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Inside Out©: Improving Children's Emotion Competence Through Film

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INSIDE OUT©: IMPROVING CHILDREN'S EMOTION COMPETENCE THROUGH FILM

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The 2015 Disney Pixar film *Inside Out*© has garnered significant attention from mental health professionals since its release. Despite its popularity, no study to date has empirically evaluated the film's effectiveness in improving children's emotion competence. Thus, the researcher pilot-tested a group intervention for parents and children designed to reduce expressive suppression and increase emotion acceptance. Twenty children ages 7 to 12 participated in the current study; fifteen (5 males) were randomly assigned to the treatment condition, which involved watching the movie *Inside Out*© and participating in a therapist-facilitated discussion, and 5 (3 males) participated in a movie-only control group. Eighteen parents also participated. All participants completed self- and other-report measures of emotion regulation and acceptance. Children in the treatment condition participated in the intervention: a group discussion about the film, which parents watched and followed along using handouts. Parents and children in the treatment group received handouts after the intervention about emotion regulation. Children and parents in the control condition watched the film only, without a group discussion or handouts afterward.

Changes in emotion regulation, suppression, and acceptance were assessed via a pretest-posttest design in which participants completed the same measures 4 weeks after participating in the study. Results from analyses indicated that children in the treatment condition demonstrated significant improvement on measures of emotion sharing and acceptance (*p's* < .05). Results from feedback measures suggested that parents perceived the intervention to be helpful in

teaching them effective ways of discussing emotions with their children, and that most participants rated the intervention as at least moderately interesting. These results suggest that *Inside Out*© might serve as an effective springboard for teaching emotion competence.

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CHAPTER I

STATEMENT OF THE PROBLEM

Filmmakers have been using movies to inspire, teach, and mold audiences for decades. Many films disguise poignant lessons through humor, drama, or action, sowing the seeds for new ways of thinking. Rarely, however, do films so overtly depict the psychological processes of children as does the Disney-Pixar film *Inside Out*©. This movie highlights the complex emotional processes of 11-year-old Riley, a girl uprooted from her home in Minnesota who struggles to comply with her parents' subtle yet pressuring requests to remain positive throughout a difficult transition to a new city. *Inside Out*© uses distinctive animated characters to visually represent five primary emotions: joy, sadness, fear, anger, and disgust. Throughout the film, the character Joy struggles to suppress Sadness's efforts to invoke this unhappy emotion in Riley. In the beginning of the movie, in fact, Joy draws a chalk circle on the floor, calling it the "Circle of Sadness," and challenges Sadness to "make sure all the sadness stays inside of it" (Riviera & Docter, 2015). In the end, Joy learns that Sadness actually helps Riley obtain much-needed emotional support from her parents, and that all emotions, even unpleasant or distressing ones, work together to help Riley adjust appropriately to her new environment.

Released to theaters in June 2015, this animated film grossed $90.4 million on opening weekend, and boasts a worldwide gross of over $850.7 million (Inside Out, 2017). Subjective reviews of the film supplement its financial success. The Internet Movie Database (IMDb) includes *Inside Out*© on its revered list of the top 250 highest-rated feature films with a rating of 8.2/10 (IMDb Charts: Top Rated Movies, 2017). Rotten Tomatoes, a website devoted to movie reviews contributed by professional writers and public audiences, has given *Inside Out*© a 98% satisfaction rating (Inside Out, 2015).

One reviewer highlighted on this website stated that the movie "…is as helpful as a session of therapy, and a lot more fun" (Dent, 2015). Although watching a film in and of itself may not be equivalent to participating in therapy, no studies to date have examined the effectiveness of *Inside Out*© as a vehicle for discussing, learning, and implementing strategies to increase emotion competence and, specifically, emotion regulation in childhood. As such, the aim of this research was to design and implement an effective and engaging emotion-focused intervention for children and their parents using the film, group discussion, and advice and guidance for parents to improve children's engagement in positive and adaptive emotion regulation strategies.

Inside Out© highlighted 2 important features of emotion competence, emotion understanding (EU) and emotion regulation (ER), while also providing an entertaining blend of theatrics and poignancy. Not only does the film reflect the current research pertaining to the development of emotion, but it also portrays adaptive regulation strategies, emphasizing the importance of accepting one's emotions rather than suppressing or dismissing them. Thus, it may prove to be an informative and entertaining impetus for interventions targeting emotion competence for children and their parents.

Achieving emotion competence is an integral part of the development process. The use of adaptive emotion regulation strategies in middle childhood is implicated in a number of positive social and emotional outcomes. Conversely, maladaptive regulation strategies, such as emotion suppression, can be extremely detrimental to a child's affective and interpersonal growth. Despite the importance of emotion regulation in childhood, there is a dearth of emotion-focused literature pertaining specifically to the middle-childhood developmental period with regard to the assessment and amelioration of maladaptive regulation strategies. This research on

emotion development in middle childhood is especially scant compared to the attention given to other periods of development (e.g., toddlerhood and adolescence). However, middle childhood is a crucial time period for the development of ER strategies (Parrigon et al., 2015). Although this area of research has expanded in the past 10 years, there remains a paucity of information on emotion regulation in middle childhood. Specifically, the literature is lacking in empirically supported interventions targeting ER deficits. As strategies for improving these skills in middle childhood are necessary (Parrigon et al., 2015), the current study focused on children in the midst of this developmental stage.

The pilot study presented here had two primary goals. The first goal of the research was to develop, implement, and evaluate the effectiveness of an intervention to help children and parents understand the importance of emotion competence and learn effective strategies for implementing ER skills at home. To achieve this goal, a group intervention incorporating the film *Inside Out*© was developed. The intervention consisted of children and parents watching the film together, followed by children participating in a group discussion about their own and others' feelings, positive ER strategies, and the film's themes and lessons pertaining to suppressing, accepting, and sharing one's feelings. Parents watched this discussion with accompanying handouts that delineated the group discussion points and ways to continue the conversations at home. At the end of the intervention, children received handouts with information pertaining to emotion competence and coping skills, and parents' handouts contained techniques for holding adaptive emotion-focused discussions at home and suggestions for responding effectively and supportively to their children's emotional expressions.

To evaluate the effectiveness of this intervention in improving children's emotion regulation, participants were randomly assigned to the treatment condition, which involved the

film and group discussion, or control condition, in which participants watched the film only without an accompanying discussion. Children and parents completed various self- and other-report measures pertaining to different aspects of emotion competence prior to participating in the study, and again four weeks after the intervention. These pre- and posttest measures were compared to identify any changes in emotion regulation since the intervention. In addition, once per week for 3 weeks after the intervention, parents received follow-up emails to remind them of the handouts provided, assess the frequency of emotion-related conversations held since the intervention, and address any questions or concerns they had.

The second goal of this pilot study was to assess the feasibility of this intervention in helping parents overcome several barriers to children's treatment success. Therefore, all participants completed feedback questionnaires to assess their degree of interest in the intervention, parents' investment in helping children maintain skills they learned during the study, and their perceptions of the helpfulness and lasting impact of the intervention.

The catalyst for this pilot study was the significant need for resources and interventions to help improve children and parents' understanding of emotions. There are some empirically-based interventions for improving emotion competence in both clinical and nonclinical child populations; mindfulness-based interventions continue to gain empirical support for alleviating symptoms of depression and anxiety (Barnhofer et al., 2011; Greenberg & Harris, 2012) and improving emotion regulation (Broderick & Jennings, 2012). Other treatments, such as Coholic and Eys's (2015) arts-based mindfulness group, individual and group meditation exercises (e.g., Napoli et al., 2005; Singh et al., 2009), Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Thornback & Muller, 2015), and psychosocial interventions (e.g., Punamaki et al., 2014), show promise for reducing emotion suppression, increasing emotion acceptance, and improving

overall ER. However, although these treatments were based on empirical evidence, many of these interventions have yet to attain empirical support for ER improvement, and empirical research in this area is plagued by small sample sizes (e.g., Thomson et al., 2015; Singh et al., 2009), quasi-experimental designs without control groups (e.g., Lee et al., 2008; Punamaki et al., 2014), and a lack of objective outcome measures (e.g., Saltzman & Goldin, 2008). To address methodological concerns, the current investigation examined the effectiveness of the intervention experimentally (i.e., using a control group), and the research involved the use of valid and reliable outcome measures.

This intervention was also unique in its extensive parent participation. All children were accompanied by at least one parent or guardian, who remained throughout the entire intervention, watching the film with their child(ren) and observing the researcher-led children's discussion afterward. Parents in the treatment group received several handouts that described strategies for helping their children navigate their emotional experiences effectively and safely. From these handouts, as well as observing the researcher's discussion with the children, parents had the opportunity to learn strategies to communicate with their children about their feelings, positive coping skills for their children to use when distressed, and ways to teach their children to accept, rather than suppress, their emotions.

Despite the abundance of evidence suggesting the significant impact that parents can have on children's emotion regulation (e.g., Denham, 2003; Eisenberg et al., 1998; Morris et al., 2007), only a few interventions overtly address parenting approaches or parental involvement in their protocols (e.g., TF-CBT; Thornback & Muller, 2015). Even when parents are invited to be a part of their children's treatment, several barriers have been shown to preclude parent participation, such as the necessity of attending numerous and frequent sessions and perceived

ineffectiveness of the treatment (Kazdin et al., 1997). This pilot intervention was designed to overcome such barriers to parent participation. First, it required a maximum of 3 hours to complete, most of which was spent watching the movie, thereby eliminating the burden of attending long-term weekly treatment sessions. Second, parents completed feedback questionnaires in order to inform the feasibility, perceived impact, and helpfulness of the intervention. The results suggested that parents regarded the film and intervention highly, providing evidence for the researcher's success in providing a venue in which both children and parents can participate, and the intervention's success in overcoming barriers to children's treatment adherence.

This study further adds a unique element to the literature in its use of *Inside Out*© as the critical component of the intervention. Evidence suggests that using cultural references in child therapy can improve treatment engagement and motivation (e.g., McNulty, 2008; Rubin & Livesay, 2006), and films have been found have longstanding personal significance for many people (Doring & Hillbrink, 2015). Therefore, it was posited that integrating the critically acclaimed film *Inside Out*© into an interactive intervention would not only be impactful in teaching ER skills to children, but would also open the door for the development, implementation, and empirical investigation of similar interventions in the future.

CHAPTER II

LITERATURE REVIEW

Emotion

The field of psychology lacks a single, unifying definition of emotion, despite decades of researchers' attempts to consolidate their theories and findings. William James (1894) interpreted emotions as responses to situations in the environment that serve to meet one's needs for safety and wellbeing. He posited that individuals change their emotions, or "response tendencies," according to their environments, essentially conceptualizing emotions as behavioral responses to external stimuli. James's (1894) definition has since expanded to include two agreed-upon components of emotion: the physiological responses governed by the nervous system, and the affective responses that humans consciously process.

Neurologically, emotions are housed in the limbic system, an area of the brain possessed by all mammals that is involved in many physiological and basic emotional processes (Papez, 1937). Evolutionarily, humans obtain important information from their emotional responses in order to respond to danger and maximize survival. Almost immediately upon sensing danger, the amygdala sends distress signals to the hypothalamus, the area of the brain responsible for activating the sympathetic nervous system for a "fight or flight" response (Cannon, 1915). The path through which the amygdala signals the hypothalamus is referred to as the "low road" (LeDoux, 1996) and is responsible for automatic emotional responses that occur before the cerebral cortex has time to reflect on the situation and respond rationally. For example, the activation of the sympathetic nervous system during a "fight or flight" response allows a person to jump out of the way of a moving car before they realize what they are doing. LeDoux (1996) proposed that emotions are also experienced by a second path, the "high road." This path serves

as a much slower conduit by which information is transmitted through the thalamus to the neocortex, allowing people to cognitively understand and process their affective states (LeDoux, 1996).

Affect, defined by Buck (1993) as the "raw subjective experience of feelings and desires" (p. 491), is a central feature of emotion. Affective episodes are experienced consciously, and are therefore able to be reported and described for various purposes such as scientific research, interpersonal communication, or therapeutic work (Satpute, Shu, Weber, Roy, & Ochsner, 2012). Furthermore, because people remain conscious of their subjective affective states (e.g., sadness, anxiety, and anger), these states can be processed cognitively, and therefore regulated.

Emotions have been described by various psychologists as discrete, short-term experiences or episodes that, although varied in duration, have beginnings and ends (e.g., Ekman, 1992; Mulligan & Scherer, 2012). Mulligan and Scherer (2012) posited that the colloquial use of the word "emotion" in everyday language often implies that emotions ebb and flow in relatively brief episodes (e.g., "The defendant showed no emotion," p. 346). The American Psychiatric Association (APA; 1994) supported the position that emotions are experienced in discrete episodes, describing mood as the "pervasive and sustained 'climate,'" and emotions as the "fluctuating changes in 'weather'" (p. 763). In other words, emotions are susceptible to fluctuations within a person's general mood, lending support to the brevity of emotional episodes.

Gross (1998) defined "emotion episodes" as including the situational context that elicits a certain emotion, the active participants in such a context, and the sequential responses from the individual whose emotion is elicited in the episode. As such, emotional responses are dynamic in nature, shifting in intensity and quality in response to these various external forces

(Thompson, 1994). The activating causes of emotions are considered by many to be integral to the definition of emotion (Izard, 2010). These activating causes can be internal (e.g., sudden neurobiological shifts indicative of panic attacks) or external (e.g., social interactions or environmental stimuli).

Researchers generally agree that, in addition to being caused by a specific internal or external event, emotions are also directed toward objects, such as people, things, memories, or processes (Mulligan & Scherer, 2012). Mulligan and Scherer (2012) noted that the activating cause is not necessarily the object of the emotion; for example, one may be scared of sharks after watching the film *Jaws*. In this case, although the shark is the *object* of the fear, having watched *Jaws* is the activating *cause* of the fear. Emotions stimulate cognition and action that facilitate coping with or adapting to one's environment for maximum safety and wellbeing (Izard, 2010; Wierzbicka, 2010). The goal-directedness of emotion, therefore, is integral to its definition, as agreed upon by many emotion researchers (Izard, 2010).

In summary, although a single definition is yet to be established, prevailing theories describe the causes and objects of emotion, the episodic nature of emotional responses, and how emotions contribute to adaptations to one's environment (Izard 2010). Because a review of emotion research can become murky with various conceptualizations and definitions, Izard (2010) emphasized the importance of researchers providing their concrete definitions of emotions when they conduct emotion-related work. As such, the current research defines emotion as discrete affective episodes (Mulligan & Scherer, 2012) that are activated in response to external or internal events (e.g., thoughts, social interactions, memories, and innate biological stimuli) and directed toward an object (person, place, or thing; Izard, 2010), in turn stimulating

various cognitions, behaviors, and physiological systems (Izard, 2010; Wierzbicka, 2010) in a goal-directed fashion to effectively cope with or adapt to one's environment (Izard, 2010).

Emotion Competence

Emotions begin in infancy as basic affective states in response to physiological experiences and external stimuli (Broderick & Blewitt, 2015). So-called "basic emotions" (Broderick & Blewitt, 2015, p. 128) include enjoyment, anger, sadness, disgust, and fear, and are distinguishable by the accompanying facial expressions that appear to be universal across cultures and populations (Ekman, 1992). Indeed, Ekman (1992) distinguished these five basic emotion categories based upon features including universal signals (i.e., facial expressions), physiological responses, and antecedent events across cultures and primate species; quick onset and brief duration; and involuntariness. As such, basic emotions serve an evolutionary purpose and are instinctual in nature, involving no higher-level cognitive processes (Broderick & Blewitt, 2015). Infants display the basic emotions of distress, contentment, and disgust at birth, and develop the capacity to demonstrate anger, surprise, fear, and sadness by 2 months of age (Broderick & Blewitt, 2015). The development of more complex and advanced emotional states, such as shame and empathy, depends upon a number of factors, including self-recognition, advances in cognitive functioning (Lewis, 2008), and language development to aid in verbally describing one's advanced emotion states (Izard, 1971). When children develop appropriate cognitive and language abilities, two important aspects of emotion development emerge: the capacity to understand one's own and others' emotions, and the ability to regulate one's own emotional experiences. These two features of emotion development, emotion understanding and regulation, are what researchers refer to as "emotion competence" (e.g., Eisenberg, Cumberland, & Spinrad, 1998; Saarni, 1999).

Emotion understanding. Emotion understanding (EU) is a multifaceted concept that includes the ability to identify one's own and others' emotions (Karstad, Wichstrom, Reinfjell, Belsky, & Berg-Nielsen, 2015) and use language to describe emotional states (Feldman, Phillippot, & Custrini, 1991). EU typically emerges during toddlerhood (Martin, Williamson, Kurtz-Nelson, & Boekamp, 2015), and increases exponentially from approximately 2 years of age through middle childhood (Hughes & Dunn, 1998). Pons, Harris, and de Rosnay (2004) compiled a list of nine different components of EU development identified in the recent literature. Each component was conceptualized as a specific developmental milestone of EU that typically emerges within a predictable age range and through which specific capacities are developed (Pons et al., 2004). According to their review, children are generally able to accomplish two tasks by age 3 or 4 years: 1) understand that emotions are influenced by external events (i.e., not derived solely internally) and 2) name and recognize emotions based on pictures (Pons et al., 2004). Emotion recognition is a fundamental stage of emotion understanding, as recognition serves as a springboard from which all other emotion understanding components develop. In addition, Pons and colleagues (2004) posited that children begin to experience negative feelings from engaging in morally questionable acts such as lying or stealing by the age of 5 years. As previously mentioned, these more advanced emotional states (e.g., shame and guilt) depend upon the advancement of cognitive functioning (Lewis, 2008).

Pons and colleagues (2004) posited that by age 6, children generally develop theory of mind, which is the understanding that people's personal desires, beliefs, and memories, which may be different from their own, can impact their emotional experiences and responses (Seidenfeld, Johnson, Cavadel, & Izard, 2014). Achieving this level of emotional understanding requires a general knowledge that people may have different emotional reactions to the same

external situation, depending on internal factors. By age 6, children are also generally able to understand that discrepancies may exist between a person's affect and their concurrent subjective emotional experience (Pons et al., 2004). Saarni (1999) described a similar component in her conceptualization of emotion competence, indicating that one of the eight skills necessary for EU is the understanding that emotional states need not correspond to outward expression. This skill is relevant to a child's understanding and use of emotional display rules, which dictate the appropriateness of various emotional expressions in different social contexts (Novin, Banerjee, Dadkhah, & Rieffe, 2009).

According to Pons and colleagues (2004), the development of emotion regulation tends to commence by approximately 6 to 7 years of age. However, other researchers have argued that regulation strategies are evident within the first few weeks of an infant's life (Broderick & Blewitt, 2015). Because infants regulate their emotions to maximize safety and connect socially with their caregivers, these strategies are conceptualized as biological-based rather than cognitively driven (Saarni, 1999). Specifically, infants invoke attentional and/or behavioral responses in the presence of external stimuli (Eisenberg et al., 1995). For example, infants may self-soothe by sucking on a pacifier, sleeping, or diverting their attention from a negative stimulus (Saarni, 1999). Additionally, infants use others' facial expressions, especially those of caregivers, to regulate their emotions. In the famous "still-face paradigm," Tronick, Als, Adamson, Wise, and Brazeltown (1978) demonstrated that infants become highly distressed in response to their mothers' flattened affect, and their distress significantly decreases when their mothers display positive facial expressions. In addition, Cole, Martin, and Dennis (2004) reported that infants and their mothers evidence a reciprocal emotion regulation relationship, through which each partner's emotional responses influence the other.

Emotion regulation becomes increasingly more sophisticated throughout development. Children begin using psychological ER strategies in toddlerhood, including distraction or denial of feelings (Denham, 2007; Pons et al., 2004). By middle childhood, youths typically develop more mature and socially driven regulation strategies as their emotion understanding continues to expand (Pons et al., 2004). By the age of 8, children generally understand that they can have mixed emotions in response to a single event (Pons et al., 2004). However, understanding the concept of mixed emotions appears to be a separate construct from the actual experience of conflicting emotions. Indeed, in a study in which 5- to 12-year-olds viewed a bittersweet film clip, Larsen, To, and Fireman (2007) demonstrated that children tend to identify others who might be experiencing mixed emotions before they identify their own personal experiences with mixed feelings. Other research supports and supplements this linear conceptualization of EU development, with children grasping increasingly complex facets of EU as they age (Banerjee, 1997; Vitulic, 2009).

Positive outcomes of emotion understanding. Achieving an age-appropriate level of emotion understanding is correlated with a number of positive social outcomes. Higher degrees of emotion understanding lead to higher peer- and teacher-rated levels of popularity (Denham et al., 2003), as well as to higher levels of peer acceptance (Miller et al., 2005). Indeed, children with better EU skills cite more friendships (Denham et al., 2003) and are more likely to have reciprocal best friendships (i.e., Child A considers Child B her best friend, and Child B considers Child A *her* best friend; Laghi et al., 2014) than their less advanced peers. EU is associated with competent social behaviors (Feldman et al., 1991; Mathieson & Banerjee, 2010), adaptive behavioral adjustment at home and school (Denham et al., 2002), and more advanced self-regulation in social situations (Martin et al., 2015). This relationship appears to be bidirectional;

indeed, the level of children's social skills is also found to be a positive predictor of EU growth (Karstad et al., 2015). Furthermore, social interactions with peers are considered to be a primary means for practicing EU skills (Karstad et al., 2015). As EU is imperative for social and psychological functioning (de Rosnay, Harris, & Pons, 2008), deficits in EU may be detrimental to children's ability to thrive in their social environments.

Outcomes of poor emotion understanding. Deficits in EU are associated with a number of behavioral, social, and emotional disruptions (Martin, Boekamp, McConville, and Wheeler, 2010). Fairchild, Van Goozen, Calder, Stollery, and Goodyear (2009) examined the relationship between facial expression recognition (the primary component of EU development; Pons et al., 2004) and early- and adolescence-onset conduct disorder (EOCD and AOCD, respectively) among males between the ages of 14 and 18. Adolescents who were diagnosed with EOCD (i.e., based on CD symptoms with onset before the age of 10 years) showed significant deficits in recognition of facial expressions of anger, disgust, and happiness. Conversely, the young males in this sample who were diagnosed with AOCD (i.e., CD symptoms with onset after the age of 10 years) also showed deficits in emotion recognition, but only for stimuli depicting fearful faces (Fairchild et al., 2009). Of note, adolescents who demonstrated significant impairments in recognition of fear, sadness, and surprise displayed high levels of psychopathic traits (Fairchild et al., 2009). Marsh and Blair (2008) suggested that such impairments might be due, in part, to neurological deficits in the amygdala and other brain areas responsible for emotion recognition. Indeed, early amygdala dysfunction has been shown to predict later psychopathic tendencies (Marsh et al., 2008). Blair and colleagues (1995) suggested that individuals with psychopathic traits fail to recognize others' negative affective cues that should trigger shame or guilt after behaving in socially unacceptable ways. The inability to recognize these important social cues

may prevent the acquisition of "moral socialization" (Prado, Treeby, & Crowe, 2015, p. 23), thus increasing the likelihood of continued antisocial behaviors (Blair, 1995).

EU deficits have also been linked to several neurological disorders. Pons and colleagues (2014) determined that the presence of a learning disability significantly impacted a child's EU skills. Indeed, 13.5-year-old children diagnosed with learning disabilities demonstrated EU skills comparable to those of typically developing 9-year-olds (Pons et al., 2014). Another disorder that has been associated with poor EU skills is Attention-Deficit/Hyperactivity Disorder (ADHD), which is characterized by significant deficits in attention and concentration and/or marked impulsivity and hyperactivity (APA, 2013). Boys with ADHD have been found to have significant impairments in emotion regulation and facial affect recognition (Cadesky, Mota, & Schachar, 2000). Other correlates of ADHD among boys in middle childhood include poorer emotion language skills (including deficient ability to verbally express one's emotional experience), impairment in understanding emotional states in self and others, deficits in understanding abstract emotional experiences, such as mixed emotions or emotion suppression, and poorer general knowledge about emotions (Kats-Gold & Priel, 2009).

There exist several proposed explanations for the link between EU deficits and ADHD in children. Izard and colleagues (2001) proposed that EU deficits among some boys with ADHD might be partially explained by their lower verbal IQ scores. However, Kats-Gold and Priel (2009) noted that this hypothesis does not fully explain these deficits, especially for boys of average intelligence, and that the EU deficits are more closely linked to specific symptoms of ADHD. For example, children with ADHD have been found to have impairments in theory of

mind (i.e., understanding others' emotional states) due to poor inhibition characteristic of the disorder (Sodian & Hulsken, 2005).

In summary, the development of emotion understanding begins in infancy, increasing in complexity and sophistication with age. It is imperative that children not only learn to recognize and understand their own and others' emotions, but also enact regulation strategies to appropriately manage their various emotional experiences early in their lives. Indeed, a child's ability to understand and navigate their emotional world significantly affects their subsequent use of adaptive (or maladaptive) emotion regulation strategies for managing and understanding their emotional experiences. Therefore, the current study examined emotion regulation as a distinct outcome of a child's level of emotion understanding with the goal of improving children's emotion regulation strategies.

Emotion regulation. One difficulty of studying emotion regulation (ER) revolves around the various definitions emanating from the work of different researchers and theorists. Many researchers agree with Thompson's (1994) multifaceted definition of emotion regulation as "the extrinsic and intrinsic processes responsible for monitoring, evaluating, and modifying emotional reactions, especially their intensive and temporal features, to accomplish one's goals" (pp. 27-28). This description encompasses four main aspects of ER: 1. emotional arousal, 2. social contexts, 3. intensity and duration of emotional responses, and 4. functionality of emotions. Variations of these components can be found in nearly all other definitions of emotion regulation, and from this four-point description have stemmed multiple other permutations and additions to the conceptualization of ER.

Many researchers (e.g., Masters, 1991; Thompson, 1994) have posited that ER strategies are used to generate (Calkins & Hill, 2007), maintain (Calkins & Hill, 2007; Thompson, 1994),

enhance (Thompson, 1994), or suppress (Thompson, 1994) emotions and affect. These strategies can be intrinsically generated (e.g., self-regulation) or extrinsic in nature (e.g., others' responses to the emotions eliciting regulatory action, Eisenberg & Spinrad, 2004). The strategy used is often influenced by the social context in which emotions are processed, managed, and subsequently either moderated or enhanced, which is the second facet of Thompson's (1994) regulation model.

The third aspect of Thompson's (1994) ER definition involves the dynamic nature of the emotion response, including the onset, intensity, duration, and recovery from internal emotional states (Eisenberg & Spinrad, 2004). ER can be employed either consciously or unconsciously (Gross, 1998). Conscious ER includes practices such as positive thinking (Gilbert, Nolen-Hoeksema, & Gruber, 2013) or changing a topic of conversation (Gross, 1998). Many strategies of ER rely on such cognitive efforts and provide the basis for cognitive behavioral therapies (Goldin et al., 2014). For example, effortful control, which is the conscious regulation of one's emotions (Spinrad et al., 2006), is a key aspect of ER. People demonstrate effortful control by remaining aware of their emotional responses and consciously choose to inhibit inappropriate behaviors or activate appropriate behavioral strategies in response to various emotions (Spinrad et al., 2006).

Whereas effortful control is linked to appropriate social functioning and adjustment, adverse effects are derived from reactive control, an unconscious reaction to emotions (Spinrad et al., 2006). Reactive control is separated into two subtypes: overcontrol and undercontrol. Reactive overcontrol is characterized by involuntary inhibition (e.g., rigidity in response to novel stimuli); in contrast, children who exhibit reactive undercontrol demonstrate impulsive behaviors, such as hitting a peer when angered (Eisenberg et al., 2013). Children who use

reactive under- or overcontrol strategies to regulate emotions tend to be rated as less popular and have poorer social skills development than their effortfully-controlled peers (Spinrad et al., 2006). Hubbard (2001) bolstered these findings through a study in which rejected and popular child subjects played a rigged board game with confederate peers. It was found that rejected children (those rated as unpopular or disliked by the majority of their peers) expressed more anger in response to losing a game, and more overt pleasure in response to winning against a peer (Hubbard, 2001). Thus, effortful control of emotions is integral not only to appropriate regulation, but also to acceptable social development.

Whether ER is consciously effortful or unconsciously reactive, the process is considered to be goal-directed. Thompson (1994) argued that ER is a process by which people achieve certain goals for particular situations. For example, aggression in response to the experience of anger has been found to serve as a cathartic means for affect regulation (Van Coillie & Van Mechelen, 2006). While some researchers argue that emotion regulation is often reactive rather than goal-oriented (e.g., Eisenberg & Spinrad, 2004), others believe that one's goals are central to a person's ER strategies. These goals are often embedded within social interactions and relationships (Rubin, Bukowski, & Laursen, 2009). Therefore, many researchers believe that emotion competence (i.e., emotion understanding and regulation) is very closely related to social competence (Eisenberg et al., 1998).

Emotion regulation is also defined in terms of the regulation process itself. Emotions can be described as either regulating or regulated (Cole et al., 2004). Emotions are *regulating* in that they influence an individual's physiological or behavioral responses. For example, the experience of fear regulates one's body to activate the sympathetic nervous system in a "fight or flight" response. Cole and colleagues (2004), among others (e.g., Saarni, 1990), argued for the

inclusion of both external stimulus and internal emotional response when researching emotions as a regulating process. Emotions as *regulated* refer to the conceptualization of ER as a process by which an individual alters their experience of emotions through cognitive, behavioral, and/or emotional strategies (Denham, 1998). These strategies include attentional diversion/distraction (Eisenberg et al., 1997), adjusting one's maladaptive thinking patterns (i.e., cognitive reappraisal, Gross, 1998), and suppressing emotional expressions (Denham, 1998). These two latter regulatory strategies will be more thoroughly discussed in later sections.

Process model of emotion regulation. Because of the subjective nature of emotions, considerable effort has been dedicated to creating objective models of emotion regulation with operationalized definitions of various ER strategies. Through his process-oriented model of emotion regulation, Gross (1998) delineated two types of ER strategies, antecedent-focused and response-focused, that are activated at different points during the emotional response. The natural progression of the emotional response involves 1) experiencing a potentially emotion-eliciting situation, 2) selectively attending to features of the situation, 3) appraising these selected features for meaning, and 4) generating an emotional response (Schutte, Manes, & Malouff, 2009). Antecedent-focused regulation describes an anticipatory, prophylactic strategy that is evoked *before* the emotional response tendency fully activates (Gross & John, 2003). That is, it allows a person to change their behavioral and physiological responses before the emotion has completely unfolded (Gross, 2002).

Gross (2002) described antecedent-focused strategies including situation selection, situation modification, attentional deployment, and cognitive change. Situation selection is the process through which a person chooses to approach or avoid various situations in attempts to preemptively regulate emotions (Gross, 2002). For example, a child may use a night-light to

avoid feeling fear of a dark room. Situation modification describes a process through which a person changes their current situation to attenuate an undesired emotional response such as distress or sadness before it unfolds (Gross, 2002). For example, a person may change the subject of a distressing conversation to avoid feeling angry or saddened by the nature of the discussion. Attentional deployment involves focusing one's attention on only certain aspect(s) of a situation. For instance, a student might distract herself from feeling anxious about an exam by employing effortful concentration on studying (Gross, 2002). Cognitive change, which encompasses cognitive reappraisal, is elicited after the situation is selected, modified, and attended to, with the goal of changing one's thoughts about the event to induce a more desired emotional response (Gross, 2002). For example, a child may feel angry with a friend for sitting with a different peer at lunch, but reappraises the situation by deciding that it may be fun to meet a new friend with whom to share lunch.

The final aspect of Gross's (1998) regulation model is response-focused regulation, which describes the process of manipulating or changing emotional response tendencies *after* the emotion has been fully evoked (Gross, 2002). Response modulation can include physiological, behavioral, and experiential (i.e., emotional) changes. Schutte and colleagues (2009) provided examples of each of these types of response modulations, such as blocking out internal signals to attenuate a distressing feeling (physiological modulation) and talking about an exciting event that increases the experience of positive emotions (behavioral modulation). Finally, expressive suppression, interchangeably referred to as emotion inhibition (e.g., Gross & Levenson, 1997), emotion suppression (e.g., Geisler & Schröder-Abé,), and suppression (e.g., Campbell-Sills, Barlow, Brown, & Hoffman, 2006a) is an example of an experiential response-focused strategy through which an individual attempts to minimize, inhibit, or ignore distressing feelings to

alleviate emotional pain (Gross, 2002). Among these five strategies, only cognitive reappraisal and suppression have been operationalized to date (Gullone & Taffe, 2012), and thus lend themselves to clinical study more readily than the others. Furthermore, these strategies are two of the most commonly used among the many possible techniques one can implement (Bebko, Franconeri, Ochsner, & Chiao, 2011); therefore, these strategies will be the focus of the current study.

Cognitive reappraisal. As previously noted, cognitive reappraisal (CR) is an antecedent-focused strategy that "involves construing a potentially emotion-eliciting situation in a way that changes its emotional impact" (Gross & John, 2003, p. 349). That is, CR allows people to re-think the meaning of an event to reduce or alter the elicited emotion. Reappraisal has the potential to change the entire sequence of the emotional response by targeting the stimulus early, soon after the emotion has been elicited, and altering the trajectory of the reaction. In general, cognitive reappraisal is regarded as a positive and adaptive emotion regulation strategy and is often a target for therapeutic treatment. One study that evaluated the effectiveness of cognitive behavioral therapy (CBT) for social anxiety disorder revealed that an individual's self-reported increased efficacy in using CR significantly mediated the positive impact of CBT in reducing symptoms of anxiety (Goldin et al., 2014). Indeed, CBT treatments emphasize the importance of cognitive strategies for improving emotion regulation and reducing symptomology (Hofmann, Heering, Sawyer, & Asnaani, 2009).

Cognitive reappraisal strategies have been linked to reductions in negative affect (Gross, 1998) and physiological symptoms of arousal (Ray, McRae, Ochsner, & Gross, 2010). However, the positive effects of CR are not uniformly supported in the literature; rather, the success of reappraisal as a regulation strategy significantly varies across studies and appears to

depend upon several factors (McRae, Ciesielski, & Gross, 2012). First, the specific strategy used in cognitive reappraisal impacts its success. McRae and colleagues (2012) highlighted eight different CR strategies that were employed by participants in their study, and found that the various tactics were unequal in their reduction of negative affect. For example, participants who used "reality challenge" (McRae et al., 2012, p. 251) by convincing themselves that an upsetting stimulus was not real had limited success in alleviating distressing emotions. Rather, explicitly positive CR strategies, such as using CR to believe that a deceased loved one is "in a better place" (McRae et al., 2012, p. 255), were more successful.

Situations will inevitably arise for which a positive spin is impossible or irrational. Focusing on negative aspects of situations, however, is not always an ineffective CR strategy (Cristea, Szentagotai, Tatar, Nagy, & David, 2012). Indeed, cognitive behavioral therapists often rely on negative functional reappraisal, a CR strategy that reframes undesirable situations and emotions in a "more functional, less tragic, but still negative way" (Cristea et al., 2012, p. 552) to alter irrational beliefs and decrease negative affect (Blechert et al., 2015). Negative functional reappraisal has been found to equal positive reappraisal in its effectiveness for alleviating distress, and to surpass positive reappraisal in reducing irrational beliefs and increasing rational beliefs (Cristea et al., 2012). Conversely, positive reappraisal led to significantly greater levels of positive emotion generation than did negative functional reappraisal, therefore remaining a successful regulation strategy for increasing positive affect (Cristea et al., 2012).

Expressive suppression. Alternatively, expressive suppression (ES) is categorized as a response-focused strategy that involves inhibiting the expression of one's emotional experiences (Gross & John, 2003). Whereas CR may adaptively change the trajectory of a subjective emotional experience, ES does not necessarily change an individual's inward experience of

emotions. Rather, it is elicited well into the emotional response process, and therefore, predominantly affects only the behavioral aspect of the emotion (e.g., stopping oneself from crying). Indeed, Gross and John (2003) warned that ES does not eliminate the emotional experience, and may prevent resolution, closure, or acceptance of one's inner emotional climate.

Because suppression occurs late in the emotional experience, implementation involves different processes from those used in CR and other antecedent-focused strategies. In fact, it is posited that this means of emotion regulation requires more cognitive resources than reappraisal strategies. Richards and Gross (2000) found that participants who were asked to suppress their emotional reactions to a distressing film clip performed significantly worse on a subsequent verbal memory test of the film than those in the cognitive reappraisal and control groups. Roth and his colleagues (2014) replicated these findings with Israeli college students, bolstering the evidence supporting the cognitive impacts of suppression. Suppression is also associated with "experiential avoidance" (Hayes et al., 2004), which describes the tendency to avoid or disengage from current negative feelings or thoughts to prevent further emotional distress. Indeed, Bebko and colleagues (2011) found that individuals who were directed to suppress their negative feelings during exposure to an emotion-eliciting visual stimulus diverted their attention (as measured through gaze aversion) from the stimulus more quickly and for longer periods of time than the subjects who were in the cognitive reappraisal group.

Despite the link between ES and avoidance or distraction, suppression actually has an ironic effect of heightening physiological and emotional arousal. In an empirical study of ES, Campbell-Sills, Barlow, Brown, and Hofmann (2006b) demonstrated this effect with adults who had been diagnosed with anxiety and/or mood disorders. Participants who were directed to suppress their negative emotions during distressing film clips showed increased physiological

arousal during the film, and slower reduction of negative affect afterward, than did control subjects who were asked to accept their experiences of distress during the stimulus presentation (Campbell-Sills et al., 2006b). A study of cancer patients revealed a significant positive relationship between ES and psychological distress (Cohen, 2013). Furthermore, adults who endorsed mild, moderate, or high levels of depression and/or anxiety, and who were instructed to suppress negative affect while recollecting distressing life events, reported higher levels of subjective distress than adults who were not directed to suppress their emotions (Dalgleish, Yiend, Schweizer, & Dunn, 2009).

In addition to the exacerbation of one's current emotional and physiological state, chronic ES is implicated in a number of other negative long-term consequences. One such consequence is a lack of social support (Gross & John, 2003; Srivastava, Tamir, McGonigal, John, and Gross, 2009). It is theorized that those who habitually suppress negative emotional affect also suppress positive affect, which prevents the establishment of emotional closeness with others (Gross & John, 2003). Furthermore, people who habitually suppress their emotions reported high levels of discomfort with closeness or sharing, as well as a lack of the social support enjoyed by those who use more positive ER strategies (Gross & John, 2003).

Negative effects on second parties may contribute to the lack of social support felt by those who use emotion suppression as a regulation strategy. Butler and her colleagues (2003) paired adult women to talk about an emotionally distressing subject, instructing one subject to suppress her negative emotions during the conversation. Although the subjects who suppressed their emotions did not demonstrate any significant physiological increases during the task, their partners' blood pressure was significantly elevated, as compared to the blood pressure of women who were assigned to a partner in the cognitive reappraisal or control condition (Butler et al.,

2003). Individuals who suppress their emotions may thus restrict the quality of rapport with others, causing their non-suppressing counterparts to experience increased levels of stress (Butler et al., 2003), and thus precluding the formation of a strong, positive relationship.

Individuals who use emotion suppression as a regulation strategy tend to view their distressing emotions as negative, and therefore unacceptable (Campbell-Sills et al., 2006a). Campbell-Sills and colleagues (2006a) noted that this tendency is especially prevalent among individuals diagnosed with mood or anxiety disorders. In other words, clinically anxious or depressed people demonstrate increased use of suppression in response to experiences of negative emotions, likely because they deem their experiences of negative emotions unacceptable. The poor outcomes associated with an inability to tolerate, acknowledge, or accept the presence of one's internal state is a focal point of a third ER strategy, emotion acceptance.

Emotion acceptance. Acceptance is defined as "the active and aware embrace of those private events occasioned by one's history without unnecessary attempts to change their frequency or form" (Hayes, Luoma, Bond, Masuda, & Lillis, 2006, p. 7). Hayes, Strosahl, and Wilson (1999) argued that acceptance of one's internal state is a key aspect of emotional wellbeing. Use of acceptance-based strategies during an emotion-eliciting situation has been found to require fewer cognitive resources and to improve cognitive efficiency in subsequent tasks of self-control (Alberts, Schneider, & Martijn, 2012). Because they de-emphasize emotional control, acceptance-based strategies arguably fall outside the realm of emotion regulation, as many definitions of ER (e.g., Thompson, 1994) include efforts to control, reduce, or eliminate negative internal states—behaviors eschewed by those who endorse acceptance strategies. However, others posit that acceptance involves regulatory processes, such as

overriding a programmed response tendency (Baumeister, Heatherton, and Tice, 1994), attending to one's current emotions in order to welcome and accept them (Wallace & Shapiro, 2006), or using self-control to remain present with one's internal state (Alberts et al., 2012). As such, emotion acceptance (EA) is included in the current review as an efficient, effective, and adaptive emotion regulation strategy for managing distressing emotions and mood.

The debate regarding acceptance as a regulation strategy extends to the category of ER to which acceptance belongs. Hofmann and Asmundson (2008) classify EA as a response-focused strategy. Their argument is derived from their understanding of Acceptance and Commitment Therapy (ACT; Hayes et al., 1999), an acceptance-based psychological treatment that teaches clients techniques for counteracting response-focused strategies such as expressive suppression (Hofmann & Asmundson, 2008). Liverant, Brown, Barlow, and Roemer (2008) argued that EA requires response-focused strategies after the emotion has been fully evoked, such as accepting the emotion as it is without suppressing or changing it. However, the argument can be made for classifying EA as an antecedent-focused strategy as well, as it relies on such techniques as cognitive reappraisal to change one's beliefs about the unacceptability of emotional experiences and to create an atmosphere of acceptance of and openness toward one's internal states (Liverant et al., 2008). Therefore, EA presents as a unique regulation strategy that involves both antecedent- and response-focused tactics.

Although empirical evidence demonstrates the positive long-term effects of emotion acceptance, it has been shown that individuals who use acceptance-based strategies for managing painful emotions experience an acute, but short-lived, increase in subjective distress. This increase is especially pronounced in patients with clinical diagnoses such as schizophrenia (Perry, Henry, Nangle, & Grisham, 2012) and anxiety disorders (Campbell-Sills et al., 2006b).

However, whereas individuals who use suppression tend to experience poorer emotional recovery after distressing situations, those who demonstrate acceptance endorse a lasting decrease in their subjective distress, despite the temporary increase in emotional discomfort (Campbill-Sills et al., 2006b). Therefore, it appears that EA serves as an adaptive long-term ER strategy for reducing distress, maximizing wellbeing, and improving affective and behavioral symptoms of depression, anxiety, and other mental health disorders (Hayes, 2004; Wallace & Shapiro, 2006).

Despite the abundance of empirical research within adult populations, the literature specifically focusing on the use of acceptance among children is only in its first decade of existence (Coholic & Eys, 2015). One subfield of research that is exponentially growing involves mindfulness training for children (Bruin, Zijlstra, & Bogels, 2014). Mindfulness-based therapeutic techniques teach children to become aware and, importantly, accepting of their inner experiences without judging their emotions negatively (Bruin et al., 2014). The research, although in its infancy, has yielded promising results. Mindfulness-based interventions for children have been found to improve emotion regulation (Broderick & Jennings, 2013; Greenberg & Harris, 2012), as well as reduce depression (Barnhofer, Duggan, & Griffith, 2011) and anxiety (Chambers et al., 2015). Chambers and colleagues (2015) observed that adolescents' use of acceptance was linked to self-reported higher quality of life than the use of expressive suppression among youth.

A variety of techniques have been adapted and implemented to teach mindfulness and acceptance to youth. The majority of mindfulness activities for adults require attention and focus for long periods of time; however, these may be difficult for many children to learn, especially for those with attention or externalizing disorders (Coholic, 2011). Thus, innovative practices

are emerging that teach children acceptance-based ER strategies without requiring substantial amounts of patience, stillness, or focus. Coholic and Eys (2015) developed an arts-based mindfulness group for children involved in mental health or welfare systems and found that their intervention yielded improvements not only in emotion acceptance and regulation, but also in positive self-concept, social skills, and helping behaviors. Goldstein, Tamir, and Winner (2013) observed decreases in elementary-aged children's use of ES and increases in EA after 10 months of participation in an acting class. Although the acting classes did not emphasize emotion regulation specifically, Goldstein and colleagues (2013) believed that the classes instilled a positive attitude toward the expression of both pleasant and distressing emotions. They argued that the mere practice of expressing a range of affective states while acting might have helped children decrease their use of suppression to regulate emotions (Goldstein et al., 2013). Other empirically-supported mindfulness interventions that have been implemented include classroom-based group meditations and relaxation exercises (Napoli, Krech, & Holley, 2005), mindfulness-based cognitive therapy for children with anxiety (MBCT-C; Semple, Reid, & Miller, 2005), and individualized meditation exercises for children with ADHD and their parents (Singh et al., 2010).

Although the aforementioned treatments hold promise, much of the research to date remains significantly limited by small sample sizes (e.g., Semple et al, 2005; Singh et al., 2010), lack of control groups (e.g., Lee, Semple, Rosa, & Miller, 2008), and subjective, if any, outcome measures (e.g., Saltzman & Goldin, 2008). Semple and colleagues' (2005) evaluation of MBCT-C included only five subjects, and Singh and colleagues' (2010) study evaluated just two children. These limitations are not unusual given the newness of the research in this area, and as such, preliminary measures such as safety and feasibility take precedence over generalizability,

control groups, and randomization (Burke, 2010). As the research continues to expand, it will be imperative for researchers to empirically examine effectiveness and generalizability of mindfulness-based treatments for improving emotion regulation and the use of emotion acceptance in children, as well as develop psychometrically sound measures for evaluating EA and other mindfulness strategies.

Outcomes of emotion regulation. ER is linked with a number of positive social, behavioral, and emotional correlates. Emotion regulation skills are believed to dictate social-related behaviors and functions (Rose-Krasnor & Denham, 2009). Spinrad and her colleagues (2006) observed that children who displayed appropriate emotion regulation skills were rated as more resilient and more socially competent by their parents and teachers than were children with poorer ER skills. This social competence is partially derived from children's ability to regulate their strong emotional displays, a skill Hubbard (1995) found to increase the likelihood that children will be accepted by their peers. As previously mentioned, Hubbard (1995) had children play a rigged board game with confederate peers and observed their responses to winning and losing this game. Children who failed to appropriately regulate their anger in response to losing, or who displayed inappropriately strong positive affect in response to winning the game, were more likely to be rejected by their peers at school. Thus, Hubbard (1995) demonstrated that the valence of the emotions expressed does not appear to matter as much as the *intensity* of the emotions, and the social context in which children fail to regulate them.

Children who endorse high levels of emotional lability, characterized by poor regulatory skills that are needed to temper negative reactions to, and subsequently recover from, distressing situations (Rogers, Halberstadt, Castro, MacCormack, & Garrett-Peters, 2015), have a number of difficulties. In addition to social problems, ER deficits are also implicated in some behavioral

issues. Hughes, Gullone, Dudley, and Tonge (2010) observed that children who use less cognitive reappraisal and more expressive suppression to regulate their negative emotions reported more instances of refusing to attend school. Although the study did not allow for causal implications, the authors suggested that the school refusal might be due, in part, to intense anxiety and poor regulation skills to assuage these feelings (Hughes et al., 2010). Indeed, anxious children appear to have poorer ER skills and more emotion dysregulation than their non-anxious peers (Carthy, Horesh, Apter, & Gross, 2010; Suveg & Zeman, 2004). Furthermore, children with anxiety tend to show low self-efficacy in their ability to regulate their intense emotions (Suveg & Zeman, 2004) and adjust or hide their feelings in interpersonal situations (Southam-Gerow & Kendall, 2000). In addition to anxiety, emotion regulation difficulties are significantly associated with childhood ADHD (Sobanski et al., 2010), ODD (Dunsmore, Booker, & Ollendick, 2013), and depression (Ehrenreich-May, Kennedy, & Remmes, 2015).

Factors Affecting Emotion Competence

The acquisition of emotion understanding and regulation skills varies among individual children as a result of both internal and external factors. Internal factors affecting emotion competence include temperament (Eisenberg et al., 1997), gender (Morris et al., 2002), and developmental level (Eisenberg et al., 1999). In addition to children's innate characteristics, external factors to which children are exposed that can either impede or facilitate emotion development include socialization, environment, and various parenting practices.

Temperament. Temperament refers to biological differences in individuals' emotional expressivity in response to their environments. It is separated into the two domains of reactivity and regulation (Rothbart & Bates, 2006). Emotional reactivity refers to the quality of a child's response (i.e., strength, speed, and valence) to external or internal environmental changes,

whereas emotion regulation refers to one's ability to control and modify reactivity to environmental changes through the use of attention and inhibitory control (Rothbart & Bates, 2006). Children who show high levels of temperamental negative reactivity respond with distress to novel situations or environmental changes, are at increased risk for ER disturbances later in life (Eisenberg et al., 1997), and may elicit more negative emotional responses from their parents (Lengua & Kovacs, 2005). Indeed, Lengua and Kovacs (2005) discovered that child irritability increased discipline inconsistency among mothers, suggesting that a child's biological temperament impacts parenting strategies and response consistency. A wealth of literature supports the bidirectionality of this effect. Specifically, children who have a difficult temperament (i.e., high in negative emotionality such as irritability, anger, and frustration; Kiff, Lengua, & Zalewski, 2011) tend to elicit negative behaviors from parents, such as anger, hostility, and rejection (Cole, Teti, & Zahn-Waxler, 2003; Martini, Root, & Jenkins, 2004). This relationship has been found in reverse, as well. High levels of parental conflict and anger expression in the home have been linked to anger expression and emotion dysregulation among children (Jenkins, 2000). The effects of these interactions can impact children throughout their lifetimes, as research suggests that temperament remains relatively stable from infancy through middle childhood (Hirshfeld-Becker et al., 2007) and into adulthood (Caspi & Silva, 1995).

Gender. A child's gender can also influence their emotional development. Simply put, Morris and colleagues (2002) suggested that girls naturally have better emotion regulation skills than boys. Perhaps more importantly, however, is that a child's gender appears to impact parents' responses to their emotions. Indeed, parents tend to respond to various emotional displays differently for male versus female children. Specifically, Eisenberg and colleagues (1998) observed that parents preferentially reinforce boys' anger displays and encourage girls

more than boys to show sadness. In addition, regulation strategies taught by parents differ according to the child's gender, as girls are guided toward relational means of coping with emotions (e.g., talking with a friend), while boys are directed toward active strategies, such as hitting a baseball (Eisenberg et al., 1998).

Developmental level. Children use different regulation strategies depending upon their current level of development. As children's cognitive, emotional, and social development progresses, they become increasingly more effective at managing their emotions independently (Pons et al., 2004). Furthermore, as with gender, the developmental stage of the child impacts how parents respond to their children's emotional expressions. Parents tend to actively teach ER when children are younger, eventually forgoing this extent of supervision to nurture their children's independent ability to manage their own emotions (Kopp, 1989). In addition, the strategies that parents teach their children become increasingly more complex and sophisticated as their children develop emotional, social, and cognitive skills (Eisenberg & Morris, 2002).

Attachment. An important factor affecting emotion development is the quality of attachment, or the emotional bond, between caregivers and infants. Bowlby (1969) posited that infants are biologically driven to seek proximity to their caregivers, and caregivers' styles of responding to this drive influence the quality of the attachment pattern between parent and child. Ainsworth, Blehar, Waters, and Wall (1978) delineated two broad attachment categories into which caregiver-child dyads fall: secure and insecure. Securely attached infants display signs of distress upon separation from their caregivers, but are able to be comforted after their caregiver's return. Essentially, infants with secure attachments are able to engage in independent play, taking comfort in the presence of their caregiver to feel wholly safe in novel environments, and display positive affect upon reuniting with caregivers after brief separations (Ainsworth et al.,

1978). Conversely, insecurely attached children were classified by Ainsworth and her associates (1978) as either anxious-avoidant or anxious-resistant. Ainsworth and colleagues (1978) classified children as anxious-avoidant who failed to display any signs of desiring a physical connection to the caregiver, and avoided the caregiver after she reentered the room following separation. Anxious-resistant (also called anxious-ambivalent; Bretherton, 1992) children were described as showing significant clinginess to their caregiver, becoming distressed and angry when they were required to be apart from their caregiver (Ainsworth et al., 1978). Ainsworth's initial classifications expanded to include a fourth category, disorganized attachment (Main, 1995), which is characterized by fearful behaviors such as freezing in front of caregivers and resisting any social contact with them (Innerhofer, 2013).

The quality of the attachment relationship is significantly linked to the quality of ER strategies used in infancy and early toddlerhood (Diener & Mangelsdorf, 1999). By one year of age, infants who have developed a secure attachment to their caregivers evidence positive social overtures toward caregivers, indicating that they view them as sources of support and help (Diener & Mangelsdorf, 1999). Parritz (1996) noted that by 18 months, infants have further expanded their repertoire of ER skills to include social referencing, using adults' affective displays to regulate their behaviors (Vandivier & Hertenstein, 2013). Generally, parents who demonstrate secure attachments with their children help guide them through their emotional experiences, serving as external "regulatory systems" (Parrigon et al., 2015, p. 28) through which children learn to use effective ER strategies independently. Although the attachment quality remains stable, the demonstration of attachment changes as children develop; Brumariu and Kerns (2008) suggested that as children expand their social worlds through school and activities,

the need for their caregivers to be in physically close proximity decreases, although the importance of having close and secure relationships with caregivers remains high.

Children who lack secure attachments with their parents or caregivers are at increased risk for using maladaptive ER strategies (Cassidy, 1994) and demonstrating poor anger management skills (Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993). Brenning and Braet (2013) observed that 11- to 16-year-olds with anxious attachments reported greater anger and sadness dysregulation on a self-report measure of ER compared to securely attached youth (Roth, Assor, Niemiec, Ryan, & Deci, 2009), and those with avoidant attachments endorsed greater anger dysregulation and use of ES in response to sadness. Furthermore, children who had disorganized attachment to their caregivers demonstrated difficulties discriminating between different emotions (Colle & Del Giudice, 2011), and problems labeling emotions were found in children with insecure attachments (Ainsworth et al., 1978). Conversely, securely attached children demonstrated greater awareness and understanding of their and others' emotional states (Brumariu, Kerns, & Seibert, 2012).

Socialization. It is posited that children's early social experiences influence the development of emotions, which would otherwise be grossly limited outside the context of social interaction (Wilson & Wilson, 2015). As such, parental emotion socialization is integral to early emotional development (Brown, Craig, & Halberstadt, 2015). Children's emotional development is shaped by their parents' affective expressions within the family context (Eisenberg et al., 1998; Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995), reactions and responses to their children's emotional displays (Denham, Mitchell-Copeland, Strandberg, Auerbach, and Blair, 1997; Fabes, Leonard, Kupanoff, & Martin, 2001), and patterns of discussing emotions in the family (Eisenberg et al., 1998).

Environment. The general emotional environment of the home can impact parents' socialization skills, and thus children's emotional development. Saarni, Mumme, and Campos (1998) posited that emotion contagion may occur, through which infants and children "catch" the overall emotionality of the family. Thus, when the family exhibits a significant amount of negative emotionality, children are more likely to endorse negative affect (Morris, Silk, Steinberg, Myers, & Robinson, 2007). Although the research is limited regarding emotion contagion, Morris and colleagues (2007) predicted that this phenomenon might also facilitate the transmission of positive affect in the home. This is not to say that all distressing emotion should be banned from the home, however. Rather, ideal patterns of family expressivity, although predominantly positive, include mild to moderate levels of distressing emotion, as this exposure has been found to improve ER in children (Morris et al., 2007). It is important that the negative emotion remains low, however; children who are exposed to high degrees of "background anger" (e.g., marital conflict between parents that is not directly aimed at the child) are at increased risk for social and emotional problems (Lemerise & Dodge, 2008).

Furthermore, some parents engage in a form of "niche-picking" (Morris et al., 2007), or choosing environments in which one's children are at decreased risk of experiencing certain distressing emotions. Niche-picking is described by Morris and her colleagues (2007) as a form of proactive coping; that is, certain stressors are anticipated and subsequently avoided (Aspinwall & Taylor, 1997). Although niche-picking could facilitate children's emotion competence across a variety of contexts and social situations, Morris and colleagues (2002) suggested it might also impede children's emotional development if their parents avoid a large variety of contexts or stimuli based on their understanding of their child's temperament or coping styles.

Parental responsiveness to emotions. Parents might engage in behaviors such as niche-picking due to discomfort with managing their children's negative affect, which could significantly decrease their children's emotion regulation skills. Parents who express high levels of anxiety in response to their children's fear and distress tend to promote emotional reactivity and poor emotion regulation skills in their children (Borelli, Rasmussen, St. John, West, & Piacentini, 2015). The variety of parents' responses to emotions can be partially explained by their beliefs of how emotions should be handled or expressed. For example, some may strive to suppress their child's "bad" emotions and, to this end, teach their youngsters to minimize, deny, or ignore their distressing emotional experiences (Eisenberg et al., 1998). If parents implement punitive measures in response to sadness, anger, or other distressing feelings, children may learn to suppress their emotional reactions to avoid such punishments (Eisenberg et al., 1998). In addition, punitive measures in response to emotions are linked to inappropriate anger regulation techniques later in life (Eisenberg & Fabes, 1994). Similarly, children of parents who minimize, invalidate, or dismiss their emotional reactions tend to deal with distress through avoidance tactics (Eisenberg et al., 1998) and are likely to display anger toward their parents in observed interactions (Snyder, Stoolmiller, Wilson, & Yamaoto, 2003). Parents may also encourage maladaptive emotion regulation tendencies in their children by using conditional regard; that is, demonstrating more love or affection in response to desired behaviors [Parental Conditional Positive Regard (PCPR; Roth et al., 2009)] or withholding affection in response to undesired behaviors [Parental Conditional Negative Regard (PCNR; Roth et al., 2009)]. PCPR is significantly correlated with their children's use of expressive suppression to regulate their emotions (Roth et al., 2009).

Parents' optimal responses to anger and sadness are correlated with children's prosocial behaviors and overall emotional expressivity (Eisenberg et al., 1998). These optimal responses vary depending on the affective displays of the child. For example, Garner (2006) suggested that children whose mothers matched their affective displays (e.g., appearing sad in response to their children crying) tended to use more appropriate regulation strategies. Denham (1993) agreed that a sad, tender response to children's sadness is optimal, but that parents should not match displays of fear or anger in children. Rather, parents were encouraged to react calmly and neutrally to children's anger and fear (Denham, 1993). Overall, the research posits that parental support and acceptance of their children's experiences of emotions, regardless of parents' specific responses, are linked with children's adaptive ER skills and a better ability to cope with distressing emotions (Gottman, Katz, & Hooven, 1996).

As such, children's understanding of emotion relies upon their parents' ability to create a climate in which all affective responses, both positive and negative, are addressed in accepting and non-hostile manners (Eisenberg, et al., 1998). Denham and colleagues (1997) suggested that parents' willingness to express a wide range of emotions helps teach their children about appropriate emotional responses and increases their children's awareness of different affective states. Parents may engage in these behaviors by holding discussions about emotions as a family (Denham et al., 2003), emotion coaching (Gottman et al., 1996), and actively teaching their children various ER strategies (Morris et al., 2007).

Family discussion. Discussing emotions with family members has been found to have positive impacts on children's emotion development (Denham et al., 2003). Eisenberg and colleagues (1998) determined that the expression of negative emotions by parents might prove to be rather positive for children if the parents lead the family in a thorough discussion about

emotions and the nature of the negative affect (Eisenberg et al., 1998). Specifically, Garner (2006) found that children whose parents engaged them in emotion-related discussions tended to use adaptive ER strategies. Although these discussions are encouraged, it is imperative that parents determine a healthy balance between engaging in supportive, emotion-focused conversations and allowing children to manage and regulate their emotions independently. Children whose parents strongly insist that they discuss their distressing emotions, regardless of the child's desire or readiness to do so, are at increased risk for emotion dysregulation and show a decreased ability to provide emotional support to significant others (Roth & Assor, 2012).

Emotion coaching. Emotion coaching is a practice through which parents help guide their children through navigating their emotional experiences (Gottman et al., 1996). This can be achieved through helping children verbally label their feelings, validating and empathizing with a child, and engaging in problem-solving techniques regarding the management and regulation of children's emotions (Gottman et al., 1996). Maternal emotion coaching has been found to significantly reduce emotional lability among preschool-aged children (Ellis, Alisic, Reiss, Dishion, & Fisher, 2014). Additionally, emotion coaching within a supportive and safe family environment has been found to significantly improve children's emotion competence (Havighurst et al., 2013).

Teaching. Parents who actively engage in teaching their children positive emotion regulation strategies often help their children effectively regulate distressing emotions (Morris et al., 2007). Teaching these skills can include the use of techniques such as cognitive reappraisal; for example, Morris and colleagues (2007) rewarded children in their study with a disappointing prize of socks, and evaluated the effectiveness of the children's mothers with teaching how to regulate disappointment and anger. The authors discovered that mothers who helped their

children reappraise the situation to be more positive (e.g., using the socks as puppets) helped reduce the children's expressions of anger and sadness (Morris et al., 2007).

Parents' emotion competence. The tactics used to teach or model emotion regulation are often informed by parents' own emotion competence. Thus, parents who use maladaptive or unhealthy regulation skills themselves tend to rear children who also have deficient understanding of ER (Eisenberg et al., 1998). Indeed, parents who frequently show intense negative emotions in the home may increase the risk for children's emotion dysregulation and decreased emotion competence. For example, 4-year-olds whose mothers met clinical criteria for major depressive disorder within the first 21 months of the children's lives showed poorer emotion regulation than children of non-depressed mothers (Maughan, Cicchetti, Toth, & Rogosch, 2007). Similarly, parental expression of negative emotion does not improve children's emotion understanding, whereas positive emotional expression from parents does improve EU in their children (Halberstadt, Crisp, & Eaton, 1999). Thus, the effects of parental emotion expressiveness depend on the intensity and nature of the emotions expressed. Indeed, Nelson and her colleagues (2012) examined high or low frequencies of three different maternal expressive styles of positive or negative emotions: high positive/low negative, very low positive/average negative, and average positive/very high negative. Findings suggested that mothers who displayed high levels of positive and low levels of negative affect created the most supportive environment for their children's emotional development. Furthermore, the children of these mothers endorsed less negative affect and greater use of appropriate emotion regulation than children of mothers who displayed very high levels of negative expression and/or very low levels of positive expression (Nelson et al., 2012). In fact, children of mothers with very low levels of positive expression had the poorest ER skills of all children in Nelson's (2012) study.

In summary, parents significantly impact their children's emotion understanding and regulation skills. These influences may be active strategies that parents use to direct their children to become socially and emotionally capable, or passive techniques such as the family environment, attachment quality, or modeling. As such, it is important that parents understand how their communication, regulation, and reinforcement styles, as well as the overall emotional climate of the family, impact the quality and effectiveness of the emotion regulation strategies that their children develop.

Existing Interventions

As noted, deficits in emotion regulation are characteristic of a number of mental health disorders, including major depressive disorder, bipolar disorder (Rive et al., 2015), oppositional defiant disorder (Dunsmore et al., 2013), and anxiety (Suveg & Zeman, 2004). As such, many interventions for these disorders include techniques to improve emotion regulation in their treatment protocols. There exist several treatments specifically targeting ER as well. Thomson, Riosa, and Weiss (2015) reported positive preliminary outcomes of cognitive behavioral therapy (CBT) for children with autism spectrum disorder (ASD) in regard to ER improvement and treatment feasibility, the reported ER improvement in their sample of 14 children ages 8-12 years did not reach statistical significance. Other treatments that have been evaluated for ER improvements in children include Trauma-Focused CBT (TF-CBT; Thornback & Muller, 2015) and a specific psychosocial intervention for children who endured war-related trauma (Teaching Recovery Techniques; Punamaki, Peltonen, Diab, & Qouta, 2014). Although these two interventions evidenced promising results, neither treatment significantly improved emotion regulation in their child subjects. Pat-Horenczyk, Shi, Schramm-Yavin, Bar-Halpern, and Tan (2015) implemented an emotion regulation treatment that did significantly improve ER in

children aged 7-12; however, empirically validated treatments that target children's ER remain elusive in the literature.

It seems that the lack of empirically supported treatments for ER may stem from the unique challenges child therapists face in their work. First, their interventions must be appropriately tailored to a client's cognitive and developmental level (Simon, 2016). That is, it is important to use age-appropriate language, materials, and activities so that children understand the treatment (O'Brien, Larson, & Murrell, 2008). Therapists may need to use metaphors (Hayes et al., 1999) or experiential learning techniques, such as games or play, rather than cognitive-based strategies, for teaching and explaining various skills to children (Semple, Lee, & Miller, 2006). In addition, memory and attention are less developed in children than in adults (O'Brien et al., 2008); therefore, treatment protocols adapted for children may need to consist of shorter, but more numerous, therapy sessions (Semple & Lee, 2008).

A second challenge to child therapy is treatment adherence. Unlike adult clients who control their own level of participation, children's treatment adherence is limited by the actions of their parents. Indeed, the research on treatment adherence addresses treatment engagement, motivation, and perceived barriers among the parents or caregivers of child clients (e.g., Kazdin, Holland, & Crowley, 1997), rather than children's perceptions of their own treatments (Nock, Ferriter, & Holmberg, 2007). Therefore, to maximize compliance, therapists must ensure that the parents or caregivers remain motivated to bring their child to therapy. Noncompliance among parents of child clients is associated with a number of factors, such as perceived obstacles associated with attending sessions, perceptions of treatment ineffectiveness, and poor parent-therapist relationships (Kazdin et al., 1997). Because parent participation is often an integral part of child therapy (e.g., Barkley, 2013; Kazdin, Bass, Ayers, & Rodgers, 1990), it is imperative

that treatments target not only children's symptoms, but also parents' responses to and handling of them. Therefore, to maximize compliance, treatment interventions must be motivating for both children and their parents.

For parents, motivation is linked to their evaluation of the treatment's credibility and their expectancies that the treatment will work, which significantly predicts treatment compliance (Nock et al., 2007). Therefore, providing a child treatment that parents believe will be effective is essential to increasing parental motivation for implementing skills and behaviors to improve symptoms in their children. For children, creating a fun, engaging, and interesting therapeutic environment is important for their motivation and compliance within the session (Briggs, Runyon, & Deblinger, 2011). To this end, a number of different techniques have been integrated into treatment protocols for children, such as play (Misurell, Springer, Acosta, Liotta, & Kranzler, 2014; Sanchez-Meca, Rosa-Alcazar, & Lopez-Soler, 2011), computer games (Aventin, Houston, & Macdonald, 2014), and physical activity (e.g., dance/movement therapy; Betty, 2013).

The integration of popular culture references has been shown to positively influence therapy with children (Livesay, 2008). Therapists have obtained positive results by implementing techniques based on superheroes (Rubin & Livesay, 2006), sports (Crenshaw & Barker, 2008), and Harry Potter (McNulty, 2008). As such, it is probable that using current day movie references in therapy may also glean positive effects, especially when that movie highlights the main themes of the intervention. However, there exists very little research to date that specifically evaluates the effects of using movies to improve symptoms, behaviors, or difficulties with children. Despite the rarity of empirically supported film-based interventions, there is evidence to suggest promise for effectiveness. Garrison (2007) suggested that movies

can help engage adolescents in psychiatric hospitalization in communicating and connecting with their family members during family visits or family therapy treatments. He explained that allowing families to choose movie themes that relate to their family issues may facilitate discussion within these families (Garrison, 2007).

Movies have also proven to make lasting impressions on adolescents and adults. Doring and Hillbrink (2015) observed that 13- to 15-year-olds exposed to clips from the movie "Into the Wild" evidenced significant value changes regarding universalism and conformity, as reported one week after watching the film, whereas control subjects not exposed to the movie did not change their values. The authors cited this work as evidence of the impact that films may have on adolescents' value systems and understanding of the world (Doring & Hillbrink, 2015), although because the authors failed to collect long-term follow-up data, it is unclear how long these value changes lasted. However, Greenwood and Long (2015) evaluated the significance of various movies watched during childhood and suggested that these impressions may last for years. In a retrospective study, the researchers discovered that poignant or life-changing films seen during childhood remained significant to adults' personal development years after watching them (Greenwood & Long, 2015). Adults in the study reported that life lessons, character connections, and social relationships were the three most impactful aspects of these films (Greenwood & Long, 2015). These findings suggest that movies with relatable interpersonal content may have lasting impacts on children's thoughts, feelings, and behaviors.

Summary of Research Goals and Hypotheses

The literature review highlights the importance of achieving appropriate emotion competence skills in childhood, as well as of parents' ability to guide their children to become effective emotion regulators through sharing and exploring emotions in the home. However,

despite the importance of emotion regulation in childhood, there is a dearth of emotion-focused literature pertaining specifically to the middle-childhood developmental period with regard to the assessment and amelioration of maladaptive regulation strategies. Generally, research on emotion development in middle childhood, typically conceptualized as the period between ages 6 and 12 (Drewes & Schaefer, 2016), is scant compared to the attention given to other periods of development (e.g., toddlerhood and adolescence). In fact, middle childhood has been dubbed the "forgotten years" due to the lack of attention from researchers (Drewes & Schaefer, 2016); nevertheless, research indicates that middle childhood is a crucial time period during which more advanced ER strategies are implemented (Parrigon, Kerns, Abtahi & Koehn, 2015). These strategies are thought to arise in response to increased socialization with peers, as children form attachment relationships at school (Parrigon et al., 2015). Although this area of research has expanded in the past 10 years, research specifically targeting ER deficits is lacking, and strategies for improving these skills in middle childhood are necessary. Therefore, the current study focused on children in the midst of this developmental stage.

To determine whether participating in a group discussion about the themes of the film *Inside Out*© impacts children's emotion competence, children participated in either the treatment (i.e., film and discussion) or control condition. Children and parents in the control group watched the movie only, without engaging in a group discussion or receiving handouts afterward. It was expected that children who participated in the treatment group would demonstrate improved emotion regulation, as evidenced by significant positive changes in the self- and parent-report measures examining children's use of cognitive reappraisal, expressive suppression, mindfulness and acceptance, and emotion understanding, compared to children who only watched the film.

As a major component of this intervention was parental involvement, it was hypothesized that the frequency of emotion-related conversations held between children and parents who participated in the intervention would significantly predict improvement in children's emotion competence from pretest to posttest. Furthermore, because the treatment group underwent more active strategies for teaching emotion regulation and coping skills, it was predicted that parents in the treatment condition would report a higher number of emotion-related conversations than control parents.

It was further predicted that parents in the treatment group would evaluate the intervention as more impactful, helpful, and interesting, per responses on a feedback measure immediately following the intervention, than parents who participated in the control condition. It was hypothesized that all children, regardless of condition, would express some degree of interest in the intervention and movie, as well as indicate some degree of helpfulness of the intervention in teaching them more about emotions.

Parent sociodemographic factors, including education level and family income, were examined for any group differences in these variables, as well as to determine the extent to which certain variables might have affected reported emotion competence in children, frequency of emotion-related conversations, or parents' feedback on the intervention. In addition, child variables such as gender, age, and diagnoses of any mental health conditions were examined.

CHAPTER III

METHOD

Participants

Participants were children and their parents from the Indiana, PA, and the Indiana University of Pennsylvania (IUP) communities. Participants were recruited through posted flyers and IUP community online newsletters, including the Psychology Department electronic news board (Appendix A). A link to this advertisement was posted to Facebook via the School of Graduate Studies and Research as well. Furthermore, the researcher distributed recruitment letters to local schools who gave prior permission for material distribution (Appendix B). These letters included information about the nature of the study, eligibility requirements for participation, and contact information for interested parents and children. The researcher requested that parents call or e-mail to express interest in participating. Upon contact from interested parents, the researcher obtained parents' contact information, available days and times to participate, and other information relevant to the study through a mailed questionnaire or email, per parents' preferences (Appendix C). This allowed potential participants to make an informed decision regarding participation, and facilitated scheduling the groups. Parents were compensated for their time with a $5 Sheetz gift card upon completing the study, and children received candy and stickers after the intervention. Furthermore, each child was entered into a random drawing to win *Inside Out*© on DVD.

The sample consisted of 20 children (8 male) ranging in age from 7 to 12 years, with an average age of 9.6 years (*SD* = 1.43). They represented grades 2 through 6, with an average grade level of 4.25 (*SD* = 1.33). Parents reported the existence of mental health conditions for their children via the parent demographic questionnaire (Table 1). No child was reported as

having a serious developmental disability, serious cognitive disability, blindness/visual impairment, or deafness/hearing impairment. Eight children (40%) were reported to be receiving therapeutic services. The parent sample consisted of 18 adults (4 male): 13 mothers (72.2%), 3 fathers (16.7%), and 2 grandparents (11.1%). The sample was ethnically homogenous: 17 parents (94.4%) reported being White, Not Hispanic, and 1 parent (5.6%) reported being White, Hispanic/Latina. Parents also reported their achieved level of education (Table 2), marital status (Table 3), and annual income (Table 4). Most parents were married (77.8%), had a college education or above (81.3%), and reported an annual income over $65,000 (56.3%).

The treatment group consisted of 15 children, 5 male (33.3%) and 10 female (66.7%), ranging in age from 7 to 12 years (M = 9.67, SD = 1.29) and in grades 2 to 6 (M = 4.27, SD = 1.28). Six children (40%) were reported to be currently involved in therapy or counseling. Nine mothers (81.8%) and 2 fathers (18.2%) participated in this group.

The control group consisted of 4 mothers (57.1%), 1 father (14.3%) and 2 grandparents (28.6%). In addition, 5 children participated in the control condition: 3 male (42.9%) and 2 female (28.6%). Children in the control group ranged from 8 to 12 years of age (M = 9.40, SD = 1.95), and represented grades 3 through 6 (M = 4.20, SD = 1.64). Two children (28.6%) were reported to be participating in therapy.

A series of independent samples t-tests revealed no significant differences in children's average age or grade between treatment and control groups, and Fisher's exact test revealed no differences in children's gender between groups (p = .347). Fisher's exact test revealed no significant differences in parents' reported education level (p = .155) between groups. To determine group differences in SES, annual income was estimated based on parents' reported income level on the demographic questionnaire and then analyzed via an independent samples t-

test. No differences in SES were found between groups (p = .469). Of note, two different children had both parents attend the study. In this event, only one parent per family completed the demographic questionnaire and measures, and therefore, complete demographic data were analyzed for 16 different families.

Table 1

Children's Reported Mental Health Diagnoses

	Diagnosis				
Group	ADHD	Anxiety	ASD	Depression	Other
Treatment	5 (33.3%)	3 (20.0%)	2 (13.3%)	–	1 (6.7%)
Control	1 (14.3%)	3 (42.9%)	1 (14.3%)	1 (14.3%)	1 (14.3%)
Total	6 (30.0%)	6 (30.0%)	3 (15.0%)	1 (5.0%)	2 (10.0%)

Table 2

Parents' Reported Education Level

	Group		
Education level	Treatment	Control	Total
High school diploma/GED	–	2 (40%)	2 (12.5%)
Some College	1 (9.1%)		1 (6.3%)
College/University Diploma	6 (54.5%)	1 (20%)	7 (43.8%)
Graduate School or Above	4 (36.4%)	2 (40%)	6 (37.5%)

Table 3

Parents' Reported Marital Status

	Group		
Marital Status	Treatment	Control	Total
Married	7 (63.6%)	7 (100%)	14 (77.8)
Divorced	2 (18.2%)	–	2 (11.1%)
Separated	1 (9.1%)	–	1 (5.6%)
Never married	1 (9.1%)	–	1 (5.6%)

Table 4

Parents' Reported Annual Income

	Group		
Annual Income ($)	Treatment	Control	Total
5,000 – 9,999	1 (9.1%)	–	1 (6.3%)
10,000 – 14,999	1 (9.1%)	–	1 (6.3%)
15,000 – 24,999	1 (9.1%)	–	1 (6.3%)
25,000 – 34,999	1 (9.1%)	–	1 (6.3%)
45,000 – 54,999	–	2 (40%)	2 (12.5%)
55,000 – 64,999	–	1 (20%)	1 (6.3%)
65,000 – 74,999	2 (18.2%)	–	2 (12.5%)
≥ 75,000	5 (45.5%)	2 (40%)	7 (43.8%)

Design

Participants were randomly assigned to either the experimental or control condition in a dependent, repeated measures design. The experimental condition consisted of watching *Inside Out,* followed by an experimenter-led group discussion with child participants, to which parents were encouraged to listen and follow along with a provided handout; in the control condition, participants viewed the film without engaging in a group discussion. Therefore, participants were divided into two groups for analyses: 1. Participants who watched the movie only (Control Group), and 2. Participants who watched the film and engaged in a group discussion (Experimental Group).

Procedure

The present study incorporated two phases: Phase 1 involved completing pretest measures and participating in the one-day intervention. During Phase 2, parents responded to weekly emails assessing frequency of emotion-related conversations, and treatment parents

reported how often they used the handouts. Participants completed follow-up measures 4 weeks after the intervention.

Phase 1

Phase 1 of the study was held in The Indiana Free Library community room, with permission from Kate Geiger, Indiana Free Library Director, and Joanne Mast, Children's Librarian. At the time the study was conducted, the Indiana Free Library possessed an umbrella license from Swank Motion Pictures, Inc. that allowed the film to be shown by the researcher with no risk of copyright infringement.

Upon arrival at the Community Room, parents and children were given two copies of consent and assent forms, respectively, that they read and signed prior to participation (See Appendices D for Parent Consent and E for Child Assent). The researcher verbally explained consent and assent to each group and answered questions. After providing informed consent and assent, participants completed Participant Number forms (Appendix F) to create their unique participant ID. Because matched follow-up data were collected, 7-digit alphanumeric participant numbers were created to ensure participants' confidentiality, while still allowing for data to be matched from pre- to posttest. Thus, adult participants created a participant number for their and their child's data using the instructions below. Participant numbers were then written on the study packets in lieu of names to ensure confidentiality.

Digits 1 & 2: First two letters of their mother's maiden name

Digits 3 & 4: First two characters of the street on which the parent grew up

Digits 5 & 6: Last two numbers of their Social Security Number

Following the assignment of participant numbers, children and adults completed their participant packets, which consisted of demographic questionnaires, parent/caregiver-report

measures, and child self-report measures of emotion competence. These measures are detailed in subsequent sections. Informed consent and completion of measures took approximately 30 minutes for all groups. After all packets were collected, the researcher invited the children and parents to partake in provided snacks and beverages for the showing of the movie.

The film *Inside Out*© follows five characters—Joy, Sadness, Anger, Fear, and Disgust—each representing an emotion within the mind of an 11-year-old girl, Riley. Throughout the movie, Joy struggles to suppress Sadness's efforts to invoke this unhappy emotion in Riley, despite Riley's difficult experiences of moving away from home and feeling abandoned by friends. At the end of the movie, Joy realizes that Sadness actually helps Riley obtain much-needed emotional support from her parents and others, and that sharing one's feelings of sadness and distress is important and helpful. The film is rated PG for mild thematic elements, such as the loss of a beloved friend. The movie is 1 hour and 42 minutes in duration.

After participants in the experimental group watched the film, the researcher led the children in a discussion about the lessons and themes of the film, their emotional experiences, and effective emotion regulation strategies. All children in the experimental group were encouraged to participate in this discussion, and most participants spoke at least once during this group conversation. Many of the children were actively engaged in the discussion, appeared to answer questions from the researcher openly and honestly, and did not seem inhibited by parental presence. A small number of children did not contribute to the discussion; however, these participants remained in the discussion circle and appeared to attend to others' responses. All children who participated demonstrated a clear understanding of the themes and lessons of the movie. The study script, as well as a list of the discussion questions and their rationale, can be found in Appendix G.

To enhance the replicability and structure of the discussion, the researcher created a checklist to ensure that every salient topic was approached in the group discussion (Appendix H). One trained research assistant used this checklist for each group discussion, and results indicated that each group met the goal of discussing every outlined question. Therefore, the group discussions were comparable across each treatment group and covered the same content. The group discussions ranged in duration from 20 to 35 minutes, with an average duration of approximately 27 minutes across the three treatment groups. Variability in duration was mainly due to participation among group members; the group discussion lasting only 20 minutes consisted of 5 children, each of whom exhibited very shy and somewhat anxious characteristics throughout the intervention. Conversely, the group discussion lasting 35 minutes had children who more actively participated by spontaneously providing examples and follow-up comments throughout the discussion. Per results from pilot testing, the researcher provided parents with a handout containing a list of the discussed questions and several strategies for continuing to engage in these conversations at home (Appendix I).

After the discussion, parents and children completed feedback questionnaires to assess the feasibility of this intervention. Specifically, the feedback questionnaires assessed interest level, perceived helpfulness, and impact of the study. See Appendices J and K, respectively, for parent and child feedback questionnaires.

After completing the feedback questionnaires, parents and children were given *Inside Out*© handouts with developmentally appropriate explanations of emotion regulation and tips for practicing these skills at home. Parents' handouts (Appendix L) contained information regarding how to talk to their children about their emotions, ways to encourage adaptive emotion regulation practices, and local resources for therapeutic services. Children's handouts (Appendix

M) consisted of appropriate emotion regulation strategies and reminded children that emotions are neither good nor bad to enhance their acceptance of all feelings. The researcher thanked participants for attending the study and children were rewarded with a small prize. The researcher reminded parents that they would receive weekly emails for 3 weeks prior to receiving the follow-up measures.

Regarding procedures for the control group, parents and children first completed consent and assent forms (Appendices N and O, respectively). Following informed consent, participants completed the same participant ID form and pretest questionnaires as did those in the treatment group. After the movie, participants in the control condition completed feedback questionnaires and parents were reminded that they would receive weekly email check-ins from the researcher. They were thanked for their participation and children were given a small prize. See Appendices P and Q for control parents' and children's feedback questionnaires.

Phase 2

Follow-up procedures for the treatment group consisted of weekly emails to parents for three weeks, assessing the number of times parents spoke with their children about feelings during the week. Parents were also asked to report how frequently they used the provided handouts during these conversations (see Appendix R for the email script). Four weeks after completion of Phase 1, follow-up measures were distributed via standard mail or electronically (via email with a link to measures created in www.Qualtrics.com), per parent preference. These follow-up measures consisted of the same pretest measures, sans the demographic form. Additionally, parents completed a questionnaire at follow-up assessing their self-reported usage of the handouts, as well as perceived usefulness of the various handouts distributed at the end of the intervention (see Appendix S for the Handout Questionnaire). Parents were given one week

to complete these measures. Eight parents (72.7%) and 10 children (66.7%) completed follow-up measures. Upon submission of the follow-up measures, all parents were sent a debriefing form (Appendix T) and $5 Sheetz gift card.

Parents in the control group also received weekly emails assessing the reported frequency of emotion-related conversations they held with their children. They received the follow-up measures via email, and all participants completed them within one week. Upon the return of completed measures, parents were sent a debriefing form, $5 Sheetz gift card, and the handouts that those in the treatment group received during Phase 1.

Additionally, at the end of data collection, a random name generator was used to draw two IDs from the pool of participants for the winners of the *Inside Out* DVD drawing. A blind email was sent to all parent participants with the two IDs listed as the winners, requesting for those parents who belonged to the IDs to respond to the researcher. Because the participant IDs were not linked to names, and the winning participants were not asked to send their IDs to the researcher, confidentiality was maintained during this procedure.

Measures

Demographic Questionnaire

A demographic questionnaire was used to obtain information about the participants, including the child's age, gender, grade, and mental health diagnoses, as well as demographic questions for parents to assess race, gender, education level, and other factors of significance. In addition, items were included to assess parents' and children's perceptions of how well they communicate about their emotions, and the number of times they had seen *Inside Out*© previously. The parent and child questionnaires are included in Appendices U and V, respectively.

Eyberg Child Behavior Inventory (ECBI)

The ECBI is a 36-item, Likert-type scale instrument that requires parents to evaluate their children's problematic behaviors, including interpersonal difficulties, destructive tendencies, and attention problems (see Appendix W). The assessment includes two subscales, producing an Intensity score and a Problem score. The Intensity score reflects the frequency of problematic behaviors, whereas the Problem score reflects the number of "problem behaviors" that parents endorse (a "Yes/No" answer to each item indicating whether or not the endorsed behavior is considered a problem for the parent). For the current investigation, only the Intensity scores were included in analyses.

Prior evaluations of the psychometric properties of the ECBI have yielded good results. A restandardization study conducted by Colvin, Eyberg, and Adams (1999) that included 798 children ages 2-16 demonstrated the high internal consistency of the ECBI Intensity scale (α = .95). The internal consistency of this measure was also computed for the current sample, yielding a Cronbach's alpha coefficient of α = .964. These data suggest that this measure is a valid and reliable measure of parents' perceptions of their children's behavioral concerns. The test-retest reliability has also been found to be high across 3 weeks (r = .86, Robinson, Eyberg, & Ross, 1980), 12 weeks (r = .80), and a 10-month period (r = .75; Eyberg & Pincus, 1999). The ECBI also has sound validity. Boggs, Eyberg, and Reynolds (1990) found that ECBI scores were correlated with overall scores on the Child Behavior Checklist (CBCL; Achenbach & Edelbrock, 1983), a standardized measurement of children's behavioral problems. Furthermore, ECBI scores were significantly correlated with observed behavioral problems among children ages 3-5 years (Webster-Stratton & Eyberg, 1982).

A series of independent samples t-tests were conducted for the current sample to analyze group differences in ECBI Intensity scores. Clinically significant Intensity T-scores fall at or above $T = 60$. In general, children who were reported to have at least one mental health concern yielded an average ECBI Intensity T-score of 63.44 ($SD = 8.17$), which fell in the clinical range and was significantly higher than children without mental health concerns ($M = 48.55$, $SD = 10.54$), $p = .003$. ECBI scores were significantly higher among children diagnosed with ADHD ($M = 66.00$, $SD = 8.67$) than children with no diagnosis ($M = 50.64$, $SD = 10.29$), $p = .005$. The same was true for ASD, with average scores of children with a diagnosis of autism meeting clinical significance ($M = 69.00$, $SD = 12.53$) and exceeding scores of children without ASD ($M = 52.82$, $SD = 10.50$), $p = .027$. Children with anxiety also had significantly higher ECBI scores ($M = 63.50$, $SD = 9.69$) than nonanxious children ($M = 51.71$, $SD = 11.40$), $p = .041$. Additionally, children who had been or were currently engaged in therapy at the time of the study obtained a significantly higher ECBI score ($M = 64.13$, $SD = 8.14$) than children with no history of therapeutic services ($M = 49.33$, $SD = 10.59$), $p = .004$. These results lend further evidence of the strong validity of this measure.

Emotion Competence Measures

As previously discussed, emotion regulation is a dynamic process that changes across development. As such, the methodology for examining ER must adapt to the subjects' age and developmental stage (Adrian, Zeman, & Veits, 2011). Specifically, ER research uses mostly observational methods with infants, toddlers, and preschoolers, and expands to self-report methods as subjects reach middle childhood and adolescence (Adrian et al., 2011). In addition, Adrian and colleagues (2011) noted the importance of using more than one methodology (i.e., self-reports, other-reports, observational methods, or physiological measures) to examine

emotion regulation. Although the majority of published studies in emotion regulation from the past 35 years used only a single method to examine ER in children (Adrian et al., 2011), this practice is insufficient, as ER presents as a multifaceted concept that should be investigated with multiple measures (Adrian et al., 2011). Thus, as the current study focused on participants in middle childhood, the methodology included self- and parent-report measures to capture a broad understanding of subjects' ER skills and strategies with developmentally appropriate, multi-informant techniques. Of note, there is a dearth of psychometrically sound emotion regulation assessment tools specifically for children (Adrian et al., 2011); therefore, researchers have limited options for assessment measures in this field. The measures used for the current investigation have been found to be valid and reliable for the assessment of various facets of ER in childhood.

Prior to this study, a pilot study was conducted to obtain feedback from parents and children to determine whether the measures used were developmentally appropriate and understandable by the child participants. Verbal feedback from parents and children indicated that the measures were clear and developmentally appropriate for ages 9-10; no participant expressed any difficulty in understanding what was being asked. Notably, one child participant required her mother to read the items for her due to severe dyslexia. However, this did not preclude the child from understanding the items verbally or participating throughout the study. Therefore, the following measures were considered to be developmentally appropriate for the target age range in this study.

Emotion Regulation Checklist (ERC). The Emotion Regulation Checklist (ERC; Shields & Cicchetti, 1997) was introduced to the field during the biennial conference held by the Society for Research in Child Development (Shields & Cicchetti, 1995). This widely used other-

report measure evaluates ER processes, such as emotional lability and intensity, via a 24-item, 4-point Likert-type scale (1 = never; 2 = sometimes; 3 = often; 4 = almost always). It has been validated for use with children between ages 6 and 12 years (Shields & Cicchetti, 1997). In evaluating the factor structure of the ERC, Shields and Cicchetti (1997) found two factors representing Emotion Regulation (ER) and Lability/Negativity (LN). The full measure and both subscales have good to excellent internal consistency ($\alpha = .83$ for ER; $\alpha = .96$ for LN; $\alpha = .89$ for the total score). Internal consistencies on this measure were computed for the current sample, yielding strong alpha coefficients for the subscales of ER ($\alpha = .89$) and LN ($\alpha = .92$).

Shields and Cicchetti (1997) also demonstrated the convergent validity of the ERC, reporting significant correlations with criterion measures of emotion regulation ($r = 0.44$, $p < .001$) and emotional lability/negativity ($r = -0.79$, $p < .001$). A series of Pearson correlations was conducted for the current sample. As expected, a significant negative correlation was found between the ER and LN subscales of this measure ($r = -.900$, $p = .001$). Additionally, scores on the ER subscale were significantly negatively correlated with scores on the ECBI Intensity subscale ($r = -.796$, $p = .000$). The LN subscale scores for the current sample were strongly correlated with their ECBI Intensity scores ($r = .894$, $p = .000$).

Independent t-tests for the current sample revealed significant group differences in ER and LN scores for children based on diagnosed mental health concerns, lending support for the criterion validity of this measure. Children with reported mental health concerns had significantly lower ER scores than children with no such concerns ($p = .001$). This was also true for children diagnosed with ADHD ($p = .001$) and anxiety ($p = .042$) compared to normal controls. Additionally, children with mental health concerns scored significantly higher on the LN subscale than children without mental health diagnoses ($p < .0005$). Thus, this measure is

considered a reliable and valid questionnaire for parents to report on their children's level of emotion regulation and overall emotionality. See Appendix X for the ERC.

Emotion Awareness Questionnaire (EAQ). Rieffe and her colleagues (2007) developed and subsequently revised the Emotion Awareness Questionnaire (EAQ; Rieffe et al., 2008), a 30-item self-report measure used to assess six aspects of emotional functioning in children and adolescents. The items are rated via a 3-point Likert-type scale (1 = not true, 2 = sometimes true, 3 = often true). Of note, the current study used 3 of the 6 subscales of this measure: Differentiating Emotions (DE), Verbally Sharing Emotions (VS), and Not Hiding Emotions (NH; Rieffe et al., 2008). Therefore, children in this study responded to 15 EAQ items.

The rationale for selecting these subscales was two-fold. First, these subscales specifically pertain to aspects of emotion understanding and regulation that are of particular interest in this study (e.g., understanding one's own and others' emotions, Pons et al., 2004; suppressing one's distressing emotions, Gross, 2002); the other subscales were either not specifically targeted in this study (e.g., awareness of physiological symptoms, attending to others' emotions) or were addressed by other measures (e.g., analyzing one's emotions). As the children had a limited amount of time to complete the set of measures before the intervention, it was beneficial to eliminate extraneous items wherever possible. As the scoring simply entailed adding the item scores, with higher scores indicating better emotion competence, the elimination of these subscales did not impact the validity of this measure (Lahaaye, Luminet, Van Broeck, Bodart, & Mikolajczak, 2010).

The EAQ has fair psychometric properties. Rieffe and colleagues (2008) reported that psychometric properties are expected to be lower than those typically reported for adult measures, given the young age of the participants (M = 10.7 years). One-year test-retest

reliabilities for the subscales produced Pearson's r's ranging from .45 to .52 (Camodeca & Rieffe, 2013). Alpha coefficients representing the internal consistencies among the six subscales ranged from .64 to .68, with the NH subscale among the highest consistencies (α = .68). This subscale is of special interest to the current study, as its items reflect various aspects of emotion suppression (e.g., *"When I am angry or upset, I try to hide it,"* Rieffe et al., 2008, p. 3). For the current sample, internal consistencies on the three subscales of this measure were excellent (α = .989 for DE, α = 1.000 for VS, α = 1.000 for NH), and for the three subscales together (α = .998). These alpha levels are unusually high, given the small number of items on each subscale: the DE subscale consisted of 7 items, the VS subscale, 3 items, and the NH subscale, 5 items. Although inflated alpha coefficients can reflect redundancy of items (Tavakol & Dennick, 2011), it is more probable that the alpha coefficients for the current sample are an artifact of the small sample size used in the analysis (Rouquette & Falissard, 2011).

Rieffe and colleagues (2008) found that all subscales showed good convergent validity with internalizing symptoms as reported on several self-report measures. Specifically, the Not Hiding Emotions subscale was significantly negatively correlated with measures of somatic symptoms (r = -.18), social anxiety (r = -.23), worry/rumination (r = -.22), and depression (r = -.17), all of which had p-values of $p < .01$. Among the current sample, independent samples t-tests revealed that children with reported general mental health conditions, anxiety, and ADHD scored lower on the DE subscale than children without these diagnoses (p's < .05).

A series of Pearson correlation coefficients was conducted for the current sample to examine criterion-related validity. Results indicated that the Differentiating Emotions subscale was significantly positively correlated with expected subscales on the Child and Adolescent Mindfulness Measure (CAMM). Specifically, DE scores correlated with CAMM subscales

assessing children's emotional awareness (r = .509, p = .022), emotion acceptance (r = .611, p = .004), and the total CAMM score (r = .578, p = .008). The Verbal Sharing subscale was also correlated with the CAMM subscale that measured children's emotional awareness (r = .501, p = .024). The Not Hiding subscale of the EAQ was significantly correlated with Verbal Sharing (r = .479, p = .033). In addition, the NH subscale negatively correlated with a measure of children's emotion suppression used in this investigation (r = -.737, p = .000). Given these results, the EAQ appears to be a psychometrically sound measure of children's emotional experiences, and the NH subscale may be a useful supplemental tool for assessing children's experiences of suppressing their feelings (Rieffe et al., 2008). See Appendix Y for the 3 subscales of the EAQ used in this study.

Emotion Regulation Questionnaire for Children and Adolescents (ERQ-CA). The ERQ-CA (Gullone & Taffe, 2012) was adapted from the original Emotion Regulation Questionnaire (ERQ; Gross & John, 2003) to create a psychometrically sound measure for evaluating ER in middle childhood and adolescence. The ERQ was created in light of Gross's (1998) process-oriented model of regulation. It is comprised of 10 items, six of which assess the use of cognitive reappraisal and the remaining four of which assess suppression strategies. Responses are given via a 7-point Likert-type response scale (Gross & John, 2003). Similarly, the ERQ-CA also evaluates children and adolescents' use of ES and CR. To adapt the scale for children, Gullone and Taffe (2012) revised the wording to be developmentally appropriate and reduced the response scale from seven points to five (1 = strongly disagree; 2 = disagree; 3 = half and half; 4 = agree; 5 = strongly agree).

With regard to psychometric validity and reliability, the ERQ boasts high internal consistency (Reappraisal: α = .79; Suppression: α = .73), high test-retest reliability after three

months for both scales (r = .69), and good convergent and discriminant validity (Gross & John, 2003). Gullone and Taffe (2012) evaluated the psychometric properties of the ERQ-CA among three separate age groups (10- to 12-year-olds, 13- to 15-year-olds, and 16- to 18-year-olds), and found comparable results. With 10- to 12-year-olds, both scales showed high or moderate internal consistency (α = .82 for CR; α = .69 for ES). Gullone and Taffe (2012) suggested that the reduced alpha coefficient found for the ES scale was due to the small number of items on this scale compared to the CR scale. These results were consistent with the current sample: Good internal consistency was demonstrated on the CR subscale (α = .861), while internal consistency was moderate for the ES subscale (α = .587).

In addition, Gullone and Taffe (2012) reported sound construct validity and convergent validity. For the current sample used in this investigation, a significant negative correlation was found between the ES scale and Not Hiding Emotions subscale on the EAQ (r = -.576, p = .024). Thus, overall, the ERQ-CA is considered a reasonably valid and reliable measure of emotion suppression and cognitive reappraisal in middle childhood (Gullone & Taffe, 2012). The ERQ-CA can be found in Appendix Z.

Child and Adolescent Mindfulness Measure (CAMM). Because emotion acceptance has proven to be an adaptive and positive emotion regulation strategy, this study included a measure that assesses children's emotion acceptance. The Child and Adolescent Mindfulness Measure (CAMM; Greco, Baer, & Smith, 2011) was developed to evaluate children's overall use of mindfulness techniques. The CAMM was adapted from three factors on the Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004), including *observing* (noticing internal thoughts, feelings, or bodily sensations); *acting with awareness* (remaining aware of the present moment and current activities); and *accepting without judgment*. This third subscale is of special

import to the current study, as it examines children's ability to accept their current internal state without judgment or criticism. From these factors, Greco and colleagues (2011) developed the 10-item, 5-point Likert-type scale (0 = never true; 1 = rarely true; 3 = sometimes true; 3 = often true; 4 = always true). The measure was originally developed with 25 items; however, Greco and colleagues (2011) revised and shortened the measure to improve the factor structure and internal consistency of the items.

Greco and colleagues (2011) evaluated the psychometric properties of the revised CAMM with a large sample of children and adolescents between the ages of 10 and 17 years (M = 12.68 years). Greco and colleagues (2011) showed that the CAMM scores were negatively correlated with self-reported somatization (p = -.40), internalizing symptoms (p = -.50), externalizing symptoms (p = -.37), and thought suppression (p = -.58), and positively correlated with overall quality of life. All zero-order correlations reached significance at $p < .01$, providing support for the convergent validity of the CAMM. A series of correlations were computed for the current sample. Scores on Acting with Awareness significantly positively correlated with scores on the Differentiating Emotions and Verbal Sharing subscales of the EAQ (r*'s* = .509, .501, p*'s* < .05). In addition, Accepting without Judgment scores negatively correlated with parent-reported mental health concerns (r = -.453, p = .045).

The measure has been shown to have adequate internal consistency among children between ages 10 and 12 years (α = 0.71; Bruin, Zijlstra, & Bogels, 2014) and adolescents (α = 0.84; Kuby, McLean, & Allen, 2015), and acceptable test-retest reliability over a one-month period (r = 0.46; Cunha, Galhardo, & Pinto-Gouveia, 2013). For the current sample, internal consistencies on the subscales were found to be moderate (Accepting without Judgment: α = .581, Acting with Awareness: α = .651) and the entire measure had an internal consistency of α =

.807. Thus, the CAMM appears to be a psychometrically valid and reliable assessment tool for examining the extent to which children and adolescents accept their emotions, rather than suppress them (see Appendix AA).

To provide further evidence of the validity of the measures used in this study, a series of Pearson correlations was conducted to demonstrate the convergent and divergent validity of the various measures. A correlation matrix of the posttest scores of the measures is presented in Table 5.

Table 5

Summary of Pearson Correlations of Posttest Scores on the ECBI, ERC, EAQ, ERQ-CA, and CAMM

Measure	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
1. ECBI	—	-.874**	.873**	-.224	.117	-.299	-.467	.066	-.113	-.503	.105	-.270
2. ERC-ER	-.874**	—	-.884**	.294	-.029	.289	.461	.120	.054	.439	-.182	.180
3. ERC-LN	.873**	-.884*	—	-.365.	.132	-.319	-.333	-.135	-.086	-.412	-.028	-.279
4. EAQ-D	-.224	.294	-.365	—	.465	.090	-.069	.023	.486	.559*	.531*	.709**
5. EAQ-VS	.117	-.029	.132	.465	—	.343	.064	-.420	.427	.263	.440	.473
6. EAQ-NH	-.299	.289	-.319	.090	.343	—	.171	-.576*	.059	.110	.058	.108
7. ERQ-CR	-.467	.461	-.333	-.069	.064	.171	—	-.299	.270	.443	-.355	.137
8. ERQ-ES	.066	.120	-.135	.023	-.420	-.576*	-.299	—	-.250	-.027	.211	.042
9. CAMM-Observing	-.113	.054	-.086	.486	.427	.059	.270	-.250	—	.737**	.270	.786**
10. CAMM Awareness	-.503	.439	-.412	.559*	.263	.110	.443	-.027	.737**	—	.152	.828**
11. CAMM Accepting	.105	-.182	-.028	.531*	.440	.058	-.355	.211	.270	.152	—	.663**
12. CAMM Total	-.270	.180	-.279	.709**	.473	.108	.137	.042	.786**	.828**	.663**	—

Note. ECBI = Eyberg Child Behavior Inventory; ERC-ER = Emotion Regulation Checklist, Emotion Regulation Subscale; LN = Lability/Negativity Subscale; EAQ-D = Emotion Awareness Questionnaire, Differentiating Emotions; VS = Verbal Sharing of Emotions; NH = Not Hiding Emotions; ERQ-CR = Emotion Regulation Questionnaire for Children and Adolescents, Cognitive Reappraisal Subscale; ES = Emotion Suppression Subscale; CAMM = Child and Adolescent Mindfulness Measure.
* $p < .05$
** $p < .01$

Feedback Questionnaires

To obtain information regarding parents' and children's attitudes toward and perceptions of the intervention, participants were provided a brief, Likert-type scale posttest immediately following the intervention. Parent- and child-report measures were developed by the researcher specifically to ascertain parents' and children's interest in the intervention, their perception of the intervention's helpfulness in learning about emotions, and their prediction of the extent to which participating would change their behavior in discussing emotions. The feedback questionnaire for the treatment group included two items specifically regarding parents' perceptions of the children's group discussion; these items were removed from the control group's questionnaires. The child's survey similarly assessed children's level of interest, perception of the intervention's helpfulness, and their prediction of how much they might change their behaviors following the intervention. Again, questionnaires for the treatment group included one item that assessed their perceptions of the group discussion. This item was removed for the control group.

These questionnaires were designed with the intent of analyzing results for three domains of helpfulness, interest, and impact. Specifically, participants answered questions pertaining to how helpful they perceived the intervention to be in teaching them new ways of managing emotions, their level of interest in participating in the intervention, and their prediction of how much the study will impact the way they address their own or their child's emotions at home. Higher scores indicated more positive views of the intervention. Prior to analyzing the results, Cronbach's alpha was used to assess the internal consistency of the questionnaires. Analysis of the Parent Feedback Questionnaires for the treatment and control groups revealed internal consistencies of $\alpha = .772$ and $\alpha = .752$, respectively. The Child Feedback Questionnaire had

moderate to strong internal consistencies for the treatment and control groups (α's = .594 and .832, respectively).

Hypotheses and Statistical Analyses

The research was guided by the following hypotheses:

H1: It was predicted that children who participated in the treatment group (i.e., who participated in a group discussion after watching the film) would demonstrate improved emotion competence, as evidenced by significant positive changes in the self- and parent-report measures from pretest (Phase 1) to follow-up (Phase 2), compared to children who only watched the film.

H2: It was hypothesized that the intervention would be regarded as helpful, interesting, and impactful by parents and children; it was further predicted that parents and children in the treatment condition would report higher degrees of interest, impact, and helpfulness for the intervention than would control participants.

H3: The frequency of parent-reported emotion-related conversations held between children and parents who participated in the treatment group was predicted to be greater than that of participants in the control group.

H4: It was hypothesized that the frequency of parent-reported emotion-related conversations after the intervention would be a significant predictor of children's emotion competence improvement from Phase 1 to Phase 2.

CHAPTER IV

RESULTS

Posttest data were completed by 15 children (75%) and 13 parents (72.2%). Three parents completed measures for more than one child, and therefore, there was a discrepancy between the number of parents and children. A total of 5 parent-child dyads did not complete any follow-up measures.

Demographic Questionnaires

Several items in the demographic questionnaires assessed parents' perceptions of how well they understand their children's emotions, how often their children share their emotions, and whether they had seen the film *Inside Out* prior to participating in this study. Children were asked to report how often they share their feelings with their parents and answer questions regarding watching *Inside Out* in the past. Frequency counts and percentages were used to analyze these data. In addition, independent samples t-tests were used to assess for group differences. Furthermore, a series of Pearson Chi-Square tests of independence were conducted to determine any relationships between parents' and children's responses on the different measures.

Emotion Sharing

Participants were asked to respond to three questions about how frequently children share their emotions on a 5-point, Likert-type scale (1 = Never, 2 = A little, 3 = Sometimes, 4 = Often, 5 = Almost Always). There were no significant differences between groups on any of the questions. On average, parents indicated that their children share their happy feeling with them fairly often (M = 3.65, SD = .99), and children indicated that they share their happy feelings with

their parents often (M = 3.45, SD = 1.23). A chi-square test was performed and no difference was found between parents' and children's responses on this question (p = .876).

On average, parents reported that their children sometimes share their sad feelings (M = 3.25, SD = .91), whereas children indicated, on average, that they share their sad feelings with their parents "a little" (M = 2.80, SD = 1.15). These responses were not significantly different, as determined by a chi-square analysis (p = .835). On average, parents indicated that they are "sometimes" aware of their children's feelings (M = 3.55, SD = .94) and children reported that their parent "sometimes" understands their feelings (M = 3.50, SD = 1.15); however, chi-square tests indicated no significant relationship between these responses (p = .676). In fact, a series of chi-square tests was performed, and results indicated no significant differences among any responses on these items (p's > .05).

Movie Viewing

Parents and children were asked if they had seen *Inside Out*© prior to participating in the study, and to report the approximate frequency of viewing the movie. Nineteen children (86.4%) reported that they had seen *Inside Out*© before attending the study. Among these children, 10 (45.5%) reported that they had seen the movie 1-2 times, 5 children (22.7%) had viewed it 3-5 times, and 3 children (13.6%) reported seeing the film 6 or more times. Fisher's exact test of independence revealed no group differences in the number of times children reported seeing the film between treatment and control groups (p = .155).

Twelve parents (54.5%) reported seeing *Inside Out*© prior to participating, and 7 parents (31.8%) denied seeing the film before. Eleven of these parents reported that they had watched the movie with their child. Of these, 8 parents (36.4%) reported that they had discussed *Inside Out*© with their children afterward, and 3 (13.6%) reported that they never discussed it.

ECBI

To assess for any differences in parent-reported behavioral issues between the treatment and control conditions, as well as to determine the extent to which such problems might impact results, parents completed the ECBI Intensity subscale at pre- and posttest. Although improvement in children's behavioral problems was beyond the scope of this intervention, parents completed this measure during both phases of the study to assess for any significant changes in scores. As such, independent samples t-tests and ANOVAS were conducted to analyze group differences.

The T-score cut-off for clinically significant problem behaviors on the ECBI is $T = 60$. Overall, the entire sample endorsed an average T-score of 55.25 ($SD = 12.02$) on the ECBI at pretest, indicating that, on average, parents did not report clinically significant problem behaviors. Independent samples t-tests indicated that there were no group differences in the ECBI Intensity T-score at pretest between the treatment and control conditions ($p = .657$). However, t-tests did reveal significant group differences on this measure between children for whom parents indicated the presence of one or more mental health concerns ($M = 63.44$, $SD = 8.17$) and children who did not have diagnosed mental health concerns ($M = 48.55$, $SD = 10.54$), $t(18) = 3.468$, $p = .003$. Therefore, analyses controlled for mental health conditions by entering them as a covariate when examining differences between pretest and posttest scores. To do so, a 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was conducted. There was no statistically significant interaction between group and time on ECBI T-scores ($p = .133$, $\eta_p^2 = .165$), suggesting that the intervention did not significantly change children's externalizing behaviors. The main effect of time showed no significant differences in mean ECBI T-scores between pretest and posttest ($p = .869$).

Similarly, the main effect of group showed no significant difference in mean ECBI scores between treatment and control groups (p = .922)

Emotion Competence

The research hypotheses were analyzed by performing series of independent samples t-tests, repeated measures Analyses of Variance (ANOVA), and linear regression analyses. Partial eta squared effect sizes (η_p^2) were calculated to demonstrate the size of the difference in scores between groups; that is, they quantified the strength of the effect demonstrated. Effect sizes of at least 0.14 are considered large, and effect sizes of .06 are considered medium (Cohen, 1988). Only medium and large effect sizes were reported for this sample. An alpha level of $p < .05$ was used for all analyses.

Hypothesis 1

The first hypothesis of this study was that children who participated in the treatment group (i.e., who participated in a group discussion after watching the film) would demonstrate improved emotion competence compared to children in the control group, as evidenced by increases in participants' scores on the emotion measures from pretest (Phase 1) to posttest (Phase 2). This hypothesis was tested by performing a series of repeated measures ANOVAs. Although this method increased the risk for Type 1 error, it was considered acceptable due to the exploratory nature of the pilot study. Indeed, given the small sample size and few significant results, the researcher used caution to examine possible trends that might prove to be significant in future, larger studies of this kind.

Prior to completing the ANOVAs, assumptions were tested for all measures. The data was normally distributed, as assessed by Shapiro-Wilk's test of normality ($p > .05$) and had no outliers, as assessed by no studentized residuals greater than +/- 3 standard deviations. There

was homogeneity of variances ($p > .05$), as assessed by Levene's test of homogeneity, and homogeneity of covariances ($p > .05$), as assessed by Box's test. The following measures were used to assess the first research hypothesis:

ERC. A series of independent samples t-tests were conducted to assess between-group differences in pretest scores on the two subscales of the ERC. Analysis revealed no significant difference in pretest scores on the emotion regulation (ER) subscale between the treatment group and control group ($p = .868$). However, there were significant differences in ER scores between children who were reported to have at least one mental health concern ($M = 33.67$, $SD = 3.77$) and those with no reported diagnoses ($M = 42.91$, $SD = 5.63$); $t(18) = -4.203$, $p = .001$. Furthermore, children from families who reported an annual income of $65,000 or higher (the estimated median income level per analysis of parents' reported income) performed significantly better on the ER subscale ($M = 41.09$, $SD = 6.27$) than children from families with an annual income below $65,000 ($M = 34.75$, $SD = 5.78$); $t(17) = 2.248$, $p = .038$.

Therefore, to determine if there was significant improvement on the ER subscale from pretest to posttest, a 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was conducted, controlling for reported mental health concerns and annual income. There was no statistically significant interaction between the intervention and time on ER scores ($p = .782$). There were no significant main effects of time ($p = .263$) or group ($p = .714$).

It was predicted that changes in emotion regulation would be partially evidenced by significantly decreased scores on the lability/negativity (LN) subscale of the ERC, as lower scores on this subscale indicate less emotional lability and better emotion regulation. An independent samples t-test revealed no significant differences in the lability/negativity (LN)

pretest scores between treatment and control groups (p = .928). However, children with reported mental health concerns had a significantly higher score on the LN subscale (M = 27.56, SD = 4.13) than children with no mental health concerns (M = 17.36, SD = 4.76); $t(18) = 5.051$, $p <$ .0005. Therefore, a 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was conducted, controlling for reported mental health concerns. Analyses revealed no significant interaction between the intervention and time on the LN subscale scores (p = .863). Furthermore, the main effect of time showed no significant difference in mean LN scores between pretest and posttest (p = .420). The main effect of group also showed no significant difference in mean LN scores between treatment and control conditions (p = .972).

For each measure, a visual inspection of scores was completed to identify clinically significant changes that may be obscured by combined group data. This study had a small sample size, which reduced the likelihood of achieving statistically significant results. However, it is possible that individual participants demonstrated clinically significant changes. Inspection of individual score differences on the ERC showed mild improvement. In the treatment group, two children's ER scores improved by one standard deviation. One of these children also demonstrated a clinically significant decreased score on the LN subscale, indicating clinical improvement in emotional lability and negativity. This child's score fell by one SD and dropped from above the 75th percentile of scores to the 50th percentile at posttest. Both children who demonstrated clinical improvement were reported to have diagnoses of ADHD. One child had concurrent anxiety and another child had been diagnosed with ASD. No children in the control condition made clinically significant improvement on either subscale of the ERC. These

improvements shed light on the potential impact of this intervention, irrespective of statistical significance and sample size.

EAQ. Three subscales of the EAQ were administered to assess for children's beliefs, behaviors, and attitudes regarding verbally sharing their emotions with others (VS) and not hiding their emotions (NH), as well as to determine changes in their ability to differentiate emotions from one other (DE). Higher scores indicated better emotion awareness. A series of independent samples t-tests were conducted to determine any between-groups differences in pretest scores on these measures. Results indicated no differences between groups at pretest on the VS subscale (p = .230), nor on the NH subscale (p = .604). However, pretest scores on the DE subscale were significantly higher for the treatment group (M = 15.67, SD = 2.79) than for controls (M = 13.60, SD = 1.14); $t(17) = 2.339$, p = .032. Analyses also revealed significant differences in DE scores between boys (M = 13.63, SD = 1.41) and girls (M = 16.17, SD = 2.80); $t(18) = -2.368$, p = .029. Furthermore, children with reported mental health concerns performed significantly worse on this subscale (M = 13.56, SD = 1.13) than did children with no such concerns (M = 16.45, SD = 2.81); $t(18) = -2.901$, p = .010. As such, analyses of this subscale controlled for gender differences and mental health concerns by entering them as covariates.

It was predicted that children in the treatment group would demonstrate significant improvement in scores on the DE subscale of this measure. Controlling for gender and mental health concerns by entering them as covariates, a 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was conducted to test this hypothesis. There was no significant interaction found between time and group for DE scores (p = .401, η_p^2 = .059). The main effect of time showed no significant difference in mean

DE scores between pretest and posttest (p = .302), and the main effect of group similarly showed no significant difference between treatment and control condition (p = .214, η_p^2 = .137).

It was hypothesized that the treatment group would demonstrate changes in expressive suppression, as evidenced by significantly increased scores on the VS and NH subscales of the EAQ from pre- to posttest. A 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was conducted to assess score changes on the VS subscale. There was a statistically significant interaction between the intervention and time on VS scores, $F(1, 13) = 5.239$, p = .039, η_p^2 = .287. There was a nearly statistically significant main effect of time on VS scores for the treatment group, with the treatment group scores increasing from pretest (M = 5.10, SE = .497) to posttest (M = 6.10, SE = .273), F (1, 9) = 4.50, p = .063, η_p^2 = .333. No significant main effect of time on VS scores was found for the control group (p = .242).

A 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was conducted to assess scores on the NH subscale. There was no statistically significant interaction between the intervention and time on NH scores (p = .769). However, the main effect of time showed a statistically significant difference in mean NH scores, $F(1, 13) = 9.617$, p = .008, η_p^2 = .425, indicating that, regardless of group, children's scores increased from pretest (M = 8.80, SD = 2.18) to posttest (M = 10.40, SD = .99). The main effect of group showed no statistically significant difference in mean NH scores between treatment and control group (p = .857).

Inspection of individual score differences from pretest to posttest yielded fairly robust clinical improvement. Four children improved their DE scores by one SD. One child's score, which fell within the 50th percentile at pretest, improved by two SDs, falling within the 75th

percentile at posttest. Three of these children participated in the treatment condition; none had any diagnosed mental health conditions. For the VS subscale, two children in the treatment condition demonstrated score improvement by one SD. Both children's scores were within the 25th percentile at pretest; at posttest, one child's score fell within the 50th percentile and one fell within the 75th percentile. Regarding the NH subscale, two children improved their scores by one SD, increasing from the 25th and 50th percentiles to the 75th percentile at posttest. Two children whose scores fell below the 25th percentile at pretest improved by 2 SDs and had scores falling within the 50th and 75th percentiles at posttest. The four children who demonstrated clinical improvement on this subscale participated in the treatment condition, and one was reported to have ADHD.

ERQ-CA. It was expected that children would demonstrate increased scores on the Cognitive Reappraisal (CR) subscale of the ERQ-CA, indicating better understanding and use of this regulation strategy. Prior to analyzing this hypothesis, a series of independent samples t-tests were conducted to determine the presence of group differences in pretest scores on the CR and ES subscales of the ERQ-CA. Analysis revealed no significant differences in CR scores based children's age, gender, presence of mental health concerns, or parents' annual income. However, t-tests revealed significant differences in CR pretest scores, with controls scoring higher (M = 23.60, SD = 2.97) than children in the treatment group (M = 16.73, SD = 5.75; $t(18) = -2.528$, $p = .021$. This trend continued at posttest, with children in the control group performing significantly better on the CR subscale (M = 21.40, SD = 3.91) than those in the treatment group (M = 16.70, SD = 3.09); $t(13) = -2.549$, $p = .024$. This difference remained significant regardless of controlling for children's age, gender, and presence of mental health concerns, or parents' reported annual income.

Despite this group difference, a 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was conducted to determine the presence of any significant interactions or main effects for the CR subscale. There was no significant interaction between the intervention and time on CR subscale scores (p = .461), suggesting that the intervention did not impact children's reported use of cognitive reappraisal. The main effect of time showed no significant difference in CR scores (p = .461). As expected given pretest group differences, the main effect of group showed a significant difference in mean CR scores between treatment and control groups (F (1, 13) = 13.804, p = .003, η_p^2 = .515), with the control group scores (M = 22.500, SE = 1.275) significantly higher than treatment group scores (M = 16.700, SE = .901).

It was predicted that children would demonstrate significantly decreased scores on the Emotion Suppression (ES) subscale of this measure, indicating reduced reliance on suppressive strategies to regulate distressing emotions. No significant differences were found between groups on the ES subscale at pretest (p = .881). However, children at or above the median age of 9.50 years scored significantly higher on ES at pretest (M = 12.60, SD = 2.22) than children who were below the median age (M = 9.00, SD = 3.33); t(18) = 2.842, p = .011. Therefore, analyses of interaction and main effects for this subscale controlled for age differences by entering children's age as a covariate. A 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor was used for analysis, revealing no statistically significant interaction between the intervention and time on ES scores (p = .164, η_p^2 = .461). There were no statistically significant main effects of time (p = .459) or group (p = .476, η_p^2 = .515).

Individual score differences were visually inspected for both the CR and ES subscales. One child from the treatment condition demonstrated CR score improvement by one SD, increasing to the 50th percentile from a pretest score that fell within the 25th percentile. Two children demonstrated clinically significant decreases in emotion suppression scores; their ES scores fell by at least 2 SDs, both falling from the 75th percentile at pretest to the 25th percentile at posttest. Both children were in the control condition; one child was reported to have ADHD, depression, anxiety, and anger management difficulties.

CAMM. It was predicted that treatment group children's scores on the CAMM would improve from pretest to posttest, with increased scores indicating better observation of emotion, emotion acceptance, and awareness. Independent samples t-tests revealed no significant between-group differences in pretest scores on the CAMM subscales of Observing (p = .773), Acting with Awareness (p = .926), or Accepting Without Judgment (p = .454), nor on the total CAMM pretest score (p = .742). However, there were group differences found for several variables on certain subscales, all of which were taken into account for the analyses, as described below. Analyses of each subscale, as well as of the total CAMM score, were conducted via a 2 (Time: Pretest, Posttest) X 2 (Group: Treatment, Control) ANOVA with repeated measures on the first factor. The results are elucidated below:

Independent samples t-tests were conducted to determine group differences on the Observing pretest scores. Analyses revealed gender differences, with girls (M = 2.75, SD = 1.14) significantly outperforming boys (M = 1.50, SD = 1.20); $t(18) = -2.359$, p = .030. As such, analyses were conducted controlling for participant gender, by entering gender as a covariant. Analysis of variance showed no statistically significant interaction between the intervention and

time on Observing scores (p = .665). There were also no significant main effects for time (p = .363) or group (p = .314).

Independent samples t-tests found group differences on several variables for Accepting without Judgment. Children with reported mental health concerns obtained significantly lower pretest scores on this subscale (M = 12.44, SD = 3.00) than children without concerns (M = 16.00, SD = 4.12); $t(18) = -2.156$, p = .045). There was also a significant difference between girls' (M = 16.08, SD = 4.14) and boys' scores (M = 11.90, SD = 2.10) at pretest (p = .008). Thus, this subscale was analyzed controlling for mental health concerns and gender by entering these variables as covariants. Analysis of variance showed a significant interaction between intervention and time on Accepting without Judgment scores, $F(1, 11) = 5.963$, p = .033, η_p^2 = .352, such that children in the treatment group demonstrated significant improvement on this subscale from pretest (M = 13.40, SE = .721) to posttest (M = 15.20, SE = .859), p = .038, η_p^2= .483. Children in the control group did not demonstrate similar improvement (p = .716).

No pretest differences were found for the Acting with Awareness subscale. Therefore, analysis was conducted without covariates. Analyses revealed no significant interaction between time and condition on Acting with Awareness scores (p = .297, η_p^2 = .083). Furthermore, there were no significant main effects found for time (p = .723) or for group (p = .941).

Analyses were also conducted for the total CAMM score. Independent samples t-tests revealed significant gender differences CAMM pretest scores, with girls' scores (M = 26.33, SD = 7.14) significantly higher than boys' (M = 19.38, SD = 5.10); $t(18) = -2.374$, p = .029. As such, analyses were conducted controlling for gender by entering it as a covariant. Analysis of variance found a nearly significant interaction between time and group on CAMM total scores, $F(1, 12) = 4.292$, p = .061, η_p^2 = .263. Children in the treatment group demonstrated

improvement in total CAMM scores from pretest (M = 21.50, SE = 1.64) to posttest (M = 24.90, SE = 1.74), p = .004, η_p^2 = .668. This difference was not significant for control participants (p = .813). There were no significant main effects for time (p = .085, η_p^2 = .227) or for group (p = .970).

Visual inspection of individual score differences demonstrated positive results for children from both groups. From the treatment condition, one child's Observing pretest score, which fell below the 25th percentile, increased by 2 SDs and fell above the 75th percentile at posttest. On Acting with Awareness, 4 children, 2 from the treatment group and 2 controls, demonstrated improvement in scores by 1 SD, rising from within the 25th percentile at pretest to the 50th percentile at posttest. Additionally, 3 children's scores on Accepting without Judgment improved by 1 SD. All 3 children participated in the treatment group, and one was reported to have ADHD and anxiety. Two of these children's scores improved from within the 25th percentile at pretest to at least the 75th percentile at posttest. Finally, 5 children demonstrated improvement on their total CAMM scores of 1 SD. Two children's scores improved from the 25th percentile to the 50th percentile at posttest, and two had scores that increased to the 75th percentile at posttest. Four of these 5 children were in the treatment group, and one had been diagnosed with ADHD. Pretest and posttest scores for all measures are summarized in Table 6.

Table 6

Summary of Means and Standard Deviations of Pre- and Posttest Scores

Measure	Treatment *n* = 15		Control *n* = 5		Total Sample *n* = 20	
	Pretest *(SD)*	Posttest *(SD)*	Pretest *(SD)*	Posttest *(SD)*	Pretest *(SD)*	Posttest *(SD)*
ERC						
Emotion Regulation	38.60 (7.21)	40.36 (5.95)	39.20 (5.59)	39.20 (5.76)	38.75 (6.70)	40.00 (5.73)
Lability/Negativity	21.80 (7.08)	20.45 (5.72)	22.40 (6.58)	21.80 (5.89)	21.95 (6.79)	20.88 (5.61)
EAQ						
Differentiating	15.67 (2.79)	17.70 (2.71)	13.60 (1.14)	15.00 (2.65)	15.15 (2.62)	16.80 (2.91)
Not Hiding Emotions	9.40 (2.67)	10.40 (1.17)	9.00 (0.71)	10.40 (0.55)	8.80 (2.18)	10.40* (0.99)
Verbal Sharing	5.10 (1.64)	6.10 (0.88)	6.60 (1.67)	5.80 (0.84)	5.75 (1.68)	6.00 (0.85)
ERQ-CA						
Cognitive Reappraisal	16.73 (5.75)	16.70 (3.09)	23.60 (2.97)	21.40 (3.91)	18.45 (5.96)	18.27 (3.97)
Emotion Suppression	10.73 (3.43)	11.00 (2.21)	11.00 (3.32)	8.40 (2.70)	10.80 (3.32)	10.13 (2.61)
CAMM						
Observing	2.20 (1.26)	2.50 (1.18)	2.40 (1.52)	2.60 (0.55)	2.25 (1.29)	2.53 (0.99)
Accepting without Judgment	14.80 (4.21)	15.20* (2.44)	13.20 (3.42)	12.60 (1.67)	14.40 (4.01)	14.33 (2.50)
Acting with Awareness	6.87 (2.56)	7.20 (3.19)	7.00 (3.24)	6.40 (2.41)	6.90 (2.65)	6.93 (2.89)
Total CAMM	23.87 (7.21)	24.90* (5.34)	22.60 (7.77)	21.60 (2.88)	23.55 (7.16)	23.80 (4.83)

Note. SD = standard deviation. ERC = Emotion Regulation Questionnaire; EAQ = Emotion Awarenss Questionnaire; ERQ-CA = Emotion Regulation Questionnaire for Children and Adolescents; CAMM = Child and Adolescent Mindfulness Measure.
* Significant change in score from pretest to posttest at the $p < .05$ level.

Hypothesis 2

The second hypothesis of this pilot study was that the intervention would be regarded as helpful, interesting, and impactful by parents and children. It was further predicted that parents and children in the treatment condition would report higher degrees of interest and perceived impact and helpfulness of the intervention than would controls. To analyze these predictions, data were collected to determine parents' and children's level of interest in the intervention, perceived helpfulness of the activity and handouts, and predicted impact participating would have on their emotion-related behaviors. These feedback questionnaires were completed immediately following the intervention, and all questions required responses based on a Likert-type scale, with higher scores indicating more positive perceptions. Data were analyzed using t-tests, as well as non-statistically to glean information for future studies of this nature.

Parent feedback questionnaires. To analyze these data, a series of independent sample t-tests were used to determine group differences among parents' responses on each item. In addition, frequency counts were used to assess parents' overall opinions of the intervention in terms of interest level, perceived impact, and helpfulness. Finally, parents were asked for written feedback about the intervention. Parents responded to all questions on a 4-point, Likert-type scale (0 = Not at all, 1 = A little, 2 = Pretty much, 3 = Very/A lot).

"How helpful was this study in learning about your child's emotions?" Across both treatment conditions, the scores ranged from 1 to 3 (M = 1.78, SD = .65), suggesting that parents found this intervention to be at least "a little" helpful in teaching them more about their children's emotions. The majority of parents responded that the intervention was "pretty helpful" in this regard. No difference in scores was found between groups.

"How much did this study teach you about talking with your children about their feelings?" Overall, scores on this question ranged from 1 to 3, with a mean score of 1.94 (*SD* = .54). This suggests that, on average, parents reported that this study helped them learn how to talk with their children about emotions a moderate amount. No statistically significant difference in scores was found between groups.

"After participating in this study, how likely is it that you will change the way you talk with your children about their feelings at home?" Parents' responses to this question ranged from 1 to 3, with an average score of 1.78 (*SD* = .73). Most parents indicated that they were "pretty likely" to change the way they talk about feelings at home. Scores did not significantly differ between groups.

"How interested were you in watching the movie with the children?" This question was designed to assess whether parents remained interested while watching *Inside Out*© with their kids. The scores ranged from 1 to 3. On average, parents indicated that they were between "somewhat" and "very" interested in watching the film (*M* = 2.61, *SD* = .70). No significant group differences were found in parents' reported interest levels.

"How much has this study changed the way you think about your child's emotions?" Overall, parents endorsed a mean score of *M* = 1.89 (*SD* = .83), suggesting that, on average, parents indicated that this study "somewhat" changed the way they consider their children's emotions. There was no significant difference found between treatment group scores on this question.

"Do you think your child will have a better understanding of their emotions after participating in the study?" This question assessed parents' perceptions of the helpfulness of the intervention in improving their children's emotion understanding. On average, parents

reported that they "somewhat" believed their child will better understand their feelings after the intervention (M = 1.94, SD = .64). These responses ranged from 1 to 3, with most parents endorsing a score of 2. No parent indicated that their child was not at all likely to better understand their feelings. These scores did not significantly differ between groups.

"How likely are you to talk about this study with your child after leaving today?" Most parents endorsed a 3 on this question, suggesting a high likelihood of talking with their children about the study. On average, parents indicated that they were between "somewhat" and "very" likely to discuss the study with their children afterward (M = 2.50, SD = .71). There were no group differences on this question.

"How interesting was listening to the children's discussion after the movie?" This question appeared on the Parent Feedback Questionnaire for the treatment group only. Scores on this question ranged from 2 to 3 with an average score of 2.45 (SD = .52), suggesting that, on average, parents were somewhat to very interested in watching the children's group discussion. Most parents indicated that the group discussion was moderately interesting to observe.

*"**After this study is over, how likely are you to help your child use the coping skills discussed today?"*** This question also appeared on the treatment group feedback questionnaire only. On average, parents reported being moderately to highly likely to help their children implement the discussed coping skills (M = 2.45, SD = .52), with their scores ranging from 2 to 3.

"After this study is over, what changes might you make to how you discuss emotions with your child at home?" Every parent responded to this question, with most indicating some change they intend to make at home. Nine parents indicated intent to change at least one aspect of their own communication strategies (e.g., "listen better," "validate emotions," and

"[communicate] more on his level"). Four parents indicated intention to guide their children in using better emotion regulation strategies by mentioning the study ("remind them what they talked about today," "refer to the movie as a reference"), identifying new coping skills ("help [child] identify better ways to react, new ways to calm down"), or discussing emotions ("acknowledge that any emotion is okay," "more talking about identifying…and understanding [emotions]"). Two parents in the sample did not identify any changes they intended to make; one indicated that the family was "already fairly open" about emotions, and the other parent cited their child's lack of communication and emotion sharing as a barrier to changing their emotion discussion ("She doesn't communicate…and shuts down […] Hard to discuss emotions with someone when this is the case").

The results of the parent feedback questionnaire overall lend support to the hypothesis that parents will regard the intervention as helpful and interesting. On average, parents indicated that the intervention would impact their behaviors at home, especially in regard to talking with their children about emotions, further supporting this hypothesis. Because there were no differences in scores between groups, the hypothesis that parents in the treatment condition would provide more positive feedback than controls was not supported.

Child feedback questionnaires. Like their parents' measures, children's feedback questionnaires assessed their immediate reactions to the intervention. Each question on the measure was analyzed using independent samples t-tests to assess for group differences in responses. Frequency counts were also used to assess children's reaction to the study in terms of interest level, perceived helpfulness of the intervention, and predicted impact of the study on their behaviors at home. Furthermore, the first four questions of the Child Feedback Questionnaire were derived from the EAQ, and analyzed for group differences, specifically in

children's beliefs about sharing their feelings with others, understanding their emotions, and approaching their emotions with curiosity and openness.

EAQ items. Four of the items on the Child Feedback Questionnaire were derived from the EAQ. The first item on the Feedback Questionnaire previously appeared on the pretest measure. All items were written on a 3-point, Likert-type scale (1 = Never, 2 = Sometimes, 3 = Often). A comparison of children's pretest scores on this item and score on the feedback questionnaire was completed via a paired-samples t-test. Furthermore, all four of these items were analyzed using frequency counts, as well as independent-samples t-tests to assess for group differences in these scores.

"Other people need to know how I am feeling." This item addressed children's perceptions of sharing their emotions with others. The item as originally written on the EAQ required reverse scoring ("Other people don't need to know how I am feeling"), and was simplified for the feedback questionnaire. In the treatment group, children's average pretest score was 1.85 (*SD* = .74), which did not significantly differ from their average score on this item on the Child Feedback Questionnaire. Children in the control group similarly did not demonstrate any significant change in score on this item from pretest to immediate posttest.

"My feelings can help me understand what's happened." This item was written on the same 3-point, Likert-type scale as mentioned above. Scores on this item ranged from 1 to 3, with a mode score of 2, suggesting that most children believed that their feelings can sometimes help them understand a situation. The average score among children in the treatment condition was 2.20 (*SD* = .68), which did not significantly differ from average control group scores.

"It is important to understand how I'm feeling." Children's scores ranged from 1 to 3, with an average score of 2.50 (*SD* = .69). The mode score was 3.00, suggesting that most

children believed it to be very important to understand their emotions. An independent samples t-test revealed significant differences in the endorsement of this item between the control group (M = 3.00, SD = 0.00) and the treatment group (M = 2.33, SD = .72); $t(14) = -3.568$, $p = .003$.

"I want to know why I feel bad about something." Most children endorsed a score of 3 on this item, and the average score suggested that overall, children sometimes wanted to understand why they have distressing feelings (M = 2.40, SD = .68). An independent samples t-test revealed no significant differences in average scores between treatment and control groups.

Feedback items. The remainder of the feedback questionnaire included questions regarding children's level of interest in the study, the perceived impact of the intervention on their emotion understanding and regulation skills, and their perception of the overall helpfulness of the intervention in teaching them skills for addressing their feelings. Unless otherwise stated, all response options were written on a 4-point, Likert-type scale (0 = Not at all, 1 = A little, 2 = Pretty much, 3 = Very/A lot).

"*How helpful was this activity in teaching you good ways to handle your feelings?"* On average, children found this activity "pretty helpful" in teaching them coping skills (M = 2.00, SD = .92). This was also the most frequently endorsed score on this question. Scores did not significantly differ between groups.

"After this activity, how likely are you to talk more about your feelings at home?" On average, children reported being "a little" to "pretty" likely to talk more about emotions with their family (M = 1.65 SD = 1.09; Mode = 1). No differences in scores were found between groups.

"How interesting was this activity for you?" The average score on this item was 2.15 (SD = .75). Scores ranged from 1 to 3 with a mode of 2, indicating that the majority of children

rated the intervention as "pretty interesting," regardless of treatment condition. Indeed, no statistically significant difference on Interest subscale scores was found between the treatment and control groups.

"How helpful do you think it was to have your parent here with you today?" This question was included to glean information regarding children's reactions to participating in the intervention with their parents. Scores on this question ranged from 0 to 3, with most children indicating that it was very helpful to have their parents included. On average, children reported that their parents' presence was "pretty helpful" (M = 2.00, SD = 1.17). Scores on this question did not significantly differ between groups.

"*How much has this activity changed the way you think about your feelings?"* Children responded to this question on a 3-point, Likert-type scale (0 = Not at all, 1 = A little, 2 = A lot). Their responses ranged from 0 to 2, with most children endorsing 2. On average, children believed the activity changed their perceptions of their emotions minimally (M = 1.20; SD = .62). Children in the control group endorsed a significantly higher score on this question (M = 1.80, SD = .45) than those in the treatment condition (M = 1.00, SD = .53); $t(18) = -3.00$, p = .008, indicating that children who watched the movie only without participating in a discussion were more likely to believe that the activity impacted their emotion understanding.

"How likely are you to use some of the skills we talked about today the next time you're feeling sad or upset?" Children in the treatment group only responded to this question. Scores ranged from 0 to 3, with an average of 1.27 (SD = .88). Most children reported that they were "a little likely" to use the coping skills discussed in the group.

Although children perceived less impact and helpfulness of the intervention than parents, children's responses indicated that they viewed the intervention overall as moderately impactful,

helpful, and interesting. This lends support to the hypothesis that this intervention can be motivating for children, helpful in teaching them skills, and could potentially impact their understanding of emotions and how they respond to their feelings; however, the lack of group differences in perceived impact and helpfulness preclude definitive assertion that the intervention would be regarded as more helpful or impactful than only watching the movie in a leisure setting.

Parent handout questionnaires. Parents in the treatment group were asked to provide feedback regarding the handouts provided at the end of the intervention. Specifically, parents were given a handout with the questions discussed during the group conversation and one with suggestions for talking with their children about emotions. Each child was provided a handout with a list of coping skills and suggestions for effective emotion regulation. This handout questionnaire was provided to parents as part of the posttest measures, and was completed by 8 parents in the treatment group (72.7%). Frequency counts were used to determine parents' reported perceptions of the handouts they and their children received on a 5-point, Likert-type scale (0 = Extremely unhelpful, 1 = Somewhat unhelpful, 2 = Neither helpful nor unhelpful, 3 = Somewhat helpful, 4 = Extremely helpful), as well as how often they used them during the three weeks after the intervention. Finally, written feedback was obtained from parents who reported no use of the handouts.

"After the study, how helpful was the Discussion Questions handout in changing how you talk to your child about emotions?" The average score on this item was 2.89 (*SD* = .78), suggesting that the questionnaire containing the discussion questions was reported as moderately helpful overall. Scores on this item ranged from 2 ("Neither helpful nor unhelpful") to 4 ("Extremely helpful"), with a mode of 3 ("Somewhat helpful").

"After the study, how helpful was the Parent Handout in changing how you talk with your child about emotions?" Scores on this item ranged from 2 to 4, with most parents endorsing a score of 2 (M = 3.00, SD = .87). These results suggest that, on average, parents found their handouts to be somewhat helpful to them.

"After the study, how helpful was your child's handout in changing how they talked or thought about their feelings?" The average endorsed score was 2.67 (SD = .87), with a range from 2 to 4 (Mode = 2.00).

"During these past three weeks, how often did your child use their handout they received at the study?" Analysis revealed that the majority of children did not use their handouts after the study (M = .44, SD = .53). Scores ranged from 0 (Not at all) to 1 (1-3 times), with the mode score of zero.

"During these past three weeks, how often did you look at either handout you received at the study?" This item was assessed on a 6-point, Likert-type scale (0 = Not at all, 1 = 1-3 times, 2 = 4-7 times, 3 = 8-11 times, 4 = 12-15 times, 5 = 16+ times). Parents endorsed an average score of 1.33 (SD = 1.22), suggesting that they used the handouts an average of 1-3 times between pre- and posttest; however, most parents endorsed a score of 0, suggesting that the majority of parents did not use the handouts after the intervention.

"If you and/or your child did NOT use any of the handouts, please explain why not." This item was included to glean information regarding ways to increase usefulness or relevance of handouts for parents and children. The parents who responded to this item cited several general reasons for not using the handouts, including children's disinterest ("[child] wouldn't try suggestions," "[child] was not interested"), busy schedules ("the timing of the study was not the best for us," "[the handouts were] a difficult addition to our daily routine"), and parents' own

preexisting understanding of emotion competence and coping skills ("Both parents are trained mental health practitioners").

Hypotheses 3 and 4

The final two hypotheses of this pilot study were that parents in the treatment group would report more emotion-related conversations after the study than parents in the control group, and that the frequency of these conversations would be a significant predictor of children's emotion competence improvement from Phase 1 to Phase 2. To test these predictions, the researcher used independent samples t-tests, frequency counts and percentages, and regression analyses.

Emotion-related conversations. The frequency of emotion-related conversations each week was collected for 13 children in the treatment group (86.7%) and 4 children in the control group (80%). Independent-samples t-tests, as well as frequency counts and percentages, were used to assess and compare the frequency of emotion-related conversations held by the parents, as reported via weekly email check-ins conducted three times between pretest and posttest (Figure 1). Nineteen parents (86%) responded to at least one email to report the number of emotion-related conversations they held. On average, parents reported talking with their child or children about emotions 4.42 times over the course of the three-week period (SD = 4.40). Parents in the treatment group reported an average of 3.69 (SD = 3.90) emotion-focused conversations during the three-week period, which did not significantly differ from reports by parents in the control group (M = 6.00, p = .301).

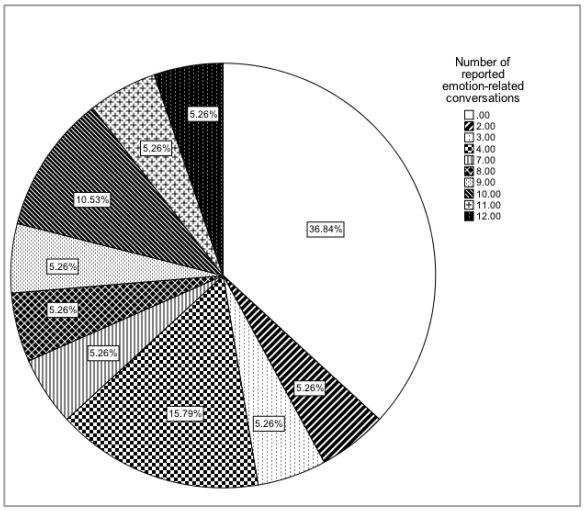

Figure 1. Total number of reported emotion-related conversations in the 3-week period before posttest.

A series of linear regression analyses were used to test if the reported frequency of emotion-related conversations significantly predicted children's scores on the emotion questionnaires, controlling for pretest levels of emotion competence. Gain scores, which are computed by subtracting pretest scores from posttest scores, were calculated for each measure of emotion regulation, and analyzed separately via a linear regression against the total number of emotion-related conversations reported by parents in the 3-week period between pre- and posttest.

A significant effect was found for the Verbal Sharing gain score of the EAQ; the reported frequency of emotion-related conversations explained 36% of the variance of this score (R^2 = .361, *SS* = 13.50, $F(1,12) = 6.77$, $p = .023$). However, this was in an unexpected direction, as analyses revealed a significant negative correlation between the gain score and the number of emotion-related conversations ($r = -.601$, $p = .012$). This suggests that the number of emotion-related conversations predicted the VS follow-up score, but in the opposite direction than expected. Regression analyses revealed no other significant findings for any of the other subscales or total scores on the measures, indicating that the frequency of parent-reported,

emotion-focused conversations was not a significant predictor of children's emotion competence improvement. Furthermore, a series of Pearson correlations was conducted, revealing no significant relationships between posttest scores and the number of reported emotion-related conversations.

Exploratory Analyses

As this was a pilot study and an unexpectedly large proportion of the sample was reported to have mental health concerns, exploratory analyses were conducted to explore the impact of problem behaviors on children's ability adopt new ER strategies following the intervention. In addition, analyses were conducted to determine the potential impact symptoms of mental health problems would have on parents' engagement in emotion-related conversations. A series of linear regression analyses and independent samples t-tests were conducted. The first analysis was conducted to determine if there were any differences in the number of emotion-related conversations reported by parents of children with clinical diagnoses versus those of children without reported diagnoses. Independent samples t-tests revealed no significant differences in the number of conversations between children with and without general mental health concerns (p = .876), a history of therapy (p = .769), and specific diagnoses of ADHD (p = .364) and anxiety (p = .935), suggesting that parents of children with clinical concerns engaged in conversations to the same extent as did parents of children without mental health concerns.

Second, a regression analysis was conducted to determine if children's pretest scores on the ECBI significantly predicted their emotion competence improvement. It was believed that significantly lower ECBI scores would predict the extent of improvement on the emotion competence measures. Improvement was calculated by computing the gain score. These analyses were conducted for the measures on which children demonstrated statistically

significant improvement from pre- to posttest: Verbal Sharing, Not Hiding Emotions, Accepting without Judgment, and total CAMM scores. Results demonstrated that ECBI scores did not predict children's scores on any of these measures of emotion regulation at posttest.

Finally, a regression analysis was used to assess if parents' responses on the Feedback Questionnaire item, "*How likely are you to talk about this study with your child after leaving today?"* significantly predicted the number of reported emotion-related conversations. The results indicated that scores on this Feedback Questionnaire item explained 31% of the variance in the number of emotion-related conversations held ($R^2 = .31$, $F(1,13) = 5.75$, $p = .032$).

CHAPTER V

DISCUSSION

Achieving age-appropriate emotion competence (i.e., emotion understanding and regulation, Eisenberg et al., 1998) is integral to children's social, behavioral, and emotional development. Children who have appropriate EU and ER skills have better social skills (De Rosnay et al., 2008; Spinrad, 2006), are more popular (Denham et al., 2003) and socially accepted (Hubbard, 1995; Miller et al., 2005), and have more reciprocal friendships (Laghi et al., 2014) than those who lack such skills. EU skills are similarly linked to self-regulation across various settings (e.g., school and home, Denham et al., 2002), and children who demonstrate good emotion competence are at lower risk for mental health problems such as anxiety (Suveg & Zemen, 2004), depression (Ehrenreich-May et al., 2015), and ODD (Dunsmore et al., 2013), than their peers who have poor emotion regulation skills. Additionally, EU deficits are positively correlated with behavioral disturbances, such as conduct disorders (Fairchild et al., 2009), as well as with neurodevelopmental disorders such as ADHD (Kats-Gold & Priel, 2009; Sobanski et al., 2010).

Although many models of emotion regulation exist, the current study focused on two distinct aspects of ER: cognitive reappraisal and expressive suppression. Cognitive reappraisal (CR) is considered an adaptive and effective regulation technique that involves actively changing one's thoughts about a situation to assuage or alter one's distressing emotions (Gross & John, 2003). CR strategies that focus on reframing thoughts about situations in a more functional, positive way are generally effective in reducing negative affect and irrational beliefs about distressing situations (Blechert et al., 2015). Therefore, one goal of this pilot study was to determine if a brief, 30-minute group discussion about feelings, coping skills, and emotion

regulation strategies in relation to the movie *Inside Out*© would increase children's reported use of CR strategies to manage emotions.

The current research also investigated whether the intervention would successfully decrease children's use of expressive suppression (ES) as a regulation strategy, an ER technique employed to inhibit the expression of emotions. Children who suppress their emotions as a regulation tool may experience prolonged periods of distress and heightened physiological arousal (Campbell-Sills et al., 2006b). In addition, hiding one's feelings from others may preclude children from building supportive and lasting relationships, which often requires a degree of emotional closeness (Gross & John, 2003).

A number of factors influence children's use of suppression strategies. Parents who use maladaptive ER strategies tend to have children with similar regulation problems (Eisenberg et al., 1998). One possible explanation for this is parental socialization: Rogers and colleagues (2015) suggested that mothers who suppress their own emotions might be modeling this strategy for their children, thus impeding their children's development of adaptive emotion regulation. Furthermore, parents' responses to their children's emotions have been found to significantly predict emotion development. Eisenberg and colleagues (1998) posited that children whose parents enforced punitive measures in response to their displays of negative affect (e.g., sadness or anger) are more likely to use expressive suppression over more adaptive emotion regulation strategies, such as cognitive reappraisal. Children's unwillingness to show negative affect may also stem from personal beliefs or feelings about their emotions. An investigation of emotion suppression among depressed patients found that fear of emotions was significantly correlated with the use of ES (Beblo, Fernando, Klocke, Griepenstroh, Aschenbrenner, & Driessen, 2012).

Because ES may stem from negative thoughts or feelings about distressing emotions, the current investigation aimed to improve children's ability to accept their feelings. Emotion acceptance is considered an adaptive emotion regulation strategy that boasts lasting effects for decreasing distress (Campbell-Sills et al., 2006b) and improving symptoms of anxiety and depression (Hayes, 2004). The researcher purported that a brief intervention could help children accept their emotions as a part of their identity, without judgment or suppression, thereby leading to improved emotion regulation skills.

A variety of treatment models exist to address children's emotion regulation, many of which emphasize increasing CR use for symptom reduction (e.g., cognitive behavioral therapies, Hofmann et al., 2009) and replacing expressive suppression with mindfulness and emotion acceptance (e.g., MBCT-C; Semple et al., 2005). The present intervention was developed and pilot tested to add to this literature and suggest avenues for further empirical investigation. Specifically, topics addressed in the group discussion included strategies for looking at distressing situations in more positive ways, which is the basis of cognitive reappraisal. Additionally, the group discussion was partly intended to note that everyone experiences both distressing and pleasant emotions, and that accepting and sharing one's emotions are more beneficial than suppression. Furthermore, children and parents in the treatment group received handouts after the intervention that provided more detailed information regarding coping skills, including cognitive reappraisal, and the benefits of accepting, rather that suppressing, emotions.

This pilot study was methodologically unique in several ways. First, it was designed to address and ameliorate several empirical limitations riddling the research literature on current ER treatments. To address the lack of experimental designs within this field of research (e.g., Punamaki et al., 2014), the current investigation was designed as an experimental study that

involved random assignment to treatment and control conditions. The researcher also strove to objectively measure improvement in children's emotion regulation using valid, reliable multi-informant measures for evaluating children's emotion regulation, understanding, and acceptance. Although the researcher's goal was to obtain a sufficiently large sample to produce generalizable findings, recruitment of children and parents from the community proved difficult. This is further examined in the limitations section, and implications for future studies of this nature are discussed.

In addition to insufficient empirical support, interventions targeting children's emotion competence skills may be limited by a lack of parental investment or motivation to participate in treatment (Nock et al., 2007). Barriers that reduce parents' consistency in bringing their child to therapy have been found to include perceived ineffectiveness of the treatment and obstacles associated with frequent session attendance (Kazdin et al., 1997). Thus, this pilot study purported to reduce these barriers by implementing a single-session intervention for parents and children, and obtaining parents' feedback regarding their perception of the intervention's effectiveness, as well as its predicted impact on their children's emotion regulation skills.

Effects on Emotion Competence

The first goal of this pilot study was to determine the extent to which watching the film *Inside Out* and engaging in a group discussion about feelings and coping skills would change children's emotion competence. This was analyzed via an experimental, 2-way mixed design with a between-subjects factor (Group) and within-subjects factor (Time). Self- and caregiver-report measures assessing ER skills, attitudes and beliefs about emotions, and mindfulness and acceptance of emotional experiences were administered before the intervention and at 4-weeks post-intervention. This goal was guided by the hypothesis that children who participated in the

group discussion would demonstrate improvement in emotion competence, as determined by significant changes in self- and parent-report measures from pretest (Phase 1) to follow-up (Phase 2), compared to children who watched the movie without discussing it afterward.

The parent- and child-report measures assessed the severity of children's emotional lability, children's ability to understand and differentiate their emotions, and children's use of emotion regulation strategies, including cognitive reappraisal and expressive suppression. Additionally, measures assessed children's awareness and acceptance of their emotional experiences and their self-reported ability to share their feelings with others. Children who participated in the intervention demonstrated significant improvement in their reported acceptance and mindfulness of emotions. Individual inspection of the scores bolstered these findings, revealing that 4 children in the treatment condition improved by at least one standard deviation on constructs of mindfulness and emotion acceptance. Additionally, children reported greater degrees of verbal sharing of emotions after the intervention. However, results indicated no significant changes in children's emotion regulation as reported by parents, nor in children's self-reported use of cognitive reappraisal. These results lend support to the intervention's success of improving children's awareness and acceptance of their emotions, but suggest that a single, brief intervention might lack the power to effect change in specific emotion regulation strategies such as cognitive reappraisal.

Liverant and colleagues (2008) noted that accepting one's feelings is indicative of better emotion regulation skills and decreased use of expressive suppression. As the use of suppressive strategies could be a product of a child's inability or unwillingness to accept their distressing emotions, it is believed that discussing emotions with children, especially emphasizing the importance of acknowledging and accepting distressing feelings as well as positive emotions, led

to improved awareness and acceptance of emotions. In turn, children's improvement in emotion acceptance likely facilitated children's willingness to share, rather than suppress, their emotional experiences. Indeed, children who participated in the intervention demonstrated significant changes in their reported emotion suppression; specifically, they self-reported more verbal sharing of emotions and less hiding of their feelings from others. Of note, children who participated in the control group also demonstrated a decrease in emotion suppression at follow-up. However, the extent of the improvement in verbally sharing emotion was greater for children in the treatment condition. Inspections of individual score changes supported these findings. Eleven different children (55%) in the sample demonstrated clinically significant improvement on at least one subtest. Among these children, 8 participated in the treatment group and 3 in the control group. Analyses revealed that all of the children who demonstrated clinically significant improvements (i.e., improvement of at least one standard deviation at posttest) on the measures assessing their ability to verbally share and not hide emotions had participated in the treatment condition. The three children in the control group showed clinical improvement in their awareness, acceptance, and differentiating of emotions. Thus, although watching the film alone might lead to some clinical changes in mindfulness and acceptance of emotions, it appears that discussing the themes of *Inside Out*© resulted in greater reduction in expressive suppression than simply watching the film. Of note, these results must be interpreted with caution, as they might reflect Type 1 error rather than true changes in children's emotion regulation.

The results of the present study suggest that watching *Inside Out* in and of itself might lead to shifts in children's willingness to share their emotions with others; however the benefit of this film in changing children's attitudes about accepting and sharing emotions is enhanced by

discussing its themes and lessons afterward. As such, the first hypothesis, that children who participate in a group discussion after watching the film would demonstrate improved emotion competence compared to children in the control group, is partially supported. Specifically, this hypothesis is supported by the nearly significant improvements in children's reported verbal sharing of emotions, and significant improvement in acceptance of their feelings and reduction in suppressive strategies. However, support for this first hypothesis is limited, as changes did not appear to be visible to parents, and there were no changes in children's reported use of cognitive reappraisal or ability to differentiate their emotions. That is, children's reported ER improvement stopped short of implementation of active cognitive reappraisal strategies following the intervention.

This is not entirely unsurprising, considering that reappraisal strategies are often taught and reviewed over the course of several months of therapy (e.g., CBT, Brozovich, Goldin, Lee, Jazaieri, Heimberg, & Gross, 2015; Emotion Regulation Therapy, Mennin, Fresco, Ritter, & Heimberg, 2015). Although the group discussion and handouts referred to various CR strategies, reappraisal was not the focus of the intervention, nor was it actively taught to the children in either condition. Therefore, a single group discussion after the movie, while possibly helpful in planting the seeds of adaptive emotion regulation, may not suffice to enact change in children's use of cognitive reappraisal and other new emotion regulation strategies. Although CBT has been proven effective with children, it remains to be seen whether children can adopt sufficient cognitive behavioral skills in a shorter time frame. It is possible that a longer group discussion that guided children through the process of identifying maladaptive cognitions and restructuring these thoughts to be more adaptive may elicit some changes in CR use.

In summary, results suggest that this investigation contributes to the literature a potentially effective intervention for improving children's emotion regulation, specifically by reducing suppressive strategies and increasing acceptance of emotions. These conclusions justify the need for future investigations of this nature to determine ways to maximize improvement in emotion competence. Specifically, attending to parents' willingness to implement changes at home to help improve children's ER skills is especially important.

Feasibility

Increasing parents' willingness to implement changes at home could be achieved by maximizing parents' investment in and positive responses to their children's treatment (Nock et al., 2007). This speaks to the second goal of this pilot study, which was to reduce perceived barriers to treatment, and to determine the extent to which parents perceived this intervention as helpful, interesting, and effective. It was hypothesized that parents and children would find the intervention interesting and helpful immediately after participating. Furthermore, it was predicted that parents would report anticipating some degree of change to their and their children's emotion competence. Finally, it was predicted that parents and children who participated in the intervention would regard the study to be more helpful and impactful than participants who watched the movie only as part of the control group.

These predictions were examined via both statistical and nonstatistical analyses of the feedback questionnaires. Generally, parents regarded participating in the study favorably, regardless of treatment condition. Most parents indicated that the intervention helped them learn more about their children's emotions, taught them a moderate amount about talking with children about feelings, and somewhat changed the way they thought about their children's emotions. These results were also found among parents who watched the movie only. Additionally, all

parents reported interest in watching the movie, and treatment group parents expressed interest in listening to the group discussion. Furthermore, most parents in the treatment group indicated a moderate or high likelihood of helping their children implement the coping skills they learned and of changing the way they talk about feelings with their children. Via written responses to open-ended questions on the feedback measures, parents from the intervention group expressed intention to help their children identify and share their emotions (e.g., "I will try and have [my child] explain better how she is feeling"), regulate their emotions more effectively (e.g., "[I will] help [my child] identify…new ways to calm down"); and accept their distressing emotions (e.g., "remind [my child] that feeling all types of feelings make you who you are"). Furthermore, parents identified changes they will make to how they respond to their children's emotional expressions, specifically in regard to validating children's feelings (e.g., "[I will] listen and ask, not dismiss," "Use more reflective speech"); their own communication strategies (e.g., "Listen patiently"); and identifying children's emotion cues (e.g., "Observing my child's body language;" "Understanding that [my child] might be sad underneath [her anger]").

Parents also expressed to a moderate degree belief that the intervention would help their children learn more about their own emotions. In contrast, analyses revealed that children did not regard the intervention to be as helpful as their parents did. Indeed, on average, children reported that this intervention minimally changed how they think about their feelings, and they reported a low likelihood of implementing the discussed coping skills at home after the study. However, on average, children in the treatment group reported the study to be moderately helpful in teaching them good ways to manage their feelings, and that they were moderately likely to talk more about their feelings at home. In addition, most children reported a high level of interest in the intervention, and indicated that it was very helpful to have their parents with them.

Of note, there were no statistically significant differences in the feedback participants delivered between treatment and control conditions, with children and adults rating the intervention as equally helpful, interesting, and impactful between groups. These results could be explained by a number of factors. First, although the researcher asked participants to respond honestly to the anonymous feedback questionnaire, it is possible that parents and children wished to provide positive feedback regarding the intervention, thereby inflating their responses to generate a positive review of the study (i.e., social desirability bias). Social desirability is relevant to the perceptions of helpfulness and perceived impact, specifically; because *Inside Out* is a highly-rated and critically acclaimed film, it is likely that participants were genuinely interested in watching the movie. Their genuine interest was supported by the fact that parents and children responded to advertisements that highlighted the film, despite having seen it already, suggesting that those who had previously seen *Inside Out*© enjoyed it enough for repeat viewing.

A second possible explanation for this finding involves the intrinsic value the film. *Inside Out*© has been considered by many to be informative and beneficial for children (e.g., Dent, 2015), and the film directly portrays the value of expressing a full range of emotions, including distressing feelings. Therefore, it is not surprising that the control group considered watching the film helpful in teaching about emotions, even in the absence of any further intervention or psychoeducation. This interpretation suggests the promise of popular culture references to educate and enlighten without the need for professional intervention. Third,, it is possible that, although children did not consider a group discussion to be very helpful, participating in the intervention significantly improved aspects of their emotion regulation to a greater extent than they were aware, leading to reduced subjective report of improvement.

These results lend partial support to the second hypothesis of the investigation. Overall, parents and children indicated a moderate to high degree of interest in the intervention. Parents rated the intervention as generally more helpful and as having a greater impact on their own behaviors at home than did children; however, children did express that the intervention was helpful in teaching them coping skills, despite their low expectation of actually using these skills at home. These results indicate that this intervention is promising in its ability to capture children's and adults' attention, and motivate parents to instill positive behavior changes in the home after the intervention has concluded.

Although parents expressed a willingness to change their behaviors at home, this motivation failed to translate into changes in emotion-related conversations. The researcher assessed the frequency of emotion-related conversations via weekly emails to parents for three weeks following Phase 1, addressing the final 2 hypotheses of the study: that parents in the treatment condition would report more emotion-related conversations than would control parents, and that the number of reported conversations would significantly predict children's emotion regulation improvement. These hypotheses were not supported. Specifically, there were no significant differences between conditions in the number of reported emotion-focused conversations, and in fact, most parents reported having zero such conversations with their children in the 4 weeks following the intervention. Furthermore, the number of reported conversations did not predict children's improvement in any of the measures of emotion competence. Furthermore, very few parents in the treatment condition reported using any of the handouts provided after the intervention, citing various barriers precluding their use, such as not knowing they were to use them and their child not being interested.

There are several potential reasons for parents' limited investment in implementing changes at home. First, it is possible that parents did not believe they needed to make any changes in their behaviors. This is likely due to the fact that most parents were highly educated, and most children did not have any reported clinical diagnoses. Although this was not directly assessed at the time of the study, it should be considered for future investigations. Second, it is possible that parents required a more directive approach, such as being asked specifically to discuss emotions at least once per day or given "homework" to talk about their children's feelings after the study. The researcher simply providing the handouts and suggesting using them for discussions did not sufficiently convince parents to make changes to their typical home discussions. Third, some parents cited their child's lack of interest as a reason for not conversing about feelings at home. It is possible that parents were not provided enough strategies or examples for how to engage their children in such conversations, and lacked the knowledge or resources to try different approaches. Fourth, parents might have lost interest in implementing changes at home, believing participating in the single-session intervention to be sufficient in changing their children's emotional competence. Assessing and maximizing parents' willingness to have emotion-related conversations with their children, and their perceived need for changing their current behaviors, would be important for future studies of this nature. As parental involvement has been found to predict children's treatment success in therapy (Thornback & Muller, 2015), it is likely that more consistent emotion-related discussions at home, including parents reminding and helping their children to practice ER skills, would lead to better outcomes. To this end, the intervention must prove necessary and useful to parents in order to maximize compliance with guidelines and suggestions for implementing skills at home.

In summary, although parents and children expressed an interest in the study and were fairly confident in the intervention's helpfulness, results suggest that the single-session intervention did not effectively motivate parents to change their behaviors or actions in regard to talking with their children about emotions. It is possible that parents require a more directive approach (i.e., telling each parent that it is necessary to have such conversations with their children, rather than employing passive suggestions) to instill change. Alternatively, parents might require more interactive strategies than simply being given handouts to take home, such as psychoeducation or a group discussion. Regardless, the initial positive responses to the intervention suggest that this intervention is a promising approach to improving emotion competence.

Strengths of the Current Study

There is a significant need for interventions targeting children's ER skills that have been supported through experimental designs with treatment and control groups, valid and reliable outcome measures, and large sample sizes for generalizability. This need is especially great for children in middle childhood. The current investigation was designed to generate a pilot intervention that could begin to fill this gap, and as such, several strengths of this study should be noted.

First and foremost, this study's primary strength lies in its methodological innovation. Researchers and professionals in the mental health field have produced works citing the value of *Inside Out*© as a learning tool (e.g., Benarous & Munch, 2016; Bodnar, 2015). Indeed, in a review of the film, licensed psychiatrist Deborah Cabaniss, MD, urged readers that *Inside Out*© "should be required viewing for anyone in the mental health field" (Cabaniss, 2015, p. 789). Nevertheless, there has been no evaluation to date that provides empirical support for using this

film to teach children about emotions. Thus, the current pilot study added a unique and important, element of empiricism to bolster the strong anecdotal evidence supporting the film's potential.

Second, the study involved randomization of participants to either a treatment or control group. The experimental procedure was the same for each group (i.e., children and parents were given the same instructions, completed the same measures, and underwent the same post-intervention process) to determine the extent to which the group discussion impacted children's ER improvement above and beyond viewing the film alone. The researcher also standardized the group discussion to the extent possible by using a script with a list of discussion questions and having a research assistant rate whether all questions were addressed for each group. This process revealed that every group answered the same questions during the discussion.

The third strength of this study lay in the outcome measures used. Relatively few studies on interventions targeting children's emotion competence have been shown to use objective or valid outcome measures (Sprung, Munch, Harris, Ebesutani, & Hofmann, 2015), making it difficult to evaluate the effectiveness of certain interventions in improving children's ER skills. As such, this intervention evaluated children's ER improvement through valid and reliable measures assessing different aspects of emotion competence. Furthermore, this pilot study assessed the feasibility of the intervention through parent- and child-report feedback surveys.

The results of the feasibility surveys contributed a fourth strength of the current study. According to participants' feedback, this intervention was intrinsically interesting and deemed impactful in teaching parents and children effective coping strategies for managing emotions. Many parents expressed positive feedback about the film and the intervention during the weekly check-ins or on the feedback questionnaires ("I really think that is a movie one should review

time to time to keep themselves in check," "I can't get that movie out of my head about looking at the situation from my child's perspective," "I think she is dealing with her emotions better than before the movie"). This feedback suggests that an intervention involving *Inside Out* would be motivating and beneficial to both children and their parents, thereby potentially increasing the likelihood that parents would help their child implement effective coping skills and ER strategies afterward.

Finally, this study demonstrated that the intervention added a unique element to the benefits of watching *Inside Out*©. As the film had been released more than one year prior to the study, it was expected that many children had already seen it. Indeed, all children but one (86.4%) reported that they had seen *Inside Out*© prior to participating in the study. Regardless, changes in children's emotion suppression and emotion acceptance were demonstrated following the intervention. Therefore, the group discussion very likely added a beneficial element beyond simply repeated exposure to the movie. Also, it is possible that watching the movie with their children, and witnessing their reactions to it afterward via the group discussion, increased parents' willingness to discuss the film and its lessons at home. Indeed, only approximately one third of the parents who had seen the movie before the study reportedly discussed it with their children afterward. This suggests that providing a safe and open space for children to share their thoughts and feelings after watching *Inside Out*© could significantly maximize the benefits of seeing this impactful and inspirational film.

Limitations and Directions for Future Research

The present research was intended as a pilot study to determine the feasibility of implementing a one-session intervention that could promote lasting changes in children's emotion competence. Although the research demonstrated the promise of using the film *Inside*

Out to teach children and parents about emotion regulation, understanding, and acceptance, several limitations should be noted. It is posited that, should this study be replicated in the future, addressing these limitations may lead to more significant results and greater improvement in children's emotion competence.

First, time limitations precluded assessment of long-term changes in emotion competence. Although changes were evident 4 weeks post-intervention, the long-term duration of these results remains unknown. Future studies would benefit from implementing longer-term follow-up to determine the effectiveness of this intervention in producing lasting changes in emotion competence.

Additionally, it is possible that no changes were demonstrated on certain measures due to strong test-retest reliabilities of the measures. Specifically, measures assessing children's self-reported use of cognitive reappraisal and expressive suppression demonstrated strong test-retest stability over the course of 3 months (Gullone & Taffe, 2012), and measures addressing children's hiding of and differentiating emotions showed fair test-retest reliability over the course of one year (Camodeca & Rieffe, 2013). Although test-retest reliabilities were not reported for the parent-report measures assessing emotion regulation and emotional lability, it is possible that these measures tend to remain relatively stable across time, thus limiting the chance of detecting statistically significant changes. Furthermore, the type of measures used might have impacted results. Although each questionnaire used had been determined to be a valid and reliable measure of emotion competence, the results relied heavily on children's self-report. To rectify this, parent-report measures (the ERC and ECBI) were administered to assess for changes in emotion regulation and problematic behaviors.

Second, the researcher recruited a relatively small sample for the study. Although recruitment took various forms, such as flyers, radio advertisement, and online postings, a small percentage of targeted parents responded to requests to participate. The small sample size limits the power to detect changes within and between groups, and therefore, these results might differ should the study be replicated with a larger sample. As previously mentioned, risk for Type 1 error was noted in this study; therefore, the results were examined cautiously and used to explore possible trends for the current sample.

The small sample also restricts generalizability, which is a third limitation important to consider when interpreting results. Specifically, generalizability is limited given the homogeneity of sociodemographic variables reported by the participants. All but 1 parent identified as White, not Hispanic/Latino; one parent identified as White, Hispanic/Latina. The racial makeup of the sample is more homogenous than expected given that of Indiana County (88.3% White; "Indiana, Pennsylvania," 2017). In addition, parents represented a restricted range of household income level (greater than $75,000) that was, on average, higher than that of the general population of Indiana County ($45,168; "Indiana County, Pennsylvania," 2017). Further, the parent sample was more educated than is representative of Indiana County. Whereas only 2% of Indiana County residents report having a professional degree (Sperling's Best Places, 2017), 40.9% of the parent sample reported an education level of graduate school or above. Thirty-six percent of the sample reported earning a four-year university or college diploma, much higher than would be expected given the reported 23.3% of the Indiana County population achieving the same (Sperling's Best Places, 2017). Of note, given the high education level and SES of the current sample, children in this study were generally emotionally competent prior to participating, and might not have demonstrated as much improvement due to a ceiling effect.

Furthermore, nearly the entire parents sample was comprised of mothers. Including fathers in pediatric research designs has been found to add important data, especially for studies addressing children's development (Phares, Lopez, Fields, Kamboukos, & Duhig, 2005). Therefore, future studies might strive to recruit more fathers or male caregivers, or encourage participation of both parents, to gain a broader perspective on children's emotion-related behaviors.

Because this intervention attempted to target parents from rural, underserved communities with limited resources, efforts will be needed to increase recruitment among the targeted demographic. This could be achieved by working with community organizations to implement the intervention in low-cost, accessible places such as churches, YMCAs, schools, or afterschool clubs. Furthermore, it would be beneficial for future studies to recruit a larger number of participants to maximize ethnic and socioeconomic diversity, thus allowing the intervention to be tested on a sample more reflective of the general population.

Children's emotion regulation changes might have been small due to the short and limited nature of the discussion. Indeed, the discussion after the movie focused mainly on accepting and regulating sadness, and other emotions such as fear and anger were not addressed. In the future, it might be helpful to prolong the discussion to address more emotions than simply sadness, to determine if discussing a range of distressing feelings can better enhance children's regulation, understanding, and acceptance of emotions.

It would also be beneficial to include children's interpretations of the film prior to participating in the discussion. Most of the children in the study had already seen the movie at least once, and therefore their previous understanding or interpretations of the film might have limited the extent to which viewing it for the study changed their emotion competence. In addition, children who are already participating in therapy might respond differently to the movie

and discussion than children who are not in counseling. This might be important to take into account for future studies.

Finally, the design of the pilot study prevented determination of the extent to which parental involvement in the intervention impacted children's emotion regulation improvement. Although the researcher strove to recruit a sample of children who participated in this study without their parents, every child who participated had a parent who expressed interest in attending the study. Therefore, it is unclear to what degree parents' involvement in the intervention affected the treatment outcomes. It would be, therefore, beneficial to replicate this study with a comparison group that consists of child participants only, without parental involvement beyond completion of study measures.

Feasibility measures indicated that, overall, parents expressed a greater degree of interest in and perceived impact of the study than did children. Therefore, it might be beneficial to actively include parents in the group discussions following the movie. This can be achieved in two ways. One option would be to hold separate group discussions, one for the children, and another for just the parents. The parents' group discussion would give them the freedom to openly express questions, concerns, or comments about their children's emotion competence, learn how to help their children regulate their feelings, and adaptive ways of responding to their children's feelings. Holding a group discussion for parents would also allow the researcher to encourage them to implement skills at home, and explicitly state the importance of their involvement in teaching children how to manage their emotions effectively and safely. Another way to include parents in the conversation would be to have children and their parents discuss the movie together after watching. Joining children and parents in a single group would not only

encourage parents and children to share their feelings with each other, but also potentially help lay the foundation for continuing adaptive and productive conversations at home.

Given the demonstrated importance of achieving effective emotion regulation skills, and this pilot study's modest success in helping children achieve these skills, the researcher posits that the Disney-Pixar film *Inside Out*© should be recognized as a potentially valuable tool in decreasing children's use of expressive suppression and increasing their ability to accept, understand, and share their emotions with others. This is especially important to those who work in clinical or educational settings (e.g., mental health professionals, guidance counselors, and teachers) who may have a great deal of impact on children's emotion regulation success, social skills, and behavioral problems. As the group discussion could be facilitated by anyone familiar with child development, and not only by mental health professionals such as psychologists, it could be beneficial and feasible for faculty and personnel in schools or after-school programs to integrate *Inside Out* as part of a curriculum in teaching healthy and adaptive emotion regulation. The viewing of this film, followed by a brief group discussion about feelings and coping skills, was regarded as an impactful, interesting, and motivating intervention by parents and children, and could potentially serve as a springboard from which emotion regulation skills may be taught and integrated in children's daily lives.

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Appendix A

Recruitment Materials

Are you a PARENT?

Are you interested in learning more about your child's emotions?
Please consider participating in my research study!

INSIDE OUT© MOVIE EVENT

I am looking for children between the ages of **8 and 12** and their parents to take part in my research study.

Children will be asked to:

- Complete questionnaires about their feelings
- Watch the movie *Inside Out*© with other kids
- Participate in a group discussion about the movie
- Complete questionnaires a few weeks later

Parents will be asked to:

- Complete questionnaires about their child's emotions
- Watch the movie *Inside Out*© with other parents and their children
- Observe the discussion held by the children about the film
- Complete questionnaires a few weeks later

Free snacks and drinks will be provided!

For participating, all parents will receive a **$5 gift card**, and children will receive a **prize!**

Children will be entered into a raffle to win *Inside Out*© on DVD.

Please call or e-mail Ingrid for more information.

724-357-4526 IUPinsideout@gmail.com

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the protection of human subjects (Phone 724.357.7730)

Announcements for Psychology Department Newsletter, IUP Daily

Wanted: Children and their parents to participate in a new study about emotional development.

Ingrid Krecko, M.A., from the Department of Psychology at IUP is currently conducting a study of children's emotion understanding using the Disney/Pixar film *Inside Out*©. I am looking for children between the ages of 8 – 12 to participate; parents are welcome to participate, but not required. Participation for children involves completing questionnaires, watching the movie *Inside Out*© and participating in a discussion about emotions. Parents also must fill out questionnaires. Follow-up questionnaires will be given 4 weeks after the study. This is a group study that will be held on the IUP campus and will take approximately 3 hours. Adult participants will each get a gift card and child participants will receive a prize. All participants to complete the study will be entered into a drawing to win *Inside Out*© on DVD.

If you would like to participate in this study, please call Ingrid Krecko at 717-460-3929 or email IUPinsideout@gmail.com.

This study is approved by the Indiana University of Pennsylvania Internal Review Board and is being conducted by a clinical psychology graduate student in the Department of Psychology.

Appendix B

Recruitment Letter

(Printed on Psychology Department Letterhead for distribution)

Dear Parents,

You and your child are invited to take part in an *Inside Out*© Movie Event, a research study about understanding the importance of emotions and how to help both you and your kids learn about emotion management and regulation.

I, Ingrid Krecko, M.A., will be running this project as part of my studies in the Clinical Psychology graduate program at Indiana University of Pennsylvania under the supervision of Laura Knight, Ph.D. The study will be held in several locations, including, but not limited to, Purchase Line Elementary School during Boys and Girls Club, the Stapleton Library on IUP's campus, or Uhler Hall on IUP's campus in Indiana, PA. The study will be held after school hours on several days of the week and on weekends to accommodate a variety of schedules.

Parents and children who want to participate will be given several questionnaires to complete, then everyone will be invited to watch the movie *Inside Out*©. After the movie, Ingrid will lead a short discussion with the children about what they learned during the movie about emotions. After the study, Ingrid will contact parents once per week for 3 weeks to follow up about what they learned from the movie and discussion. After 4 weeks, parents will be contacted to complete the same questionnaires again. All parents who complete all the questionnaires will be given a $5 gift card for participating in the study and will be entered into a drawing to win *Inside Out*© on DVD.

It is your choice if you would like to take part in this research and you do not have to participate. In addition, if you are interested in your child participating <u>but you are unable to attend the study yourself</u>, your child may still be involved in the study with parent/guardian permission.

If you decide you would like to take part in this study, please contact me by phone or e-mail, and I will get back to you to find a day and time that works best for your schedule.

If you decide that you would like to take part in this study, I will:

- Review the study with you, by phone or in person, at a convenient time for you.
- Talk with your child about what it means to take part in this study and answer any questions they might have about participating.
- Provide you with an information sheet to complete for your availability, and contact you promptly to schedule a convenient date and time.
- Run the movie event study with you and your child and collect information from you.
- Contact you via either phone or email weekly for 3 weeks after participating to follow up with you about the study.

- Contact you 4 weeks after the study to deliver questionnaires for you and your child to complete.
- Send a gift card to you when you return the questionnaires to me.

If you and your child choose to participate in this study, all information that you provide will be kept private. Due to the group structure of the study, your privacy will be limited by the other participants in your group. However, all participants will be instructed not to discuss other group members when the study is over. Neither your name nor your child's name will be on any questionnaires that you complete, and all information collected for this study will be kept in a locked cabinet at IUP. Nobody from your child's school district will have access to any of the information you provide for this study.

By taking part in this study, you may learn ways to talk with your child about emotions to improve their understanding and regulation of their feelings and behaviors. There is no cost to participate.

You may call or e-mail me if you have any questions as you read over this material. I am happy to clarify and review any of this with you and answer any questions you might have. If you would like to speak with me, please call **Ingrid Krecko** at 724-357-4526 or e-mail IUPinsideout@gmail.com

Thank you for your time.

Sincerely,

Ingrid Krecko, M.A.
Graduate Student
Principal Investigator
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101 Uhler Hall
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(724) 357-4526
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This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730)

Appendix C

Parent and Child Information Sheet

(Printed on Psychology Department Letterhead for distribution)

Thank you for your interest in participating in my *Inside Out*© movie event and research study! Please complete the information below and return this by e-mail or in the addressed, stamped envelope provided.

PARENT INFORMATION

One parent/caregiver is requested to participate in the Movie Event. Please complete the information of the parent who will be involved in the research study. If neither parent is able to attend but still wishes for their child to participate, please choose one parent to complete the information.

Name: _____

Relation to child (biological parent, grandparent, adoptive/foster parent, etc.):

_____

Phone Number: _____

E-mail Address: _____

Mailing Address: _____

_____

_____ Please check here if a parent/guardian is NOT able to participate in the study, but would like for your child to be involved in the event.

Availability

Please indicate **ANY AND ALL general days and times** that you OR just your child ***might*** be able to participate in this research study. This form does not hold you accountable to any days/times you indicate, nor does it obligate you to participate in the study. Drinks and snacks will be provided to all participants during the movie viewing.

_____ Monday 4:00 – 7:00 PM
_____ Tuesday 4:00 – 7:00 PM
_____ Friday 4:00 – 7:00 PM

_____ Saturday 10:00 AM – 1:00 PM
_____ Saturday 1:30 – 4:30 PM
_____ Saturday 5:00 – 8:00 PM
_____ Sunday 10:00 AM – 1:00 PM
_____ Sunday 1:30 – 4:30 PM
_____ Sunday 5:00 – 8:00 PM

Potential locations for the study include the Indiana Free Library and Stapleton Library and Uhler Hall, both on the IUP campus (free parking will be provided). There is a possibility that the study *might* be held at one of the schools in your child's district, if necessary. Please indicate whether you would be able to participate at a location in Indiana that is outside the school:

_____ YES, I am willing to consider participating even if the event is not held at the school.

_____ NO, I cannot participate unless the event is held at the school.

Snacks will be provided for the movie. Please indicate any food/drink allergies you or your child has:

_____

Please contact me with any questions or concerns about the study, location, or these forms. Thank you for your interest in this study!

Sincerely,

Ingrid Krecko, M.A.
Graduate Student
Principal Investigator
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101 Uhler Hall
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Appendix D

Parent Consent Form (Treatment Group)

(Printed on Psychology Department Letterhead for distribution)

You and your child are invited to participate in this research study. The following information is provided to help you make an informed decision about whether or not to participate. If you have any questions, please do not hesitate to ask.

The purpose of this study is to see whether watching and talking about the Disney/Pixar movie *Inside Out*© helps children learn to better understand and control their emotions, as well as helps parents talk about emotions with their children. This study will take approximately 3 hours total, during which you and your child will be required to complete several questionnaires, watch the movie *Inside Out*©, and, for child participants only, engage in a 20- to 25-minute discussion after the film that you and other parents will observe. For participating in the study, every child will be given a small prize. Afterward, I will be contacting each parent once per week for 3 weeks via either phone or email (according to your preference) to check in with you about the study. After 4 weeks, you will receive questionnaires for you and your child to complete. These will be delivered via email or post, per your preference. After sending these questionnaires back to me, you will receive a $5 gift card as a thank you for participating. Also, your child will be entered into a drawing to win *Inside Out*© on DVD.

Participation in this study is voluntary, and you are free to decide not to participate or to withdraw from this study at any time. If you decide to withdraw, you may leave at any time and any information I have about you and your child will be destroyed. Your responses on the questionnaires are confidential and will not be shared with anyone. The questionnaires that you and your child complete will be identified by number, not by your name, to protect your privacy.

If you and your child choose to participate in this study, all information that you provide will be kept private. Due to the group structure of the study, your privacy will be limited by the other participants in your group. However, all participants will be instructed not to discuss other group members when the study is over. Neither your name nor your child's name will be on any questionnaires that you complete, and all information collected for this study will be kept in a locked cabinet at IUP. Confidentiality is also limited by the state requirement that suspicions of child abuse must be reported to authorities. Therefore, if a child reports to an investigator that he or she is being abused, a report will need to be made.

Risks to participating in this study are believed to be minimal. However, if your child becomes distressed during the study, the primary investigator, Ingrid Krecko, M.A., is a clinical psychology graduate student under the supervision of licensed psychologists, and is trained to manage children's distress. Two licensed clinical psychologists will be available by phone as needed throughout the duration of the study.

If you are willing to participate in this study, please sign the statement below and return one copy of this form to Ingrid Krecko after signing. Please keep the extra copy in case you have any questions at a later time. If you choose not to participate, you may return the unsigned copy to Ingrid Krecko and leave the study.

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730)

Ingrid Krecko, M.A.
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VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent participate in this study. I understand that my responses are confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this informed Consent Form to keep for my personal records.

Name (PLEASE PRINT): _____

Signature: _____

Date: _____

Phone number: _____ E-mail address: _____

Please indicate your preferred method of contact for weekly check-ins:

_____E-mail _____Phone _____ **OK to leave voicemail?**

Please indicate your preferred method for receiving the questionnaires in 4 weeks (parent and child questionnaires):

_____E-mail (linked to an anonymous online survey) _____Standard mail

If you prefer standard mail, please write your address: _____

_____

I certify that I have explained to the individual the nature and purpose, the potential benefits, and possible risks associated with this research study, answered any questions that have been raised, and witnessed the above signature.

_____
Investigator's Signature Date

Appendix E

Child Assent Form (Treatment Group)

(Printed on Psychology Department letterhead for distribution)

What is a research study?
Research studies help us learn new things and test new ideas. First, we ask a question, and then we try to find the answer.

My name is Ingrid and I am in charge of this research study. This form will tell you about my research study. After you read it, you will get to choose if you want to take part in it. I want you to ask me any questions that you have about the research. You can ask me these questions at any time.

Important things to remember:
- You get to decide if you want to help with the study.
- You can say "No" or you can say "Yes."
- Nobody will be upset if you say "No."
- If you say "Yes" and change your mind, you can always say "No" later.
- You can say "No" at any time.

What would happen if I join this research?
If you decide to help with this research study, you will be asked to:
- Fill out some forms that ask about you and your feelings.
- Watch the movie *Inside Out*© with other kids your age and your parent.
- Participate in a discussion with the whole group about the movie afterward.
- In 4 weeks, you will be asked to fill out the forms again.

Could bad things happen if I join this research study?
It might be hard to answer some of the questions on the surveys. If you don't know the answer, I ask that you just try your best. I will try to make sure that no bad things happen.

Could the research help me?
I think being in this research might help you and your parents understand your feelings a little better and learn new ways of feeling better when you're sad, upset, or mad. It might also help your parents learn how to help you feel better when you need support.

What else should I know about this research?
If you don't want to be in the study, you don't have to be.

It is OK to say "Yes" and change your mind later. You can stop being in the research at any time. If you want to stop, just tell me.

As a thank you for being in this study, you will get a prize at the end.

You can ask questions at any time. You can talk to Ingrid or your parent/guardian if you have any questions. Take the time you need to make your choice.

If you want to be in the research, please write your name below. I will write my name too. This shows that we talked about the research and you want to help me.

Name of Participant _____

Name of Researcher _____

Signature of Researcher _____

_____
Date

Ingrid Krecko, M.A.
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Appendix F

Participant Number Form

Participant Number

Please complete the information below to create your personal, confidential participant number for the study:

- First two letters of your mother's maiden name: _____
- First two letters (or numbers) of the street you grew up on: _____
- Last two numbers of your Social Security Number: _____

My participant number is: _____

Appendix G

Study Script and Discussion Questions

Upon arrival, participants were given informed consent and assent. After all participants received their consent/assent forms, the researcher verbally reviewed these forms and answered any questions the participants had. They were then asked to sign both copies of their consent forms and return one to the researcher. After obtaining informed consent/assent, parents completed the information necessary to generate their personal participant numbers. Participants were given pre-treatment measures labeled with corresponding participant numbers (e.g., KRPL06 for parent; KRPL06-C for child) to allow matching of child and parent data. These participant numbers were written on the study packets in lieu of names to ensure confidentiality.

7-digit alphanumeric participant numbers were assigned as follows:

Digit 1: "P" for parent participant; "C" for child participant

Digits 2 & 3: First two letters of their mother's maiden name

Digits 4 & 5: First two letters (or numbers) of the street on which the parent grew up

Digits 6 & 7: Last two numbers of their Social Security Number

The researcher addressed the entire group as follows:

"Please complete the forms in your packet. If you have any questions about the forms or measures, just raise your hand and I will come to you. When you are finished, you may turn in the packet to me, and then you can go get snacks and drinks for the movie.

"Please sit quietly to wait for everyone to finish their packets. You may draw, read, or use phones, iPads, and other quiet electronics while you're waiting, but once we get started everyone will have to put them away. Any questions so far?"

After all participants have turned in their packets and obtained snacks and drinks, the researcher will address the group one more time before playing the film:

"I'll be starting the movie now. Feel free to get up for more snacks and drinks during the movie, but it is important that you be as quiet as possible so everyone else can hear the movie, OK? Let's get started!"

Script for Group Discussion

"Let's talk about the movie now. Now, so everyone gets a chance to talk, we're going to use the classroom rules. What do you have to do in the classroom before you talk? [Wait for students to raise hands] That's right! So if we want to talk, we're going to raise our hands and wait to be called on."

Discussion Questions:

1. Who here has ever felt sad? Raise your hand if you've felt sad.
    a. **Goal for this question:** demonstrate that sadness is a ubiquitous emotion by showing that everyone feels sad sometimes.
    b. **Contingency plan if children do not give a desirable response:** If nobody raises their hand, the investigator will continue: "I know it's sometimes hard to talk about feeling sad, but today we are going to try our best to talk about what we can do to feel better when we are feeling sad or down."
2. What's something that makes people feel sad?
    a. **Goal:** Allow children to connect with others about things that make people feel sad. This can also foster a sense of universality so important to group discussion.
    b. **Contingency plan:** If children don't answer, researcher will say, "I know that sad things can be really hard to talk about, especially with people we don't know very well. You don't need to share anything you don't want to about yourself. Who can think of something that might make a friend or family member feel sad?
3. Is feeling sad a bad thing? Why? Why not?
    a. **Goal:** The investigator's goal is to determine what the children currently think about feeling sad. The researcher will let children give reasons for why feeling sad is bad or not bad. If a child or children does indicate that feeling sad is not OK, the researcher will open up the next question by saying, "Let's talk about some of the OK things about feeling sad…in the movie, how did Sadness end up helping Riley?"
    b. **Contingency plan:** If all the children state that feeling sad is not a bad thing, the researcher will move on to the next question by saying, "That's right, feelings aren't good or bad! Even though nobody likes to feel sad, showing that you're sad can help. In the movie, how did Sadness end up helping Riley?"
4. In the movie, how did Sadness end up helping Riley?
    a. **Goal:** To see if the children are able to understand that Sadness was able to help Riley get social and emotional support when she lost the hockey game, as well as at the end of the movie when her parents hugged her and made her feel better. In addition, children should be able to indicate that if Riley had talked with her parents earlier about feeling sad and upset about moving and leaving her friends, her parents could have helped her feel better.
    b. **Contingency plan:** If the children are unable to determine how Sadness helped Riley, hints will be given until a child answers correctly (example: "What happened when Riley missed the winning goal at her hockey game?"

"What could have helped Riley when she felt sad about missing her friends back home?")

5. What kinds of things do you do when you're feeling sad?
    a. Do these things make you feel better, or worse?
    b. How does it make you feel better or worse?
        i. **Goal:** To allow children to share their own coping skills (adaptive or maladaptive) and generate discussion on things people do when they're feeling sad
6. What are some things you can do at home next time you're feeling upset in order to feel better?
    a. **Goal:** To discuss positive coping skills such as accepting one's feelings, talking to a trusted person, doing something fun (coloring, playing, etc.), taking deep breaths, thinking about the sad situation in a more positive way, and distracting oneself with something else.
    b. **Contingency plan:** If children are unable to determine positive coping skills (such as the ones listed above), investigator will provide these examples
7. Who do you like to talk to when you're feeling sad or upset?
    a. **Goal:** To help children determine who they can trust with talking about their feelings and to indicate that sharing these feelings can be helpful to children
    b. **Contingency plan:** If a child is unable to name anyone, investigator will indicate that a trusted adult, such as a parent, teacher, or guidance counselor is always a good option.
8. What can you tell a friend who feels embarrassed or ashamed for being sad? What can you tell yourself next time you feel embarrassed for being sad?
    a. **Goal:** To see if children understand that feeling sad is okay, and if they can learn to tell themselves that it's OK to feel sad
    b. **Contingency plan:** If no child answers, he investigator will say, "When I'm feeling sad, I will tell myself, "Feeling sad is OK, there is nothing wrong with it. But, I want to feel better now. So I'm going to talk to my mom, and then I'll go for a run." How about you?

Appendix H

Discussion Checklist

Question	**Discussed? Y/N**	**Notes/Comments**
1. Who here has ever felt sad?		
2. What makes people feel sad?		
3. Is feeling sad bad/why?		
4. How did Sadness help Riley?		
5. What do you do when sad?		
6. What can you do at home next time you're sad to feel better?		
7. Who can you talk to?		
8. Embarrassed for feeling sad—friend? Yourself?		

Appendix I

Discussion Handout For Parents

Dear Parents,

Feel free to follow along to our group discussion with the questions below. Under each question is the reason why we're talking about the topic, and helpful tips for you if you want to continue these important conversations at home with your kids!

1. **Who here has ever felt sad? Raise your hand if you've felt sad.**
    a. **Goal for this question:** Demonstrate that sadness is a common and normal emotion by showing that everyone feels sad sometimes.
    b. **Tips for you:** Whenever your child or someone else in your family is sad or upset, sharing and talking about these feelings as a family in a supportive and open environment can help children feel safe to express their feelings.

2. **What's something that makes people feel sad?**
    a. **Goal:** Allow children to connect with others about things that make people feel sad.
    b. **Tips for you:** You can share with your child things that make you feel sad, too! However, it is NOT helpful to tell them that things they do, like not make their beds, make you feel sad. Stick to other things that they cannot control. Also, make sure not to talk about "grownup" things that make you feel sad, such as paying the bills. Try to help your child relate to you.

3. **Is feeling sad a bad thing? Why? Why not?**
    a. **Goal:** Determine what the children currently think about feeling sad.
    b. **Tips for you:** If you notice your child trying to hide their feelings (sadness, fear, anger, etc.), remind them that feelings are not good OR bad—they just are! And it's okay to have all sorts of feelings, even if they aren't pleasant.

4. **In the movie, how did Sadness end up helping Riley?**
    a. **Goal:** To see if the children understand that Sadness was able to help Riley get social and emotional support when she lost the hockey game, as well as at the end of the movie when her parents hugged her and made her feel better. I also want to make sure the children understand that if Riley had talked with her parents earlier about feeling sad and upset about moving and leaving her friends, her parents could have helped her feel better.
    b. **Tips for you:** Remind your child that hiding their feelings and not sharing what is really going on will make them feel worse. Remind them that you will not be angry with them because of their feelings. Always be supportive and empathic.

5. **What kinds of things do you do when you're feeling sad?**
    a. **Goal:** To allow children to share their own coping skills (adaptive or maladaptive) and discuss things people do when they're feeling sad

b. **Tips for you:** Point out your own coping skills that you use when you're sad (or angry, afraid, etc.) and explain how they make you feel better.

6. **What are some things you can do at home next time you're feeling upset in order to feel better?**
    a. **Goal:** To discuss positive coping skills such as accepting one's feelings, talking to a trusted person, doing something fun (coloring, playing, etc.), taking deep breaths, thinking about the sad situation in a more positive way, and distracting oneself with something else.
    b. **Tips for you:** Make a "Feel-Sad Plan" with your child. Remind them about how Sadness was helpful to Riley in the movie, as she was able to get the emotional support she needed from her parents. Make sure this Feel-Sad Plan includes positive coping skills and people your child can talk to.

7. **Who do you like to talk to when you're feeling sad or upset?**
    a. **Goal:** To help children determine who they can trust with talking about their feelings and to indicate that sharing these feelings can be helpful to children.
    b. **Tips for you:** Make a list with your child of people with whom it's safe and OK to talk about their feelings. Keep this list somewhere visible to remind them.

8. **What can you tell a friend who feels embarrassed or ashamed for being sad? What can you tell yourself next time you feel embarrassed for being sad?**
    a. **Goal:** To see if children understand that feeling sad is okay, and if they can learn to tell themselves that it's OK to feel sad.
    b. **Tips for you:** Remind your child that feelings are normal and natural! Reflect on your child's feelings and validate them by telling them it's okay that they're feeling this way.

INSTEAD OF…	SAY…
"Don't be angry; it's not a big deal!"	"I see that you're angry right now, and I understand why that would make you feel so mad. What can we do to make you feel better?"
"Stop crying!"	"You seem really sad. What would you like to do on your Feel-Sad Plan to feel better?"
"Stop acting like a baby. Big boys/girls don't get scared."	"I know this is really scary for you, but it's also really important that you get your shots. Let's try to take some deep breaths to calm down."
"You shouldn't be sad, you should be happy!"	"It's okay to feel sad right now. I feel sad, too, sometimes. When I'm sad, I feel better when I talk about it. What will help you right now?"
"Don't be mad about your chores, do you realize how much I do around the house?"	"I see that you're angry that you have to do chores. It's okay to be angry about them, but you still have to do them before you can _____."

Appendix J

Parent Feedback Questionnaire (Treatment Group)

Participant ID: _____

Please circle your response and answer all questions honestly. Your responses are anonymous.

1. How helpful was this study in learning about your child's emotions?

Not at all helpful A little helpful Pretty helpful Very helpful

2. How much did this study teach you about talking with your children about their feelings?

Nothing A little A moderate amount A lot

3. After this study is over, how likely are you to help your child use the coping skills discussed today?

Not at all likely A little likely Pretty likely Very likely

4. After participating in this study, how likely is it that you will change the way you talk with your children about their feelings at home?

Not at all likely A little likely Pretty likely Very likely

5. How interested were you in watching the movie with the children?

Not at all interested A little interested Somewhat interested Very interested

6. How interesting was listening to the children's discussion after the movie?

Not at all A little Somewhat Very

7. How much has this study changed the way you think about your child's emotions?

Not at all A little Somewhat A lot

8. Do you think your child will have a better understanding of their emotions after participating in this study?

Not at all A little Somewhat Very much so

9. How likely are you to talk about this study with your children after leaving today?

Not at all likely A little likely Somewhat likely Very likely

10. After this study is over, what changes might you make to how you discuss emotions with your child at home?

Appendix K

Child Feedback Questionnaire (Treatment Group)

Participant ID: _____
Please circle your response. Answer all questions as honestly as you can.

1. Other people need to know how I am feeling.

Never Sometimes Always

2. My feelings can help me understand what has happened.

Never Sometimes Always

3. It is important to understand how I am feeling.

Never Sometimes Always

4. I want to know why I feel bad about something.

Never Sometimes Always

5. How much has this activity changed the way you think about your feelings?

Not at all A little A lot

6. How helpful was this activity in teaching you good ways to handle your feelings?

Not at all helpful A little helpful Pretty helpful Very helpful

7. How likely are you to use some of the skills we talked about today the next time you're feeling sad or upset?

Not at all likely A little likely Pretty likely Very likely

8. After this activity, how likely are you to talk more about your feelings at home?

Not at all likely A little likely Pretty likely Very likely

9. How interesting was this activity for you?

Not at all interesting A little interesting Pretty interesting Very interesting

10. How helpful do you think it was to have your parent here with you today?

Not at all helpful A little helpful Pretty helpful Very helpful

Appendix L

Post-Study Handout for Parents

Dear Parents,

Thank you for participating in this movie event! I hope you were able to take away some important information about talking with your children about their emotions. Because it can be hard to have these conversations with your kids, below are some suggestions for ways to help your child better identify, regulate, and understand their emotions.

Talking About Feelings

DO:

- Listen to your child openly and nonjudgmentally
- Accept all feelings that your child is experiencing without trying to change them
- Validate their feelings by empathetic comments (e.g., "I understand why that made you angry").
- Help your child talk through their feelings, and then offer help with using a coping skill to feel better
- **Remind your child that it's okay to feel this way!**

DON'T:

- Imply that your child's feelings are silly or irrational ("It wasn't that big of a deal!")
- Tell your child NOT to feel a certain way ("Don't be sad," "You shouldn't be so mad right now")
- Be angry, upset, or critical of your child for expressing their feelings

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Positive Coping Skills for Kids (and Parents!)

- Taking slow, deep breaths
- Going on a walk with your child
- Engaging your child in a favorite game or toy
- Imagining a favorite place or memory in as much detail as possible
- Writing in a journal
- Talking to a friend or family member

Resources

Helping your child express their thoughts and feelings can be hard work! If you think your child would benefit from counseling or therapy to address emotion regulation or other difficulties, below is a list of local resources for you.

- **Center for Applied Psychology**
  238 Uhler Hall
  Indiana, PA 15705
  (724) 357-6228
- **Community Guidance Center**
  793 Old Rte 119 Hwy N.
  Indiana, PA 15701
  (724) 465-5576
- **Community Guidance Center**
  300 Prushnok Drive Suite 103
  Punxsutawney, PA 15767
  (814) 938-4444
- **Lake Psychological Services**
  163 Plaza Road
  Indiana, PA 15701
  (724) 465-2311
- **Family Counseling Center**
  300 S Jefferson St, Kittanning, PA 16201
  (724) 543-2941

Appendix M

Post-Study Handout for Children

SADNESS SAYS…

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Feeling sad is OK!
When I feel sad, I like to talk with someone about it, take 10 deep breaths, and go on a walk. That's my Feel-Sad Plan. What's yours?

Things to Remember About Feelings:

1. Feelings aren't good OR bad. They just are!
2. Showing your feelings can be scary or uncomfortable. It helps to think of one or two people (Mom and Dad, siblings, or friends, for example) who can be your Feelings Person. You should be able to talk to this person every time you want to share your feelings.
3. If you don't have someone to talk to, you can always ask your guidance counselor, teacher, or principal to be your Feelings Person.
4. Other good ways to help you feel better when you're sad are:
   - ☺ Remind yourself that it's OK to feel this way
   - ☺ Play a favorite game or do a favorite activity
   - ☺ Play with a friend or pet
   - ☺ Write in a journal
   - ☺ Take 10 deep breaths
   - ☺ Close your eyes and imagine a favorite memory, place, or story, in as much detail as you can

Appendix N

Parent Consent Form (Control Group)

(Printed On Iup Psychology Department Letterhead For Distribution)

You and your child are invited to participate in this research study. The following information is provided to help you make an informed decision about whether or not to participate. If you have any questions, please do not hesitate to ask.

The purpose of this study is to see whether watching and talking about the Disney/Pixar movie *Inside Out*© helps children learn to better understand and control their emotions, as well as helps parents talk about emotions with their children. This study will take approximately 2 hours total, during which you and your child will be required to complete several questionnaires and watch the movie *Inside Out*. For participating in the study, every child will be given a small prize. Afterward, I will be contacting each parent once per week for 3 weeks via either phone or email (according to your preference) to check in with you about the study. After 4 weeks, you will receive questionnaires for you and your child to complete. These will be delivered via email or post, per your preference. After sending these questionnaires back to me, you will receive a $5 gift card as a thank you for participating. Also, your child will be entered into a drawing to win *Inside Out*© on DVD.

Participation in this study is voluntary, and you are free to decide not to participate or to withdraw from this study at any time. If you decide to withdraw, you may leave at any time and any information I have about you and your child will be destroyed. Your responses on the questionnaires are confidential and will not be shared with anyone. The questionnaires that you and your child complete will be identified by number, not by your name, to protect your privacy.

If you and your child choose to participate in this study, all information that you provide will be kept private. Due to the group structure of the study, your privacy will be limited by the other participants in your group. However, all participants will be instructed not to discuss other group members when the study is over. Neither your name nor your child's name will be on any questionnaires that you complete, and all information collected for this study will be kept in a locked cabinet at IUP. Confidentiality is also limited by the state requirement that suspicions of child abuse must be reported to authorities. Therefore, if a child reports to an investigator that he or she is being abused, a report will need to be made.

Risks to participating in this study are believed to be minimal. However, if your child becomes distressed during the study, the primary investigator, Ingrid Krecko, M.A., is a clinical psychology graduate student under the supervision of licensed psychologists, and is trained to manage children's distress. Two licensed clinical psychologists will be available by phone as needed throughout the duration of the study.

If you are willing to participate in this study, please sign the statement below and return one copy of this form to Ingrid Krecko after signing. Please keep the extra copy in case you have any questions at a later time. If you choose not to participate, you may return the unsigned copy to Ingrid Krecko and leave the study.

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the Protection of Human Subjects (Phone: 724-357-7730)

Ingrid Krecko, M.A.
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Principal Investigator
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VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent participate in this study. I understand that my responses are confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this informed Consent Form to keep for my personal records.

Name (PLEASE PRINT): _____

Signature: _____

Date: _____

Phone number: _____ E-mail address: _____

Please indicate your preferred method of contact for weekly check-ins:

_____E-mail _____Phone _____ **OK to leave voicemail?**

Please indicate your preferred method for receiving the questionnaires in 4 weeks (parent and child questionnaires):

_____E-mail (linked to an anonymous online survey) _____Standard mail

If you prefer standard mail, please write your address: _____

_____

I certify that I have explained to the individual the nature and purpose, the potential benefits, and possible risks associated with this research study, answered any questions that have been raised, and witnessed the above signature.

_____
Investigator's Signature Date

Appendix O

Child Assent Form (Control Group)

(Printed on IUP Psychology Department letterhead for distribution)

What is a research study?
Research studies help us learn new things and test new ideas. First, we ask a question, and then we try to find the answer.

My name is Ingrid and I am in charge of this research study. This form will tell you about my research study. After you read it, you will get to choose if you want to take part in it. I want you to ask me any questions that you have about the research. You can ask me these questions at any time.

Important things to remember:
- You get to decide if you want to help with the study.
- You can say "No" or you can say "Yes."
- Nobody will be upset if you say "No."
- If you say "Yes" and change your mind, you can always say "No" later.
- You can say "No" at any time.

What would happen if I join this research?
If you decide to help with this research study, you will be asked to:
- Fill out some forms that ask about you and your feelings.
- Watch the movie *Inside Out*© with other kids your age.
- In 4 weeks, you will be asked to fill out the forms again.

Could bad things happen if I join this research study?
It might be hard to answer some of the questions on the surveys. If you don't know the answer, I ask that you just try your best. I will try to make sure that no bad things happen.

Could the research help me?
I think being in this research might help you and your parents understand your feelings a little better and learn new ways of feeling better when you're sad, upset, or mad. It might also help your parents learn how to help you feel better when you need support.

What else should I know about this research?
If you don't want to be in the study, you don't have to be.

It is OK to say "Yes" and change your mind later. You can stop being in the research at any time. If you want to stop, just tell me.

As a thank you for being in this study, you will get a prize at the end.

You can ask questions at any time. You can talk to Ingrid or your parent/guardian if you have any questions. Take the time you need to make your choice.

If you want to be in the research, please write your name below. I will write my name too. This shows that we talked about the research and you want to help me.

Name of Participant _____

Name of Researcher _____

Signature of Researcher _____

_____
Date

Ingrid Krecko, M.A.
Graduate Student
Principal Investigator
Indiana University of Pennsylvania
101 Uhler Hall
Indiana, PA 15701
(724) 357-4526

Laura Knight, Ph.D.
Assistant Professor
Faculty Advisor
Indiana University of Pennsylvania
218 Uhler Hall
Indiana, PA 15701
(724) 357-4526

This project has been approved by the Indiana University of Pennsylvania Institutional Review Board for the protection of human subjects (Phone 724.357.7730)

Appendix P

Parent Feedback Questionnaire (Control Group)

Participant ID: _____

Please circle your response and answer all questions honestly. Your responses are anonymous.

1. How helpful was this study in learning about your child's emotions?

Not at all helpful A little helpful Pretty helpful Very helpful

2. How much did this study teach you about talking with your children about their feelings?

Nothing A little A moderate amount A lot

3. After participating in this study, how likely is it that you will change the way you talk with your children about their feelings at home?

Not at all likely A little likely Pretty likely Very likely

4. How interested were you in watching the movie with the children?

Not at all interested A little interested Somewhat interested Very interested

5. How much has this study changed the way you think about your child's emotions?

Not at all A little Somewhat A lot

6. Do you think your child will have a better understanding of their emotions after participating in this study?

Not at all A little Somewhat Very much so

7. How likely are you to talk about this study with your children after leaving today?

Not at all likely A little likely Somewhat likely Very likely

8. After this study is over, what changes might you make to how you discuss emotions with your child at home?

Appendix Q

Child Feedback Questionnaire (Control Group)

Participant ID: _____
Please circle your response. Answer all questions as honestly as you can.

1. Other people need to know how I am feeling.

Never Sometimes Always

2. My feelings can help me understand what has happened.

Never Sometimes Always

3. It is important to understand how I am feeling.

Never Sometimes Always

4. I want to know why I feel bad about something.

Never Sometimes Always

5. How much has this activity changed the way you think about your feelings?

Not at all A little A lot

6. How helpful was this activity in teaching you good ways to handle your feelings?

Not at all helpful A little helpful Pretty helpful Very helpful

7. After this activity, how likely are you to talk more about your feelings at home?

Not at all likely A little likely Pretty likely Very likely

8. How interesting was this activity for you?

Not at all interesting A little interesting Pretty interesting Very interesting

9. How helpful do you think it was to have your parent here with you today?

Not at all helpful A little helpful Pretty helpful Very helpful

Appendix R

Scripts for Phase 2 Emails

Treatment Group Script

Hello Parents!

This is your weekly check-in to remind you about the handouts and resources I gave you at the Inside Out study. If you have any questions or concerns about these forms, please call or e-mail me back at your convenience You will be receiving follow-up questionnaires in X weeks to complete. Kindly answer the following questions:

Participant ID:
First 2 letters of your mother's maiden name:
First 2 letters/numbers of the street you grew up on:
Last 2 digits of your SSN:

Did you and your child talk about emotions at all this week? YES or NO

If YES, approximately how many times did you discuss feelings this week? (Best guess/estimate)

As a reminder, I will be checking in with you next week at this time as well. Thank you very much!

Control Group Script

Hello Parents!

This is your weekly check-in about the study. You will be receiving follow-up questionnaires in X weeks to complete. Kindly answer the following questions:

First 2 letters of your mother's maiden name:
First 2 letters/numberes of the street you grew up on:
Last 2 digits of your SSN:

Did you and your child talk about emotions at all this week? YES or NO

If YES, approximately how many times did you discuss feelings this week? (Best guess/estimate)

As a reminder, I will be checking in with you next week at this time as well. Thank you very much!

Appendix S

Handout Questionnaire

Please complete this form to the best of your ability.

1. After the study, how helpful was the Discussion Questions handout in changing how you talk to your child about emotions?
    a. Extremely helpful
    b. Somewhat helpful
    c. Neither helpful nor unhelpful
    d. Somewhat unhelpful
    e. Extremely unhelpful

2. After the study, how helpful was the Parent Handout in changing how you talk with your child about emotions?
    a. Extremely helpful
    b. Somewhat helpful
    c. Neither helpful nor unhelpful
    d. Somewhat unhelpful
    e. Extremely unhelpful

3. After the study, how helpful was your child's handout in changing how they talked or thought about their feelings?
    a. Extremely helpful
    b. Somewhat helpful
    c. Neither helpful nor unhelpful
    d. Somewhat unhelpful
    e. Extremely unhelpful

4. During these past three weeks, how often did you look at either handout you received at the study?
    a. Not at all
    b. 1-3 times
    c. 4-7 times
    d. 8-11 times
    e. 12-15 times
    f. 16+ times

5. During these past three weeks, how often did your child use their handout they received at the study?
    a. Not at all
    b. 1-3 times
    c. 4-7 times
    d. 8-11 times
    e. 12-15 times
    f. 16+ times

6. Did you create a Feel-Sad Plan with your child?
    a. Yes, and we used it
    b. Yes, but we never used it
    c. No
7. If you and/or your child did NOT use any of the handouts, please explain why not:

Thank you for completing this survey!

Appendix T

Debriefing Form

(Printed On Psychology Department Letterhead For Distribution)

Experiment Debriefing

Thank you for participating in the study *Inside Out© Movie Event.* The purpose of this study is to determine if watching the entertaining and popular film, *Inside Out©*, can help children understand, share, and regulate their emotions in more appropriate and effective ways. I also wanted to determine whether parental involvement in watching the movie and talking about emotion regulation with their children afterwards can help children talk about their feelings more comfortably in the home.

In this study, I asked children and parents to complete several questionnaires about observed and self-reported emotion experiences, including hiding feelings, not accepting one's emotional responses, and regulating emotions in adaptive or maladaptive ways. Then, participants were asked to watch the film *Inside Out© and* child participants engaged in a discussion about the lessons that the movie taught and how they can be applied to their own emotional experiences. I then asked you and your child to complete the questionnaires again after 4 weeks to see if your children's emotion regulation improved.

Emotion regulation is an important aspect of a child's emotional development. For children to effectively regulate their emotions, they must be taught ways to not only accept the feelings they are having, but also channel them in ways that will allow them to manage their emotions and feel better. These methods, often referred to as "coping skills," can include deep breathing, distraction, or talking to a friend or family member about their feelings. It is important for parents to help their children choose a positive coping skill to use when they are feeling sad, angry, frustrated, or scared. Even parents can learn to use these coping skills!

I hope that you enjoyed taking part in this study and that you were able to learn new ways to talk with your children about their feelings. Remember: Feelings aren't good or bad; they just are! If you are interested in hearing about the results of this study, have any questions about the research, or would like more information about any aspect of the research, please do not hesitate to contact Ingrid Krecko. I'd like to thank you again for participating in my research study. Your contributions will certainly help propel the field of emotion regulation in children!

If you think your child would benefit from counseling or therapy to address emotion regulation or other difficulties, below is a list of local resources for you.

- **Center for Applied Psychology**
  1020 Oakland Ave (210 Uhler Hall)
  Indiana, PA 15705
  (724) 357-6228
  http://www.iup.edu/psychology/centers/default.aspx
  "The CAP currently houses four clinics (Intake Clinic, Stress and Habit Disorders Clinic, Family and Child Treatment Clinic, and Adult Assessment Clinic) offering psychotherapeutic and evaluation

services, staffed by IUP faculty members who are Pennsylvania licensed psychologists and by doctoral students in advanced training."

- **Community Guidance Center**
  793 Old Rte 119 Hwy N.
  Indiana, PA 15701
  (724) 465-5576
  http://www.thecgc.com/
  "The mission of the Community Guidance Center is to provide high quality comprehensive Mental Health Services, empowering individuals and families residing in the community to improve the quality of their lives."

- **Community Guidance Center**
  300 Prushnok Drive Suite 103
  Punxsutawney, PA 15767
  (814) 938-4444

- **Lake Psychological Services**
  163 Plaza Road
  Indiana, PA 15701
  (724) 465-2311

- **Family Counseling Center**
  300 S Jefferson St, Kittanning, PA 16201
  (724) 543-2941
  http://www.fccac.org
  "It is the aim of the Family Counseling Center to provide respectful and courteous service to the public, to enhance each person's sense of value and self-esteem, and to foster self-acceptance, self-reliance, empowerment and recovery..."

- **Family Behavioral Resources**
  1380 Route 286 Hwy East
  724-463-3600
  http://www.familybehavioralresources.com/
  "Since its start in 1999, Family Behavioral Resources (FBR) has continually enhanced its delivery of quality mental health services … and now provides a variety of mental health services throughout twelve counties in Southwestern Pennsylvania. FBR continues to work with counties' MH/MR centers and managed care systems to identify other mental health needs, either new programs or expansion of existing programs, that will help people in those counties."

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Appendix U

Parent Demographic Questionnaire

Participant ID: _____

Inside Out© Movie Event!
Parent Questionnaire

Thank you for participating in our *Inside Out*© movie event and study. Please complete the following questionnaire. As your name will not be on this form, the information is strictly confidential.

Relationship to child: _____

Does your child have any of the following concerns?

____ Blind / Visually impaired ____ Deaf / Hard of hearing

____ Serious developmental disability ____ Serious cognitive disability

____ ADHD _____Autism Spectrum Disorder _____Depression _____Anxiety

_____Other mental health problem(s) (please explain):_____

_____

Has your child ever been in therapy or counseling? _____NO _____YES

If YES, please explain: _____

What is your gender? _____ Male _____ Female _____ Other

What is your race/ethnicity? (Circle all that apply):

a) White, not Hispanic
b) Black
c) Asian/Pacific Islander
d) American Indian/Alaska Native
e) White, Hispanic/Latino
f) Multiple/Mixed Race
g) Other Race

What is your highest attained level of education?

1 Some high school
2 High school diploma/GED
3 Technical/vocational school

4 Some college
5 College/University Diploma

6 Graduate School or above

What is your marital status?

a) Married
b) Divorced
c) Separated
d) Never married

What is your family's annual income?

a) < $5,000
b) $5,000—$9,999
c) $10,000—$14,999
d) $15,000—$24,999
e) $25,000—$34,999
f) $35,000—$44,999
g) $45,000—$54,999
h) $55,000—$64,999
i) $65,000—$74,999
j) $75,000+

Have you seen the movie *Inside Out*©? _____Yes _____No

If yes, did you watch it with your child? _____No

____Yes, and we talked about it afterward. ____Yes, but we never talked about it.

How often does your child talk about their feelings with you when she/he is feeling happy or excited? Circle one.

1	2	3	4	5
Never	**A little**	**Sometimes**	**Often**	**Almost Always**

How often does your child talk about their feelings with you when she/he is feeling sad or upset? Circle one.

1	2	3	4	5
Never	**A little**	**Sometimes**	**Often**	**Almost Always**

How often do you feel like you know or understand how your child is feeling? Circle one.

1	2	3	4	5
Never	**A little**	**Sometimes**	**A lot**	**Almost Always**

Appendix V

Child Demographic Questionnaire

Participant ID: _____

Inside Out© Movie Event!
Child Questionnaire

Thank you for being here for our *Inside Out*© movie event! Before we get started, please fill out this questionnaire as best you can. Your name won't be on it, so everything you write will be confidential (that means nobody will know who wrote it!).

Age: _____ Birthdate (Month, Day, Year): _____

Grade: _____ Gender: _____

Have you seen the movie *Inside Out*© before? ____Yes ____No

If yes, about how many times? ___ 1-2 ___ 3-5 ___ 6 or more times

How often do you talk with your parents/guardians about your feelings when you're feeling happy or excited? Circle one.

1	**2**	**3**	**4**	**5**
Never	**A little**	**Sometimes**	**Often**	**Almost Always**

How often do you talk to your parents/guardians about your feelings when you're feeling sad or upset? Circle one.

1	**2**	**3**	**4**	**5**
Never	**A little**	**Sometimes**	**Often**	**Almost Always**

How often do you feel like your parents/guardians understand your feelings overall? Circle one.

1	**2**	**3**	**4**	**5**
Never	**A little**	**Sometimes**	**A lot**	**Almost Always**

Appendix W

Eyberg Child Behavior Inventory (ECBI)

ECBI™ Eyberg Child Behavior Inventory™

Parent Rating Form by Sheila Eyberg, PhD

Your Name _____ Relationship to Child _____ Today's Date __/__/__

Child's Name _____ Child's Gender _____ Child's Date of Birth __/__/__

Directions: Below are a series of phrases that describe children's behavior. Please (1) circle the number describing **how often** the behavior **currently** occurs with your child, and (2) circle either "yes" **or** "no" to indicate whether the behavior is **currently a problem for you**.

For example, if seldom, you would circle the 2 in response to the following statement:

	Never	Seldom	Sometimes	Often		Always	Is this a problem for you?
1. Refuses to eat vegetables	1	(2)	3	4	5	6	7	YES	(NO)

Circle only one response for each statement, and respond to all statements. **DO NOT ERASE!** If you need to change an answer, make an "X" through the incorrect answer and circle the correct response. For example:

1. Refuses to eat vegetables	1	(2)	(X)	4	5	6	7	YES	(NO)

	How often does this occur with your child?							Is this a problem for you?	
	Never	Seldom	Sometimes	Often		Always			
1. Dawdles in getting dressed	1	2	3	4	5	6	7	YES	NO
2. Dawdles or lingers at mealtime	1	2	3	4	5	6	7	YES	NO
3. Has poor table manners	1	2	3	4	5	6	7	YES	NO
4. Refuses to eat food presented	1	2	3	4	5	6	7	YES	NO
5. Refuses to do chores when asked	1	2	3	4	5	6	7	YES	NO
6. Slow in getting ready for bed	1	2	3	4	5	6	7	YES	NO
7. Refuses to go to bed on time	1	2	3	4	5	6	7	YES	NO
8. Does not obey house rules on own	1	2	3	4	5	6	7	YES	NO
9. Refuses to obey until threatened with punishment	1	2	3	4	5	6	7	YES	NO
10. Acts defiant when told to do something	1	2	3	4	5	6	7	YES	NO
11. Argues with parents about rules	1	2	3	4	5	6	7	YES	NO
12. Gets angry when doesn't get own way	1	2	3	4	5	6	7	YES	NO
13. Has temper tantrums	1	2	3	4	5	6	7	YES	NO
14. Sasses adults	1	2	3	4	5	6	7	YES	NO
15. Whines	1	2	3	4	5	6	7	YES	NO
							Page 1 subtotals		

OVER →

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	How often does this occur with your child?							Is this a problem for you?	
	Never	Seldom	Sometimes		Often		Always		
16. Cries easily	1	2	3	4	5	6	7	YES	NO
17. Yells or screams	1	2	3	4	5	6	7	YES	NO
18. Hits parents	1	2	3	4	5	6	7	YES	NO
19. Destroys toys and other objects	1	2	3	4	5	6	7	YES	NO
20. Is careless with toys and other objects	1	2	3	4	5	6	7	YES	NO
21. Steals	1	2	3	4	5	6	7	YES	NO
22. Lies	1	2	3	4	5	6	7	YES	NO
23. Teases or provokes other children	1	2	3	4	5	6	7	YES	NO
24. Verbally fights with friends own age	1	2	3	4	5	6	7	YES	NO
25. Verbally fights with sisters and brothers	1	2	3	4	5	6	7	YES	NO
26. Physically fights with friends own age	1	2	3	4	5	6	7	YES	NO
27. Physically fights with sisters and brothers	1	2	3	4	5	6	7	YES	NO
28. Constantly seeks attention	1	2	3	4	5	6	7	YES	NO
29. Interrupts	1	2	3	4	5	6	7	YES	NO
30. Is easily distracted	1	2	3	4	5	6	7	YES	NO
31. Has short attention span	1	2	3	4	5	6	7	YES	NO
32. Fails to finish tasks or projects	1	2	3	4	5	6	7	YES	NO
33. Has difficulty entertaining self alone	1	2	3	4	5	6	7	YES	NO
34. Has difficulty concentrating on one thing	1	2	3	4	5	6	7	YES	NO
35. Is overactive or restless	1	2	3	4	5	6	7	YES	NO
36. Wets the bed	1	2	3	4	5	6	7	YES	NO

Page 2 subtotals		
Subtotals from page 1		

Scores	Raw score	T score	Exceeds Cutoff (✓)
Intensity			
Problem			

Comments:

Appendix X

Emotion Regulation Checklist (ERC)

Participant Number: _____

Please indicate the extent to which you feel these statements pertain to your child:

	Never	Sometimes	Often	Almost Always
1. Is a cheerful child.	1	2	3	4
2. Exhibits wide mood swings (child's emotional state is difficult to anticipate because s/he moves quickly from positive to negative moods).	1	2	3	4
3. Responds positively to neutral or friendly overtures by adults.	1	2	3	4
4. Transitions well from one activity to another; does not become anxious, angry, distressed or overly excited when moving from one activity to another.	1	2	3	4
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).	1	2	3	4
6. Is easily frustrated.	1	2	3	4
7. Responds positively to neutral or friendly overtures by peers.	1	2	3	4
8. Is prone to angry outbursts/tantrums easily.	1	2	3	4
9. Is able to delay gratification.	1	2	3	4
10. Takes pleasure in the distress of others (for example, laughs when another person gets hurt or punished; enjoys teasing others).	1	2	3	4
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).	1	2	3	4
12. Is whiny or clingy with adults.	1	2	3	4
13. Is prone to disruptive outbursts of energy and exuberance.	1	2	3	4
14. Responds angrily to limit-setting by adults.	1	2	3	4

15. Can say when s/he is feeling sad, angry or mad, fearful or afraid.	1	2	3	4
16. Seems sad or listless.	1	2	3	4
17. Is overly exuberant when attempting to engage others in play.	1	2	3	4
18. Displays flat affect (expression is vacant and inexpressive; child seems emotionally absent).	1	2	3	4
19. Responds negatively to neutral or friendly overtures by peers (for example, may speak in an angry tone of voice or respond fearfully).	1	2	3	4
20. Is impulsive.	1	2	3	4
21. Is empathetic towards others; shows concern when others are upset or distressed.	1	2	3	4
22. Displays exuberance that others find intrusive or disruptive.	1	2	3	4
23. Displays appropriate negative emotions (anger, fear, frustration, distress) in response to hostile, aggressive, or intrusive acts by peers).	1	2	3	4
24. Displays negative emotions when attempting to engage others in play.	1	2	3	4

APPENDIX Y

EMOTION AWARENESS QUESTIONNAIRE (EAQ)

Participant ID: _____

	Never	Sometimes	Often
1. I am often confused or puzzled about what I am feeling.	1	2	3
2. It is difficult to know whether I feel sad or angry or something else.	1	2	3
3. When I am upset about something, I often keep it to myself.	1	2	3
4. I find it difficult to explain to a friend how I feel.	1	2	3
5. I find it hard to talk to anyone about how I feel.	1	2	3
6. Other people don't need to know how I am feeling.	1	2	3
7. I never know exactly what kind of feeling I am having.	1	2	3
8. When I am upset, I don't know if I am sad, scared, or angry.	1	2	3
9. I can easily explain to a friend how I feel inside.	1	2	3
10. When I am upset, I try not to show it.	1	2	3
11. Sometimes, I feel upset and I have no idea why.	1	2	3
12. When I am angry or upset, I try to hide.	1	2	3
13. I often don't know why I am angry.	1	2	3
14. When I am feeling bad, it is no one else's business.	1	2	3
15. I don't know when something will upset me or not.	1	2	3
16. It is important to know how my friends are feeling.	1	2	3
17. I don't want to know how my friends are feeling.	1	2	3
18. If a friend is upset, I try to understand why.	1	2	3

19. I don't care about how my friends are feeling inside.	1	2	3
20. I usually know how my friends are feeling.	1	2	3
21. When I am angry or upset, I try to understand why.	1	2	3
22. My feelings help me understand what has happened.	1	2	3
23. When I have a problem, it helps me when I know how I feel about it.	1	2	3
24. It is important to understand how I am feeling.	1	2	3
25. I always want to know why I feel bad about something.	1	2	3

Appendix Z

Emotion Regulation Questionnaire for Children And Adolescents (ERQ-CA)

Participant ID: _____

Please read each sentence and circle the answer depending on how much you think each statement is true of yourself.

	Strongly Disagree	**Disagree**	**Half & Half**	**Agree**	**Strongly Agree**
1. When I want to feel happier, I think about something different.	**1**	**2**	**3**	**4**	**5**
2. I keep my feelings to myself.	**1**	**2**	**3**	**4**	**5**
3. When I want to feel less bad (e.g., sad, angry, or worried), I think about something different.	**1**	**2**	**3**	**4**	**5**
4. When I am feeling happy, I am careful not to show it.	**1**	**2**	**3**	**4**	**5**
5. When I'm worried about something, I make myself think about it in a way that helps me feel better.	**1**	**2**	**3**	**4**	**5**
6. I control my feelings by not showing them.	**1**	**2**	**3**	**4**	**5**
7. When I want to feel happier about something, I change the way I'm thinking about it.	**1**	**2**	**3**	**4**	**5**
8. I control my feelings about things by changing the way I think about them.	**1**	**2**	**3**	**4**	**5**
9. When I'm feeling bad (e.g., sad, angry, or worried), I am careful not to show it.	**1**	**2**	**3**	**4**	**5**
10. When I want to feel less bad (e.g., sad, angry, or worried) about something, I change the way I'm thinking about it.	**1**	**2**	**3**	**4**	**5**

Appendix AA

Child and Adolescent Mindfulness Measure (CAMM)

Participant ID: _____

Please read each sentence and circle the answer depending on how much you think each statement is true of yourself.

	Never True	**Rarely True**	**Sometimes True**	**Often True**	**Always True**
1. I get upset with myself for having feelings that don't make sense.	**0**	**1**	**2**	**3**	**4**
2. At school, I walk from class to class without noticing what I'm doing.	**0**	**1**	**2**	**3**	**4**
3. I keep myself busy so I don't notice my thoughts or feelings.	**0**	**1**	**2**	**3**	**4**
4. I tell myself that I shouldn't feel the way I'm feeling.	**0**	**1**	**2**	**3**	**4**
5. I push away thoughts that I don't like.	**0**	**1**	**2**	**3**	**4**
6. It's hard for me to pay attention to only one thing at a time.	**0**	**1**	**2**	**3**	**4**
7. I think about things that happened in the past instead of thinking about things that are happening right now.	**0**	**1**	**2**	**3**	**4**
8. I get upset with myself for having certain thoughts.	**0**	**1**	**2**	**3**	**4**
9. I think that some of my feelings are bad and that I shouldn't have them.	**0**	**1**	**2**	**3**	**4**
10. I stop myself from having feelings that I don't like.	**0**	**1**	**2**	**3**	**4**