

PARENTAL EMOTION SOCIALIZATION OF  
ADOLESCENTS: CREATION AND VALIDATION  
OF A MULTI-METHOD MEASURE

By

CARA D. BOSLER

Bachelor of Science in Human Development  
and Family Science  
Oklahoma State University  
Stillwater, OK  
2006

Master of Science in Human Development  
and Family Science  
Oklahoma State University  
Stillwater, OK  
2010

Submitted to the Faculty of the  
Graduate College of the  
Oklahoma State University  
in partial fulfillment of  
the requirements for  
the Degree of  
DOCTOR OF PHILOSOPHY  
July, 2013

PARENTAL EMOTION SOCIALIZATION OF  
ADOLESCENTS: CREATION AND VALIDATION  
OF A MULTI-METHOD MEASURE

Dissertation Approved:

Michael M. Criss, Ph.D.

---

Dissertation Adviser

Amanda S. Morris, Ph.D.

---

Laura Hubbs-Tait, Ph.D.

---

Robert E. Larzelere, Ph.D.

---

Jennifer Byrd-Craven, Ph.D.

---

Name: CARA D. BOSLER

Date of Degree: JULY, 2013

Title of Study: PARENTAL EMOTION SOCIALIZATION OF ADOLESCENTS:  
CREATION AND VALIDATION OF A MULTI-METHOD MEASURE

Major Field: HUMAN SCIENCES, with option in Human Development and Family  
Science

Abstract: In the extant literature, parental emotion socialization has been measured using parent, youth, and observer reports. However, a triangulated measure combining these approaches has not been established. The purpose of this study was to create and validate a multimethod-multiinformant measure of emotion socialization using a predominantly high-risk sample of 206 families with adolescents. First, an observational measure was created for this project. A correlated-uniqueness approach was utilized to combine the measures and reduce any error based on reporter. Some evidence for validity of the triangulated measure was found. In addition, findings suggest that the structure of the parental emotion socialization factors differ based on the specific emotion felt by the youth. This investigation provides preliminary evidence for a triangulated measure of emotion socialization. Further, this investigation has implications for interventionists and service providers.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
II. REVIEW OF LITERATURE.....	3
Adolescent Development.....	3
Defining and Operationalizing Emotion Socialization.....	4
Emotion Socialization and Adolescent Emotion Regulation.....	11
Examination of Different Emotions.....	12
Testing Validity.....	13
Research Goals and Hypotheses.....	16
III. METHODOLOGY.....	18
Sample.....	18
Procedure.....	18
Measures: Emotion Socialization (Observed).....	19
Measures: Emotion Socialization (Parent and Youth Reports).....	20
Measures: Emotion Expression (Observed).....	21
Measures: Emotion Regulation (Parent and Youth Reports).....	22
Plan of Analysis.....	22

Chapter	Page
IV. FINDINGS.....	25
Research Goal #1 .....	25
Research Goal #2 .....	26
Research Goal #3 .....	28
V. CONCLUSION.....	30
Factor Structure of Anger and Sadness ER.....	30
Better Interrater Reliability for Positive ES.....	33
Link Between ES and ER .....	34
Strengths of the Current Study.....	35
Limitations and Future Directions .....	36
Conclusions.....	37
REFERENCES .....	39
APPENDICES .....	50

## LIST OF TABLES

Table	Page
1.....	50
2.....	51
3.....	52
4.....	53
5.....	55
6.....	56

## LIST OF FIGURES

Figure	Page
1.....	57
2.....	58
3.....	59
4.....	60
5.....	61
6.....	62

## CHAPTER I

### INTRODUCTION

Adolescence is characterized by a number of developmental transformations and transitions within the youth and parent-youth relationship. For instance, brain development, physical maturation, and enhancement in cognitive and emotional skills are normative individual transformations during this period of the life cycle. In addition, the youth's relationship with his or her parents changes as (1) they spend less time under parental supervision and more time with peers, (2) they exert more autonomous behavior, and (3) the relationship becomes more balanced in terms of power. Perhaps due to these developmental transformations and transitions, adolescence is characterized by emotional volatility and thus is an ideal period to study the emotion socialization process.

The socialization of children's emotional expression, understanding, and regulation has been studied for decades. Parental emotion socialization (ES) is defined as parents' discussion and expression of emotions along with their reactions to their child's expression of emotion (Eisenberg et al., 1998). Most researchers conclude that, although there are cultural and family differences in goals, the desired outcome of ES is the appropriate expression and regulation of emotions. Indeed, the literature is saturated with findings of significant positive relations between ES and emotion regulation (ER; e.g.,



Cunningham, Kliewer, & Garner, 2009; Lunkenheimer, Shields, & Cortina, 2007; Shortt, Stoolmiller, Smith-Shine, Eddy, & Sheeber, 2010). While most of the earliest literature on this topic is based on preschool-aged participants, recently researchers have begun to focus on parental emotion socialization during adolescence. ES of adolescents traditionally has been measured using questionnaires, interviews, and observational measures. However, there have been no known published studies that have assessed ES using a multi-method, multi-informant approach.

The purpose of this study was to use a multi-method, multi-informant approach to generate and validate a measure of ES combining parent and youth reported questionnaire data with observational ratings based on an interaction task and coding system developed for this investigation. The *first goal* of this study was to examine the correlations among the parent, youth, and observer ratings of ES. The *second goal* of this investigation was to establish the structure of the ES factor to be used in the primary analyses. The *third goal* of this dissertation project was to examine the construct validity of the new measure by analyzing the link between ES and youth ER. For each goal, analyses were run separately for the socialization of two distinct emotions, anger and sadness.

## CHAPTER II

### LITERATURE REVIEW

The purpose of this section is to provide an overview of the literature on the assessment of parental emotion socialization (ES) and its relation to adolescent ER. There will be four parts to this literature review. In the first section, the developmental transformations that occur within the adolescent and within the parent-adolescent relationship will be discussed. Next, ES will be defined with special attention to the different dimensions and methods of assessment. In addition, research examining links between ES and adolescent emotion regulation (ER) will be reviewed. Next, common methods for validating observational measures are highlighted. In the last section, the specific goals and hypotheses of this study will be presented.

#### **Adolescent Development**

Adolescence is an important transitional period characterized by a number of transformations within the youth and within the parent-youth relationship. For instance, adolescence is characterized by advances in brain development (e.g., prefrontal cortex, Blakemore & Choudhury, 2006; Tamura et al., 2012; Wallace et al., 2010), though the maturation process is not complete until the early to middle 20's. In addition, adolescents go through a number of physical changes associated with puberty that often influence

how they view themselves and how others view them (Simmons, Blyth, Van Cleave, & Bush, 1979). Adolescents also show an expansion in cognitive ability, particularly in abstract thinking and perspective taking (Steinberg, 2001). Mostly due to these advances in cognition and brain maturation, adolescents also gain improved skills in emotion related tasks such as emotional understanding and regulation (Zeman, Cassano, Perry-Parrish, & Stegall, 2006). In addition to the physical, cognitive, and emotional transformations, there are changes within the parent-child relationship. For instance, adolescents begin spending less time with parents and more time with peers unsupervised by adults (Rubin et al., 2006; Steinberg & Morris, 2001). Furthermore, there are changes in adolescent autonomy and perceptions of parental authority (Steinberg, 2001). Furthermore, the nature of the relationship between the parent and youth begins to become more equal and horizontal and less hierarchical and vertical (Steinberg, 2001). In sum, adolescence is characterized by a number of critical transformations within the youth and within the parent-youth relationship.

### **Defining and Operationalizing Emotion Socialization**

The current literature has highlighted several distinct, yet related, processes and factors in which children learn about emotions and emotion regulation strategies during adolescence (Darling & Steinberg, 1993; Gottman, Katz, & Hooven, 1997; Morris et al., 2007). For instance, emotion expression and regulation can be learned through observational learning in the home as youth are exposed to different emotion intensities and strategies for regulation among family members (Parke, 1994). In addition, the emotional climate within the family is critical (Darling & Steinberg, 1993). This would include parent-child relationship quality (i.e., openness, conflict), attachment, and marital

relations. A negative emotional climate may overwhelm the abilities of an adolescent to manage emotion, whereas a positive emotional climate allows the youth to feel competent in their ability to manage emotions and their parents' willingness to meet their emotional needs (Morris et al., 2007). Investigators also have argued that characteristics of the parent and youth influence adolescent emotional development (Eisenberg & Morris, 2002; Gottman, Katz, & Hooven, 1997). For example, parents' mental health status and beliefs about emotional expression may impact their choices of ES strategies. In addition, a youth's temperament and level of development may elicit particular types of parenting in relation to emotion.

Another important way that parents can shape adolescent emotional development is through *ES* which, as stated above, reflects how parents react to their children's expression of emotions and the types of instruction or advice provided by the parent (Eisenberg et al., 1998; Garside & Klimes-Dougan, 2010). As in most forms of socialization (Bugental & Grusec, 2006), ES may occur in a variety of contexts (e.g., eating dinner, when the parent drives the youth to and from places, while watching TV) and may be *reactive* (e.g., child gets angry and hits his sister) or *proactive* (e.g., parent discusses what the youth can do in the future when he/she gets upset with a teacher or classmate). Like other forms of socialization (e.g., monitoring; Stattin & Kerr, 2000), ES-related conversations may be initiated by the youth or by the parent (Newland & Crnic, 2011). However, with the transformations in the parent-youth relationship that occur during adolescence and the fact that the adolescent spends more time away from home, it is likely that parents depend more on the adolescent to initiate these ES-related conversations.

While ES can be characterized by a variety of approaches, the literature has focused on four factors that illustrate specific categories of typical parental responses to their child's expression of emotion. One ES factor is *coaching*, also labeled as rewarding in some studies, which is defined as parental responses that encourage the appropriate expression and regulation of emotion (Garside & Klimes-Dougan, 2002; Lunkenheimer, Shields, & Cortina, 2007; Shortt, Stoolmiller, Smith-Shine, Eddy, & Sheeber, 2010; Stocker, Richmond, & Rhoades, 2007). In the literature, coaching often encompasses teaching about emotion (e.g., using their own experiences with emotions to demonstrate effective coping: "Sometimes when I feel really angry, I do something else to distract myself."), problem solving (e.g., active discussion of solutions to emotion-eliciting issues: "What can you do to avoid conflict with your sister?"), validation (e.g., showing an understanding of or clarifying the youth's emotions: "Did you feel disappointed?"), and comforting (e.g., behaviors meant to calm or soothe: "It will be okay."). Another more negative and aversive ES dimension that has been assessed by researchers (Eisenberg, Fabes, Shepard, Guthrie, Murphy, & Reiser, 1999; Garside & Klimes-Dougan, 2002; Lunkenheimer, Shields, & Cortina, 2007) is *dismissing* (or overriding). Dismissing behaviors include parental responses that discourage emotion expression and regulation through minimizing or distracting from emotion (e.g., "You weren't that mad."; changing the topic). *Punishing* ES responses also have been assessed in the literature (Eisenberg et al., 1999; Garside & Klimes-Dougan, 2002). This dimension refers to when emotion expression and regulation are discouraged through punishment and expressed disapproval of emotion (e.g., laughing at youth's expression of emotion, "It's stupid that you feel that way."). The fourth ES dimension has been referred to as

*magnifying* (Klimes-Dougan et al., 2007; Parra, Olsen, Buckholdt, Shields, & Davis, 2010) as some parents may encourage inappropriate expression of emotion through parental escalation of emotion or expanding on expressed emotion (e.g., “That freaks me out!”).

ES has been measured using different methods with the most common being parent and youth reports on questionnaires. For example, the Emotions and Child Scales (EAC; Klimes-Dougan et al., 2001; Magai & O’Neal, 1997) include 15 items in which both parent and youth participants are asked to rate parental reactions in their family using a 5-point Likert-type scale for each emotion of interest. The survey includes five categories of reactions: reward (e.g., “Helped my child deal with the issue.”), override (e.g., “Distract him/her.”), magnify (e.g., “Got tearful and cried.”), neglect (e.g., “Ignored him/her.”), and punish (e.g., “Gave him/her a disgusted look.”). The Maternal Emotional Styles Questionnaire (MESQ; Lagace-Seguin & Coplan, 2005) is another example of a self-report measure utilized in the field. This measure includes 14 items in which parents rate the likelihood that they would employ each response to their child’s emotional expressions. The responses are grouped into two socialization styles, emotion coaching and emotion dismissing.

In addition to questionnaire approaches, a few researchers have used interview rating scales to assess ES. For instance, Gottman and colleagues (1996) first coined the term meta-emotion philosophy which describes how parents believe and behave in response to their own and their child’s emotions. In Gottman’s research, parents were interviewed about their own feelings of sadness and anger, their beliefs and attitudes about how emotions should be expressed, and their outlook and manner for dealing with

their child's anger and sadness. These interviews were coded for parent's awareness and regulation of their emotions and their support of their child's emotion, which they called coaching. Coaching included 11 scales: respecting the child's emotional experience, discussing the situation, intervention, comforting, teaching appropriate expression, educating about the nature of emotions, teaching regulation strategies, involvement in the child's emotion experience, confidence in dealing with emotion, goals for the child's knowledge of emotions, and appropriate strategies based on age and situation. These scales were all rated on a global Likert-type scale and combined for overall coaching (interrater reliabilites ranging from .73 to .86).

Another method used to assess ES is observation. Observational measures provide many advantages over self-reports (questionnaire or interview). First, observational methods tend to be more objective than participant reports (Bakeman & Gnisci, 2006; Morris, Robinson, & Eisenberg, 2006). Second, social desirability is less likely to influence the ratings of observers (Morris et al., 2006). Another strength of observational methods is the ability to observe obscure and subtle actions, such as non-verbal behavior (Bakeman & Gnisci, 2006; Morris et al., 2006). Lastly, methodologies that allow researchers to observe extended lengths of interaction can lead to the identification of patterns of contingent behaviors (Bakeman & Gnisci, 2006; Morris et al., 2006).

A thorough search of the literature turned up only a small number of studies using observational methods, and less than a handful included adolescent samples. For example, Lunkenheimer, Shields, and Cortina (2007), using an interaction task from Fivush (1994), asked parents and children (8 to 11.75 years) to engage in three discussion tasks that were untimed: a positive experience, a difficult experience, and a time when the

child misbehaved. Emotion communication, including questions and statements, were coded during these interactions. The communication codes were specific for emotion coaching and dismissing questions and statements. Coaching codes included those responses that validated or labeled emotion, involved problem-solving, or facilitated an understanding of emotions (e.g., “How did you feel when that happened?”). Dismissing codes included responses that invalidated, showed disapproval of, evaded discussion of, or diverted attention from emotions (e.g., “It wasn’t anything to get upset over.”).

Hudson, Comer, and Kendall (2008) adapted a coding measure from Hudson and Rapee (2001) to code parental responses to negative emotion. Youth were asked to discuss three positive or negative emotional experiences with their parents. These interactions were coded for both negative and positive parental responses to each of their child’s negative emotion displays. Instances in which the parent criticized, became upset, interrupted, or changed the topic were coded as negative, whereas acknowledgement of distress and supportive responses were positive. Parent-child warmth, parental intrusive involvement, and child affect also were coded.

Hersh and Hussong (2009) adapted a coding measure from Brand et al. (2005) which was used to measure ES styles. Coders used a 4-point rating scale (absent, minimal, moderate, strong) for six factors based on how parents reacted to their adolescent’s five-minute discussion of a personal stressor: problem-focused (i.e., targeting the stressor itself with questions and advice), emotion-focused (i.e., empathy and validation of affect), minimizing (i.e., dismissing the affect as unimportant), magnifying (i.e., intensifying adolescents’ affect), autonomy-inhibiting (i.e., interfering with adolescents’ independence in dealing with their affect), and punitive (i.e., blaming



the adolescent for the affect). A 5-point rating scale (absent, minimal, moderate, strong, very strong) was used to rate facilitative engagement.

In another investigation, Cox, Mezulis, and Hyde (2010) created an observational measure to assess maternal responses to adolescent failure. Youth were presented with a difficult math task created for them to fail. After the task, parents discussed the score and task with their child for two minutes. Coders rated four factors on a Likert rating scale: emotion minimization (e.g., “You’re just overreacting.”), encouragement of emotion expression (e.g., “How did you feel about that test?”), maternal emotion focused attributions (e.g., “You were really nervous taking that test. When you get nervous you don’t do as well.”), and problem-focused coping (e.g., “It seems like that math strategy was tricky. Let’s go over it again.”).

Brand, Mulvihill, Klimes-Dougan, Usher, and Zahn-Waxler (2005) also created an emotional discussion coding system. In their interaction task, adolescents and their parents discussed an instance in which the youth felt sad and/or worried for three minutes. The parent behavior categories included reward (e.g., “How did that make you feel?”, “Yeah, you looked pretty shook up.”), override (e.g., “Things aren’t so bad.”, “No need to be scared”), punish (e.g., “Grow up.”, “You should be ashamed”), and magnify (e.g., “That made me so sad.”, “It’s been very stressful for me.”). This measure involved micro-level codes, in which coders indicated whether a specific response occurred in each 30-second interval. The proportion of intervals in which a behavior occurred was the parent’s score for each factor. The observational measure in the current study was adapted from this coding manual. In sum, a number of methods and informants have been utilized in the current literature when assessing ES.

## **Emotion Socialization and Adolescent Emotion Regulation**

Regardless of how it has been assessed, research has shown that parental socialization of emotions is related to adolescent ER. For example, ES, measured as the combined score of emotion coaching and dismissing (reverse coded), was found to be significantly positively related to ER in a study of 87 children (8-11.75 years; Lunkenheimer, Shields, & Cortina, 2007). In another study of 215 families with children in middle school and same-sex siblings in upper elementary school, emotion coaching (measured using Gottman's Meta-Emotion Philosophy Interview described earlier) was found to be significantly associated with better anger regulation for both younger and older siblings (Shortt, Stoolmiller, Smith-Shine, Eddy, & Sheeber, 2010). Likewise, Cunningham, Kliewer, and Garner (2009) observed that emotion socialization (also measured using Gottman's Meta-Emotion Philosophy Interview) was significantly related to better ER and emotion understanding in a sample of 69 African American youth aged 9-13. Thus, emotion socialization has been linked to emotion regulation in previous research.

Both Social Learning Theory (Bandura, 1977) and Attachment Theory (Bowlby, 1969) may provide insight into why ES has been consistently linked to ER in the literature. In particular, a parent's responses to their child's emotions may elicit certain positive or negative emotional reactions in the child which corresponds to the concept of operant conditioning, or changing behavior based on consequences (Thyer & Meyers, 1998). Moreover, children may mimic the emotion regulation and coping strategies of their parents as in observational learning or modeling (Bandura, 1977). Another process through which children may learn to experience and cope with emotion is through an

emotional bond with their caregiver. Specifically, research in attachment and relationship quality has shown parental acceptance, warmth, and openness to be important factors predicting positive outcomes in children (Ainsworth, Bell, & Strayton, 1974; Dunsmore, Bradburn, Constanzo, & Fredrickson, 2009; Kamal Uddin, 2011). While the first two mechanisms derive almost entirely from Social Learning Theory and the last from Attachment Theory, it is possible that these processes operate together in explaining children's development of emotional competence.

### **Examination of Different Emotions**

While ES may be beneficial for the development of children's emotional competence, it is important to acknowledge that children experience different types of emotions (e.g., anger, sadness) during their daily interactions with family and friends. Indeed, evidence in the literature has suggested the importance of examining the socialization and regulation of different emotions separately. For example, parents' beliefs and values about how different emotions should be displayed and dealt with may cause them to tailor their responses to the specific emotion exhibited by the adolescent (Gottman, Katz, & Hooven, 1996, 1997; Schwartz, Sheeber, Dudgeon, & Allen, 2012). Moreover, researchers found differences in the mean level of rewarding, punishing, overriding, and magnifying (but not for neglecting) due to the emotion displayed by the child (O'Neal & Magai, 2005). In the same study, confirmatory factor analysis confirmed that an emotion-specific model fit the data better than the model which combined socialization strategies of all emotions. Thus, different types of emotions (i.e., anger and sadness) will be examined separately in the current investigation.

## **Testing Validity**

While there have been several investigations utilizing questionnaire or observational measures of ES, there have been no known published studies that have used a validated triangulated instrument. Methodologists have suggested that the use of multiple informants and multiple methods is preferred as the biases of each reporter are cancelled out (Dirks, De Los Reyes, Briggs-Gowan, Cella, & Wakschlag, 2012; Hunsley & Mash, 2007). Moreover, testing validity is important because it determines whether a measure is assessing what it was designed to measure (Carmines & Zeller, 1979; Leary, 2008). Researchers have utilized several different strategies to ascertain whether an observational measure is valid. One method that has been used in the literature is examining whether the observation factor is related to comparable factors assessed with other methods (e.g., parent and youth reports). For example, Melby, Conger, and Puspitawati (1999) found that observed adolescent behavior ratings from the Iowa Family Interaction Rating Scales were positively associated with reports of the same behaviors by parents, siblings, and adolescent participants. Validity evidence also was found in another study by comparing scores from a self-report measure of co-parenting to the observer ratings (Co-parenting and Family Rating System - CFRS; McHale, Kuersten-Hogan, Lauretti, & Rasmussen, 2000).

Confirmatory factor analysis (CFA) also has been used to validate observational measures. CFA often is utilized to determine whether each observed factor is a separate construct from other factors (Kline, 2011). This is accomplished by comparing a model based on theory with an alternative model (Kline, 2005). This is typically used to provide justification for using several factors separately rather than combining them into a single

construct. For example, Sabatelli, Anderson, Kosutic, Sanderson, and Rubinfeld (2009) used CFA to support a theoretical three-factor model (emotional safety and well-being, challenge and involvement, and supportive environment) of the Youth Development Assessment Device fit the data better than the four alternative models in which the items were collapsed into only one or two factors. In a similar study, researchers established support for distinguishing between nine different aspects of the Elementary School Success Profile (ESSP) by comparing the nine factor model with a model in which the factors were collapsed into three domains (Wegmann, Thompson, & Bowen, 2011).

To validate measures using multiple methods, some investigators have advocated adopting a multitrait-multimethod approach (Dirks et al. 2012, Hunsley & Mash 2007). This approach is a special form of confirmatory factor analysis in which more than one trait is measured using more than one method (i.e., youth, parent, and observer report). The *correlated trait-correlated method* (Campbell & Fiske, 1959) is one approach where each indicator is allowed to load on two latent constructs, one based on the method (i.e., how the indicator was measured) and one on the trait (i.e., what construct the indicator is a measure of) associated with them. One limitation of this approach is that it can provide unstable results (Kline, 2011). For example, researchers have reported finding impossible results (e.g., standardized loadings greater than one) and results that cannot be trusted (e.g., exceptionally high or low loadings or correlations compared to expectations or previous findings). The *correlated uniqueness model* (Marsh & Grayson, 1995) is another approach where the indicators are allowed to load onto latent constructs based on trait but not on method. Instead, the errors for each indicator are allowed to correlate based on method. Epstein, Renk, Duhig, Bosco, and Phares (2004) used this approach in

their test of the validity of multi-informant measures of interparental conflict, adolescent internalizing problems, adolescent externalizing problems, and adolescent competence.

The correlated uniqueness model approach was adopted in another study where the authors assessed parent, teacher, and adolescent reports of child personality (i.e., Big Five Questionnaire – Children; Barbaranelli, Fida, Paciello, Di Giunta, & Vittorio Caprara, 2008). These studies demonstrate that the correlated uniqueness model approach would be useful when testing convergent and discriminate validity of measures using multiple methods and informants.

A second step often utilized in the literature to obtain evidence of construct validity is to examine whether the factor of interest is correlated with constructs to which it should be related based on empirical or theoretical evidence in the literature. For instance, Vuchinich, Angelelli, and Gatherum (1996) used correlations to determine that the Family Problem Solving Code was significantly related to family cohesion and adaptability. Likewise, correlations were also used to validate the System for Coding Interactions and Family Functioning (SCIFF) measure by testing whether observed ratings of negativity, positive affect, and cohesiveness were related to family conflict and family cohesion (Bloom, 1985). In sum, researchers in the literature have advocated the adoption of a two-step process when testing the validity of a multi-method multi-informant measure. A multitrait-multimethod approach is recommended to combine differing measures of a construct and remove informant bias before determining whether the construct is related to factors with which it should theoretically be associated. As such, this method will be used in this investigation.

## **Research Goals and Hypotheses:**

Many transformations take place during adolescence that may influence the regulation and expression of emotion by youth as well as ES practices utilized by parents. While ES is a fairly new topic in the adolescent literature, several forms of measurement have been adapted to study the strategies parents use to teach their adolescents about emotion, including questionnaires, interviews, and observational measures. These measures typically distinguish at least two types of ES (e.g., positive and negative), and many discriminate between more than one type of negative ES strategy. Numerous studies have established that the type of ES strategy is related to how well adolescents regulate their emotions. However, few of the observational measures of ES have been validated with samples of adolescents. Moreover, no known studies have developed and validated multi-method multi-informant measures.

To address these gaps in the literature, there were three major goals of this investigation. The *first goal* was to examine whether the observed ES factors were correlated with parent and youth reports of comparable ES factors. The ES factors (i.e., coaching, dismissing, punishing, and magnifying) were examined with regard to two types of emotion, anger and sadness. It was expected that the four factors of ES will be significantly correlated with reports of the same constructs from questionnaire data. For the *second research goal*, a multitrait-multimethod approach was used to combine the scores from the three methodologies. Note that before combining the three ratings, a standard CFA was employed to determine the structure of both the anger and sadness ES constructs (i.e., how many factors), which were used in all subsequent analyses. It was hypothesized that the model fit statistics would support the triangulation of the observer,

youth, and parent reports for both anger ES factors as well as sadness ES. For the *third research goal*, the link between the triangulated measure of ES and youth ER (observer, parent, and youth ratings) was examined. Again, this model was analyzed separately for the two emotions, anger and sadness. Based on previous research and theory, emotion coaching (i.e., sadness coaching and anger coaching) was expected to be significantly positively related to ER. It also was hypothesized that high proportions of dismissing, punishing, and magnifying behaviors (for both anger and sadness) would be significantly related to poor ER. Due to the lack of evidence in the literature, no specific differences were expected regarding anger and sadness ER.



## CHAPTER III

### METHODS

#### **Sample**

The sample consisted of 206 families with adolescents who participated in the Family Youth Development Project (FYDP). The purpose of the FYDP was to examine predictors and outcomes of adolescent ER. Data were collected from both adolescents ( $M$  age = 13.37,  $SD$  = 2.32; 51% female; 29.6% European American, 32% African American, 19.4% Latino American, 19% other ethnic groups) and their primary caregivers (83.3% biological mothers, 10.7% biological fathers, 2% grandparents, 4% other). The sample was predominantly comprised of low-income (*Median* annual income = \$40,000) families with an average of 4.35 people living in each home and 38.7% headed by single parents. In addition, 38.7% of the families reported that they received welfare assistance during the past year.

#### **Procedure**

Parents and youth both participated in an extensive 2½ hour laboratory assessment that including questionnaires and multiple interaction tasks that were video recorded. Data from two interaction tasks were used in the current investigation. First, the

parent and adolescents were asked to discuss and resolve various conflicts (selected by the parent and youth) for 6 minutes. In the next task, the adolescent was asked to recall a time when he or she felt angry or sad when their parents were not around. They were then instructed to describe what happened and discuss the situation and their feelings with their parent for three minutes. Parents were asked to listen, ask questions, and comment as they wished. Separate three-minute tasks were conducted for anger and sadness. These tasks were digitally video recorded for later coding. Parents and youths were compensated \$60 each for their participation in the study.

### **Measures: Emotion Socialization (Observed)**

The primary goal of this project was to validate a newly created coding system for parents' ES among adolescents (see Appendix A). This coding system was adapted from an existing coding system (Brand, Mulvihill, Klimes-Dougan, Usher, & Zahn-Waxler, 2005) that has been utilized among middle income participants with higher levels of education than the current sample (Hersh & Hussong, 2009; Klimes-Dougan, Brand, Zahn-Waxler, Usher, Hastings, Kendziora, & Garside, 2007). The rating scales include micro-level/specific codes that focus on the prevalence of specific behaviors. Ten socialization behaviors were coded for their occurrence during ten-second intervals. These behaviors were collapsed into four socialization categories. First, *emotion coaching* reflects parental responses to emotions that encourage the expression of emotion and include behaviors such as problem solving and emotion validation. Next, *dismissing behaviors* are defined as parental responses to emotion that discourage the expression of emotion through minimizing or distraction. The third technique is *punishing*, which is a parental response to emotion that discourages the expression of

emotion by punishing or expressing disapproval of emotion. Finally, *magnifying* involves parental responses to emotion that encourage expression of emotion through parental escalation of emotion, or expanding on expressed emotion. Coders (separate coders for positive and negative behaviors) and a master coder (the author) coded each video recording of the emotion discussion task described above. The master coder coded at least 20% of the videos in order to determine interrater reliability via intraclass correlations. Sufficient reliability was found for most indicators of anger socialization (comforting,  $\rho = 1.00$ ; validating,  $\rho = .76$ ; problem solving,  $\rho = .91$ ; teaching,  $\rho = .83$ ; minimizing,  $\rho = .70$ ; changing the topic,  $\rho = .55$ ; invalidating,  $\rho = .14$ ; teasing,  $\rho = .66$ ; escalation,  $\rho = .77$ ; and inappropriate sharing,  $\rho = 1.00$ ). The two with low reliabilities ( $< .65$ ) were retained in the analyses for anger. For sadness socialization, four of the six indicators for the negative behaviors were rather low (minimizing,  $\rho = .59$ ; changing the topic,  $\rho = .52$ ; invalidating,  $\rho = .15$ ; teasing,  $\rho = .50$ ; escalating,  $\rho = .13$ ; inappropriate sharing of emotion,  $\rho = .65$ ). Thus, to obtain higher reliability, those indicators were combined. This led to the use of only five indicators of sadness socialization (comforting,  $\rho = .71$ ; validating,  $\rho = .67$ ; problem solving,  $\rho = .67$ ; teaching,  $\rho = .87$ ; negative,  $\rho = .42$ ). Even with aggregating the negative ES ratings into a single factor, the interrater reliability for negative ES factor is acknowledged to be low as intraclass correlations above .55 are thought to be acceptable for these types of data (Criss, Shaw, & Ingoldsby, 2003; Mitchell, 1979).

### **Measures: Emotion Socialization (Parent and Youth Reports)**

Parents and youth were asked to complete a questionnaire adapted from the Emotions and Child Scales (EAC; Klimes-Dougan et al., 2001; Magai & O'Neal, 1997).

The survey consists of 30 items in which participants are asked to use a 5-point Likert-type scale to rate how typically the parent uses each of five strategies in response to the adolescent's expression of anger and sadness. The respondent rated three examples of each strategy. The five categories of reactions are similar to the observation scales: *coach* (e.g., "Helped my child deal with the issue."), *override* (e.g., "Distract him/her."), *magnify* (e.g., "Got tearful and cried."), *neglect* (e.g., "Ignored him/her."), and *punish* (e.g., "Gave him/her a disgusted look."). The final score for each type of reaction was the mean of the three ratings. Parent reports of anger and sadness neglecting, overriding, and punishing showed moderate to low internal consistency. Likewise, the youth reports of anger overriding and sadness neglecting, overriding, and punishing displayed moderate to low internal consistency. Adequate internal consistency was found for the remaining factors (see *Table 1*).

### **Measures: Emotion Expression (Observed)**

During the conflict task described earlier, the levels of anger and internalized distress displayed by the adolescent were coded every 15 seconds. This coding system is based on a measure established by Morris, Silk, Morris, Steinberg, Aucoin, and Keyes (2011) adapted from the Affect Coding Scale (Hubbard, 1997) and the AFFEX Coding System (Izard, Dougherty, & Hembree, 1983). Ratings were based on a 5-point Likert-type scale (1 = no sign of the emotion, 5 = exceptionally strong display of the emotion). Coders based their ratings on facial expression, tone, and body language. Ratings for each interval were based on the strongest display of emotion. Ratings will be averaged across all 24 intervals (each coded every 15 seconds for 6 minutes) to create a final score for both anger and internalized distress. At least 20% of the videos have been coded by a

master coder in order to determine interrater reliability via intraclass correlations (anger,  $\rho = .96$ ; internalized distress,  $\rho = .88$ ). This measure has been shown to have predictive validity as scores for anger have been shown to be related to teacher reports of externalizing behavior, while sadness scores were linked to internalizing behavior (Morris & Silk, 2001; Morris, Silk, Steinberg, Terranova, & Kithakye, 2010).

### **Measures: Emotion Regulation (Parent and Youth Reports)**

Adolescents and their parents reported on adolescents' abilities to cope with their feelings of anger and sadness using the emotion management scale (Zeman, Shipman, & Penza-Clyve, 2001). The anger coping subscale consisted of 4 items such as "I stay calm and keep my cool when mad" and "I do things like slam doors when mad". The sadness coping subscale consisted of 4 items such as "I cry and carry on when I am sad". The Likert-scale responses ranged from 0 (*Not true*) to 2 (*Very true*). Item wording was modified for the parent reports. For each emotion, parent-reported and youth-reported scores were created using the mean of the items. Internal consistency was adequate for both parent and youth reports (see *Table 1*).

### **Plan of Analysis:**

The analyses were comprised of three parts. Each part of the analyses was performed separately for each emotion (i.e., anger and sadness). For the *first part of the analysis plan*, descriptive statistics and bivariate correlations among the parent, youth, and observer ratings of each ES and ER factor were computed. *For the second part of the analysis plan*, the creation of the ES factors was conducted in three steps. First, a confirmatory factor analysis (CFA) was used with only the observed indicators to empirically determine the number of ES strategies that should be analyzed. Only the

observed indicators were analyzed in this model because the focus of this study is the creation and validation of the observational measure. Model fit indices and factor loadings were used to determine the best model to use in the next step of the analyses. In the analysis of the anger socialization, comforting did not load on the coaching factor and had an extremely low base rate ( $M = .10$ ). As such, comforting was excluded from the anger model for two reasons: 1.) it is less important conceptually (comforting an angry adolescent may not be developmentally appropriate) and 2.) comforting had a low base rate.

Next, to evaluate the convergent and discriminant validity of the triangulated ES measure a multitrait-multimethod approach was used. A confirmatory factor analysis in which more than one trait (i.e., depending on the first step, emotion coaching, dismissing, punishing, and magnifying or a combination of negative strategies) is measured using more than one method (i.e., youth, parent, and observer report). This strategy is preferable as there are multiple ES strategies measured by parent, youth, and observer ratings. Due to Kline's (2011) warning about the correlated trait-correlated method approach, the *correlated uniqueness model* (Marsh & Grayson, 1995) was adopted in this study. In this approach, the indicators load onto latent constructs based on trait but not on method. Instead, the errors for each indicator were allowed to correlate based on method. Convergent validity is shown by high loadings on the trait constructs. Discriminant validity is revealed by low to moderate correlations among the latent constructs.

As a last step in this process, the ER factors (i.e., parent, youth, and observer reports) were added to determine if any of the errors needed to correlate with other error

factors based on method. The ER factors were not computed in a separate CFA because the ER measure only provides a test of construct validity for this project. Nonetheless, it was explored whether the final model should allow the residuals using the same methods to be correlated with each other. Adding the factors to the CFA as a last step in the computation of the ES factors allowed the method variance to be taken into account and permitted the researcher to check the loadings and model fit to ensure justification of combining the three reports of ER.

For the *third part of the analyses*, the link between ES and ER was examined to test the concurrent validity of the ES factor. It should be noted that the result of the CFA (i.e., step two of analysis plan) determined the structure of the ES and ER factor(s) used in the third step of the analyses. In particular, the ER factor was allowed to regress on the ES factors as dictated by the CFA analyses for both anger and sadness. By using the final model from the second step, shared method variance was removed from the analyses so that the factor scores were based on only the commonalities across all measures of the trait, thus excluding biases due to any one reporter. In other words, the removal of the method variance should have excluded any error based on each reporter's biased perspective and should have led to the creation of more accurate trait scores.

## CHAPTER IV

### RESULTS

#### **Research Goal #1**

Descriptive statistics and correlations among the indicators used in the anger and sadness models are presented in *Tables 2-5*. The first goal of this study was to determine if the observed indicators of emotion socialization were correlated with parent and youth reports of similar factors. The correlations between observer and parent reports of ES for anger ranged from .01 to .12 in magnitude ( $M r = .05$ ). The range of correlations between observer and youth reports of ES for anger was .02 to .12 in magnitude ( $M r = .07$ ). For sadness, the correlations between observer and parent reports of ES ranged from .05 to .09 in magnitude ( $M r = .07$ ). The correlations between observer and youth reports of ES for sadness ranged from .01 to .14 in magnitude ( $M r = .07$ ). In summary, none of the observed indicators were correlated with the parent and youth reports. However, there was one significant link worth noting between the parent report of punishing and the observer report of teaching ( $r = -.15, p < .05$ ). While this link did not support the hypothesis put forth, it does provide evidence that the measures may be of similar overall constructs.



## Research Goal #2

The second goal was to create a triangulated measure of emotion socialization using youth, parent, and observer reports. This was done in two steps for each emotion. First, the observed indicators were analyzed using a CFA. Next, a correlated uniqueness model was used to combine the youth and parent reports with the observer reports. The results of these four models (2 steps for each emotion) are depicted in *Figures 1-4*.

**Anger.** For anger, the first test was to determine how many factors should be included. The indicators of punishing and dismissing seemed to be correlated and modification indices suggested that these two factors should be combined. A  $\chi^2$  difference test was used to verify that all four of the indicators should load on the same factor (dismiss/punish;  $\chi^2$  difference = .03,  $p > .05$ ). Next, it was discovered that two indicators of coaching (comforting and validating) were not loading onto the coaching factor as well as hoped. As stated above, the comforting indicator did not seem to be as important for anger as it had a very low base rate (.10) so it was dropped from the analyses. Although validation had a higher base rate, it was not significantly correlated with the other indicators of coaching, yet is conceptually important especially for anger socialization. Thus, it was retained as a single indicator (i.e., a measured variable). Results of the CFA for anger are shown in *Figure 1*. Adequate loadings were found for all indicators (see *Figure 1*) and model fit was good,  $\chi^2(25) = 34.65$ ,  $p = .09$ ; RMSEA = .04; CFI = .94; TLI = .92, SRMR = .05. The final step in this part of the analyses was to include the parent and youth reports and allow the residual errors to correlate based on method (see *Figure 2*). For anger, the links between the residual errors of the observer reports of validating, teaching, and problem solving were not significant so they were not allowed to correlate.

However, all residual errors of the parent and youth reports were highly significant. Model fit statistics were good,  $\chi^2(105) = 135.68, p = .02$ ; RMSEA = .04; CFI = .97; TLI = .96, SRMR = .08 and loading were adequate.

**Sadness.** For sadness, there was only one indicator for negative emotion socialization so this was left as a measured variable in the first step of the analyses. The positive observed sadness socialization indicators did not load onto one coaching factor. Based on correlations and modification indices the four indicators were split into two in which teaching and problem solving loaded onto the coaching factor as in the anger analyses; and comforting and validating loaded onto another factor which was labeled *understanding*. Factor loadings (see *Figure 3*) and model fit was adequate except for CFI and TLI ( $\chi^2(8) = 14.27, p = .08$ ; RMSEA = .06; CFI = .70; TLI = .63, SRMR = .06). In the next step of the analyses, the parent and youth report were added to the model. Fit of youth and parent reports of positive behaviors was better for understanding than coaching. The parent and youth reports of negative socialization behaviors loaded together on the same factor, but the observed negative variable did not load. This resulted in four factors for the subsequent analyses: coaching, understanding, parent and youth reports of negative socialization, and observer report of negative socialization. The last step was to allow residual variances to correlate based on method. The parent and youth reports were both allowed to covary even though the residuals of the parent reports were not significantly correlated. Only the residual errors of the observed indicators of validation and problem solving and comforting were left in the model as the others were close to zero. Model fit indices showed good fit ( $\chi^2(25) = 28.04, p = .31$ ; RMSEA = .02; CFI = .94; TLI = .91, SRMR = .05) and factor loadings were adequate (see *Figure 4*).

**Summary of Anger and Sadness Analyses.** Overall, the ES factors did not fit the data completely as expected, but evidence for validity of the triangulated measures was found in the models for both anger and sadness. The data indicated that the factor structure should be different for the two emotions. For **anger**, the factors included a *coaching factor* (indicators: observer reports of teaching and problem solving and parent and youth reports of coaching), a *dismissing/punishing factor* (indicators: observer ratings of minimizing, changing the topic, invalidating, and teasing and parent and youth reports of dismissing and punishing) a *magnifying factor* (indicators: observer ratings of escalating and inappropriate sharing and parent and youth reports of magnifying), and an *observer report of validating factor*. For **sadness**, the factors included a *coaching factor* (indicator: observer reports of teaching and problem solving), an *understanding factor* (indicators: indicated by observer reports of validating and comforting and parent and youth reports of coaching), a *negative ES factor* (indicators: youth and parent reports), and a single indicator *observed negative ES measured variable*. Adequate model fit indices and factor loadings for one factor in each model showed convergent validity for those factors created. Discriminant validity was demonstrated by the low correlations among the separate factors.

### **Research Goal #3**

The last goal of this project was to determine if the newly created multi-method ES factors were associated with the multi-method ER factor. This was tested by using the model established in the research goal #2 analyses for each emotion, adding the ER factor based on the three indicators (youth, parent, and observer report), and regressing the ER factor onto each ES variable. Before the final model was adopted, modification indices

were observed to determine whether the residual variances of the ER indicators should be correlated with residuals of ES indicators based on method. In the anger model, the residual of the parent report of ER was allowed to correlate with the residual of the parent report of dismissing, while the residual of the adolescent report of ER covaried with the adolescent report of dismissing and magnifying. No residual variances of the ER factors were set to covary in the sadness analyses based on modification indices.

Finally, for each emotion the associations between each ES factor and ER were observed. The results for this step are depicted in *Figures 5* and *6*. For anger (see *Figure 5*), one significant positive link emerged between coaching (observer reports of teaching and problem solving and teacher and youth reports of coaching) and anger ER ( $\beta = .83, p < .001$ ). For sadness (see *Figure 6*), high levels of understanding (observer reports of validating and comforting and parent and youth reports of coaching) were marginally related to high levels of sadness ER ( $\beta = .40, p = .09$ ). In addition, there was a significant negative correlation between the observed negative ES and sadness ER ( $\beta = -.38, p < .01$ ).

**Summary of anger and sadness analyses.** In general, the two significant links found in the final set of analyses between ES factors and ER show criterion validity of the factors created. Findings indicate that the triangulated anger coaching factor is significantly and positively related to ER, while the observed negative ES variable and ER are significantly negatively linked in the sadness analyses. The positive link between the triangulated sadness understanding factor and ER showed a trend toward significance as well.

## CHAPTER V

### DISCUSSION

The purpose of this study was to create and validate a multimethod-multiinformant measure of ES. Overall, findings demonstrated that the factor structure of positive ES strategies diverged from the hypothesized composition and differed between the two emotions under investigation. In addition, some evidence of construct validity was found for the final models of both anger and sadness socialization based on model fit, factor loadings, covariances, and correlations. There were three surprising and interesting points worth discussing further: (1) the factor structure and reliability differed based on emotion, (2) positive ES was more reliable, and (3) two significant links and one marginal link were found between ES and ER. These points are discussed in greater detail below.

#### **Factor Structure of Anger and Sadness ER**

The results of this study indicated that adequate interrater reliability was more difficult to achieve for the sadness task. This influenced the differing structure of the negative ES factors for anger and sadness. For instance, the sadness model included only one combined observed indicator of negative ES in order to improve the reliability to

marginally adequate levels; whereas the anger model included all six negative observed indicators loading onto two separate negative ES factors (i.e.; dismissing/punishing and magnifying). In addition, there were also differences between the positive strategies that parents utilize to socialize anger and sadness. Specifically, in the anger model parent and youth reports loaded on the coaching factor with observer reports of problem solving and teaching, while parent and youth reports loaded on the understanding factor with observer reports of validating and comforting in the sadness model. Another difference was the omission of comforting in the anger model due to the infrequency of observed occurrences. In general, the parent and youth reports of ES tended to coincide better with active approaches from the parent for anger reported by observers; yet, for sadness, these reports were a better fit with observer reports of sympathetic reactions shown by the parent. There are several reasons for these findings. First, anger has been conceptualized in the literature as being more of an externalizing emotion, whereas sadness is seen as being more internal (Jackson & Goossens, 2006). This may make it easier for parents to see and respond to anger; therefore, it is easier for observers to see parents' responses to anger. Internalized emotions may be more difficult for parents to identify as these may be more subtle and subjective. Indeed, other researchers have reported considerably lower interrater reliability coefficients for factors related to internalized emotions in comparison to externalized emotions ( $r = .56$  for internalizing,  $r = .72$  for external dysregulation, Carter, Briggs-Gowan, Jones, & Little, 2003;  $r = .32$  for internalizing,  $r = .37$  for externalizing, Nelson, Epstein, Griffith, & Hopper, 2007).

It also should be emphasized that a sympathetic and understanding response may be more important for sadness; whereas an active approach in which problem solving and

teaching is involved might be more important for anger due to its external nature. Previous research has demonstrated that emotion-focused (sympathetic) responses are more common for internalized than externalized emotions (Vandervoort, 2001). In fact, a low base rate caused the comforting indicator to be removed from the anger model. This low base rate may have been due to the structure of the task as the adolescents' breathing and heart rate were being monitored and they were told not to move. Parents were reluctant to touch or hug their children for fear of spoiling the data. It is also possible that comforting for anger is not appropriate for this age group given the transformations that are said to occur in the parent-child relationship during adolescence (Eisenberg et al., 1999; Klimes-Dougan et al., 2007). In addition, it is possible that parents' responses to emotions in the current predominantly high-risk sample may differ from samples used in previous studies. For example, in this high-risk sample consisting of mostly ethnic minorities, open and active discussion of sadness may not often take place. A previous study supports this idea with the finding that African Americans report significantly fewer supportive and more nonsupportive responses to their children's negative emotions than European American parents (Nelson, Leerkes, O'Brien, Calkins, & Marcovitch, 2012).

The factor structure of both anger and sadness ES exhibited in the current investigation also differed from previous research in three ways. The first important distinction between this investigation and previous studies examining emotions separately is that the factor structure differed based on the emotion in the current models. For example, a study by Klimes-Dougan and colleagues (2007) measured parental socialization of sadness, anger, and fear in which they used the same five ES factors

(reward, punish, neglect, override, magnify) for all three emotions. Further, the current measure included two positive factors for both anger (coaching and validating) and sadness (coaching and understanding) socialization, while other measures incorporate only one positive factor (e.g., Garside & Klimes-Dougan, 2010; Lunkenheimer, Shields, & Cortina, 2007; Stocker et al., 2007). Finally, the number of negative factors in this investigation, especially for anger socialization, diverges from previous studies. In many cases, there is only one negative ES factor typically labeled dismissing much like the sadness factor in this study (e.g., Lunkenheimer, Shields, & Cortina, 2007). In fact, in some cases, researchers reverse coded the negative ES behaviors and combined them with the positive to form one emotion coaching factor (e.g., Stocker et al., 2007) or distinguished only an overall coaching philosophy (Gottman, Katz, & Hooven, 1996). However, those measures that include more than one negative ES factor typically consist of four factors (punish, override, neglect, and magnify; e.g., Garside & Klimes-Dougan, 2010; O'Neal & Magai, 2005), while this study includes two negative anger socialization factors (dismissing/punishing and magnifying). The differences between the current and previous measures of ES point to the need for further research with respect to ES in high-risk populations as well as the investigation of more accurate measurement of ES in all populations.

### **Better Interrater Reliability for Positive ES**

The next noteworthy point in this investigation was that interrater reliability was higher when positive ES strategies were observed in comparison to negative responses for both emotions. One reason for this could be attributed to reactivity which sometimes is an issue with observation research (Brackett, Reid, & Green, 2007; Kazdin, 1982).



Specifically, it is possible that many parents may have restrained their negative reactions and exaggerated the positive strategies. Previous studies have demonstrated that behavior is influenced by social desirability (Baum, Forehand, & Zegiob, 1979; Gittelsohn, Shankar, West, Ram, & Gnywali, 1997). Another reason for lower reliability among negative reactions is that the coding manual did not distinguish among negative behaviors adequately. For example, dismissing and punishing were very similar constructs making it difficult at times to distinguish them from each other. Furthermore, indicators for magnifying had low base rates for both emotions. It is more difficult to demonstrate reliability with a low base rate because of a small sample size of relevant occurrences to code, thus weighting agreement more heavily for the few occurrences.

### **Link between ES and ER**

The final point of discussion is the link between ES and ER. Two significant links and one marginally significant association were found in this investigation. Overall, findings demonstrated that adolescents whose parents actively coach them in coping with their anger are better able to regulate their emotions. In addition, when parents were observed reacting in negative ways to sadness, their adolescents demonstrated lower sadness ER. Furthermore, a trend towards significance suggests that parents who are sympathetic when discussing sadness may improve the ability of their adolescent to cope with sadness. Moreover, all of these associations were found while simultaneously controlling for the other ES factors. Overall, these results are comparable to the findings from previous studies (Cunningham, Kliewer, & Garner, 2009; Lunkenheimer, Shields, & Cortina, 2007; Shortt, Stoolmiller, Smith-Shine, Eddy, & Sheeber, 2010) and suggest that parents' responses to their adolescents' emotions are important in determining the

emotional well-being of youth. These findings also suggest that the most positive and effective approach of emotion socialization may vary based on the emotion felt by the adolescent. Specifically, higher levels of ER may be found in adolescents whose parents use an active coaching style when they feel angry and a sympathetic socialization method when they feel sad. In addition, these results imply that negative parental responses to sadness may be more detrimental than when in response to anger. Further research examining this phenomenon is needed.

### **Strengths of the Current Investigation**

The current study has several strengths. First, the use of multiple methods (parent, youth, and observer reports) to measure the constructs is noteworthy as it is preferable to combine reports when possible to take into account many perspectives (Dirks, De Los Reyes, Briggs-Gowan, Cella, & Wakschlag, 2012; Hunsley & Mash, 2007). Furthermore, the complex methodology provided a strategy to combine the three different forms of data. The correlated uniqueness model (Marsh & Grayson, 1995) utilized in this investigation has been shown to be an effective way to test multitrait-multimethod models as it eliminates error based on reporter bias and offers a more accurate measure of the constructs. Moreover, it is preferred by some researchers over other multitrait-multimethod models such as the correlated trait-correlated method (Campbell & Fiske, 1959) as they can provide unstable results (Kline, 2011). Indeed, previous research has been successful using correlated uniqueness models in similar studies (Barbaranelli, Fida, Paciello, Di Giunta, & Vittorio Caprara, 2008; Epstein, Renk, Duhig, Bosco, and Phares, 2004). Finally, this study focused on a population that has been understudied. The emphasis on a high-risk sample including a large proportion of ethnic minorities provides

important information about emotion-related family processes among the families that may need the most support.

### **Limitations and Future Directions**

While this study had several strengths there were several limitations. First, the interrater reliability was inadequate for some of the observed indicators of ES. It would be beneficial for future coding systems to include more precise definitions and examples of ES, especially in relation to internalized emotions and negative parental reactions. Indeed, this study pointed out the difficulties in observing discussions of internalized emotions and negative parental reactions to emotion discussions. This may require a modification of the observation task, such as having the parent and youth sit on a couch which may facilitate different types of warmth and coaching. Moreover, observer reports were not found to be significantly correlated with youth and parent reports of similar behaviors in this investigation. Previously, researchers have found that observer ratings do not correlate adequately with self-reports (Heinisch & Jex, 1998; Ryan, 1998). One explanation for this may be that the measures are focused on different aspects of or contexts in which the behaviors take place. Indeed, families in this study reported on the usual behavior of the participating parent in the context of their everyday lives which may contain many distractions; while observers reported on a discussion in a quiet room with little or no distractions. Another explanation for this may be that the self-report measure is not sufficiently thorough in describing parental behavior given that the questionnaire is based on only three questions for each factor.

In addition, a larger sample may prove useful when including this many links into the models. Furthermore, this study employed a cross-sectional design. Longitudinal data

assessing ES and ER at multiple times may help disentangle the nature of the link between these two factors. Future research may benefit from including different types of emotions beyond negative emotions such as sadness and anger. Perhaps, including positive emotions (e.g., happiness, excitement) will yield noteworthy results. Additionally, age, income, and gender differences with respect to mean levels, factor loadings, or links in the model were not examined in the current study. However, examination of these differences may yield important information as other research has found differences based on characteristics of the adolescent and family (Klimes-Dougan et al., 2007). Finally, it must be acknowledged that different findings may have been found using a more middle-class, European American sample where the discussion of emotions may be more prevalent. Indeed, the script for the sadness discussion task had to be modified early in this project as more descriptors of sadness (e.g., feeling low, depressed) had to be added as many adolescents and parents had difficulties understanding the word “sad.”

## **Conclusions**

The present investigation provides valuable evidence in the study of the socialization of emotion of adolescents. It establishes a foundation for the development of a multi-method multi-informant measure of emotion socialization. This study reinforces the concept of triangulation and the importance of neutralizing reporter bias. The findings also support previous research demonstrating the importance of parental emotion socialization in the emotional development of adolescents. Further research is needed to confirm the idea that specific coaching behaviors (i.e., active teaching vs. sympathetic

response) are more effective based on the emotion; however, this finding may have implications for family interventions.

## REFERENCES

- Ainsworth, M. D. S., Bell, S. M., & Strayton, D. (1974). Infant-mother attachment and social development. In M. P. Richards (Ed.), *The Introduction of the Child into a Social World* (pp. 99-135). London: Cambridge University Press.
- Bakeman, R., & Gnisci, A. (2006). Sequential observational methods. In M. Eid, & E. Diener (Eds.), *Handbook of multimethod measurement in psychology* (pp. 127–140). Washington, D.C.: American Psychological Association.
- Barbaranelli, C., Fida, R., Paciello, M., Di Giunta, L., & Vittorio Caprara, G. (2008). Assessing personality in early adolescence through self-report and other-ratings a multitrait-multimethod analysis of the BFQ-C. *Personality and Individual Differences, 44*, 876-886.
- Baum, C. G., Forehand, R., & Zegiob, L. E. (1979). A review of observer reactivity in adult-child interactions. *Journal of Behavioral Assessment, 1*, 167-178.
- Bloom, B.S. (Ed). (1985). *Developing talent in young people*. NY: Ballantine.
- Bowlby, J. (1969). *Attachment and Loss: Vol. 1*. New York: Basic Books.
- Brackett, L., Reid, D. H., & Green, C. W. (2007). Effects of reactivity to observations on staff performance. *Journal of Applied Behavior Analysis, 40*, 191-195.

- Brand, A. E., Mulvihill, J., Klimes-Dougan, B., Usher, B. A., & Zahn-Waxler, C. (2005). Parent-adolescent conversations regarding sad and worrisome past events: The emotional discussion coding system. Poster presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA (April).
- Bugental, D. B., & Grusec, J. E. (2006). Socialization processes. In N. Eisenberg (Vol. Ed.), *Handbook of child psychology: Vol. 3. Social, emotional, and personality development*. New York: Wiley.
- Campbell, D. T. & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological Bulletin*, *56*, 81-105.
- Carmines, E. G. & Zeller, R. A. (1979). *Reliability and validity assessment*. London: Sage Publications.
- Carter, A. S., Briggs-Gowan, M. J., Jones, S. M. & Little, T. D. (2003). The Infant-Toddler Social and Emotional Assessment (ITSEA): Factor structure, reliability, and validity. *Journal of Abnormal Child Psychology*, *31*, 495-514.
- Cox, S. J., Mezulis, A. H., & Hyde, J. S. (2010). The influence of child gender role and maternal feedback to child stress on the emergence of the gender difference in depressive rumination in adolescence. *Developmental Psychology*, *46*, 842-852. doi: 10.1037/a0019813.
- Criss, M. M., Shaw, D. S., & Ingoldsby, E. M. (2003). Mother-son positive synchrony in middle childhood: Relation to antisocial behavior. *Social Development*, *12*, 379-400.
- Darling, N. & Steinberg, L. (1993). Parenting style as context: an integrative model. *Psychological Bulletin*, *113*, 487-496.

- Dirks M. A., De Los Reyes A., Briggs-Gowan M. J., Cella D., Wakschlag L. S. (2012). Embracing not erasing contextual variability in children's behavior: theory and utility in the selection and use of measures and informants in the assessment of developmental psychopathology. *Journal of Child Psychology Psychiatry*, *53*, 558–574.
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, *9*, 241-273.
- Eisenberg, N., Fabes, R. A., Shepard, S. A., Guthrie, I. K., Murphy, B. C., & Reiser, M. (1999). Parental Reactions to Children's Negative Emotions: Longitudinal Relations to Quality of Children's Social Functioning. *Child Development*, *70*, 513-534. DOI: 10.1111/1467-8624.00037.
- Eisenberg, N., & Morris, A. S. (2002). Children's emotion-related regulation. In H. Reese, & R. Kail (Eds.), *Advances in child development and behavior* (Vol. 30, pp. 189–229). San Diego, CA: Academic Press.
- Epstein, M. K., Renk, K., Duhig, A. M., Bosco, G. L., & Phares, V. (2004). Interparental conflict, adolescent behavioral problems, and adolescent competence: Convergent and discriminant validity. *Educational and Psychological Measurement*, *64*, 475-495. DOI: 10.1177/0013164403258462
- Farrell, A. D., Danish, S. J., & Howard, C. A. (1992). Relationship between drug use and other problem behaviors in urban adolescents. *Journal of Consulting and Clinical Psychology*, *60*, 705-712.



- Farrell, A. D., Kung, E. M., White, K. S., & Valois, R. F. (2000). The structure of self-reported aggression, drug use, and delinquent behaviors during early adolescence. *Journal of Clinical Child Psychology, 29*, 282-292.
- Fivush, R. (1994). Constructing narrative, emotion, and self in parent-child conversations about the past. In U. Neisser, & R. Fivush (Eds.), *The remembering self: Construction and accuracy in the self-narrative* (pp. 136–157). New York: Cambridge University Press.
- Garside, R. B. & Klimes-Dougan, B. (2010). Socialization of discrete negative emotions: Gender differences and links with psychological distress. *Sex Roles, 47*, 115-128.
- Gittelsohn, J., Shankar, A. V., West, K. P., Ram, R. M., & Gnywali, T. (1997). Estimating reactivity in direct observation studies of health behaviors. *Human Organization, 56*, 182-189.
- Gottman, J. M., Katz, L. F., & Hooven, C. (1996). Parental meta-emotion philosophy and the emotional life of families: Theoretical models and preliminary data. *Journal of Family Psychology, 10*, 243–268.
- Gottman, J. M., Katz, L. F., & Hooven, C. (1997). *Meta-emotion: How Families Communicate Emotionally*. Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.
- Heinisch, D. A. & Jex, S. M. (1998). Measurement of negative affectivity: A comparison of self-reports and observer ratings. *Work & Stress: An International Journal of Work, Health & Organisations, 12*, 145-160.

- Hersh, M. A. & Hussong, A. M. (2009). The association between observed parental emotion socialization and adolescent self-medication. *Journal of Abnormal Child Psychology*, *37*, 493-506. doi: 10.1007/s10802-008-9291-z
- Hubbard, J. A. (1997). Observing children's emotion expression in peer interaction in a confederate-based, competitive paradigm. Paper presented at the biennial meeting of the Society for Research in Child Development, Washington, DC (March).
- Hudson, J. L., Comer, J. S., & Kendall, P. C. (2008). Parental responses to positive and negative emotions in anxious and nonanxious children. *Journal of Clinical Child and Adolescent Psychology*, *37*, 303–313.
- Hudson, J. L., & Rapee, R. M. (2001). Parent-child interactions and anxiety disorders: An observational study. *Behavior Research and Therapy*, *39*, 1411-1427.
- Hunsley, J. & Mash, E. J. (2007). Evidence-based assessment. *Annual Review of Clinical Psychology*, *3*, 29–51.
- Izard, C. E., Dougherty, L., & Hembree, E. (1983). A system for identifying affect expressions by holistic judgments (AFFEX). Newark, NJ: University of Delaware, Instructional Resources Center.
- Jackson, S. & Goossens, L. (Eds.) (2006). Handbook of adolescent development. New York, Hove: Psychology Press.
- Katz, L. F. & Hunter, E. C. (2007). Maternal meta-emotion philosophy and adolescent depressive symptomatology. *Social Development*, *16*, 343-360. doi: 10.1111/j.1467-9507.2007.00388.x.
- Kazdin, A. E. (1982). Observer effects: Reactivity of direct observation. *New Directions for Methodology of Social and Behavioral Science*, *14*, 5–19.

- Klimes-Dougan, B., Brand, A., & Garside, R. B. (2001, August). Factor structure, reliability, and validation of an emotion socialization scale. In C. O'Neal (Chair), *Multiple approaches to emotion socialization: Methodology and emotional development*. Symposium conducted at the annual meeting of the American Psychological Association, San Francisco, CA.
- Klimes-Dougan, B., Brand, A. E., Zahn-Waxler, C., Usher, B., Hastings, P., Kendziora, K., & Garside, R. B. (2007). Parental emotion socialization in adolescence: Sex, age, and risk differences. *Social Development, 16*, 326-342.
- Kline, R.B. (2005), *Principles and Practice of Structural Equation Modeling* (2nd Edition ed.). New York: The Guilford Press.
- Kline, R. B. (2011). *Principles and Practice of Structural Equation Modeling* (3<sup>rd</sup> ed.). New York, NY: The Guilford Press.
- Lagace-Seguin, D. G. & Coplan, R. J. (2005). Maternal emotional styles and child social adjustment: Assessment, correlates, outcomes and goodness of fit in early childhood. *Social Development, 14*, 613-636.
- Lahaderne, H. M. & Jackson, P. W. (1970). Withdrawal in the classroom: A note on some educational correlates of social desirability among school children. *Journal of Educational Psychology, 61*, 97-101.
- Leary, M. R. (2008). *Introduction to Behavioral Research Methods* (5<sup>th</sup> ed.). Boston, MA: Pearson Education, Inc.
- Lunkenheimer, E. S., Hollenstein, T., Wang, J., & Shields, A. M. (2012). Flexibility and attractors in context: Family socialization patterns and children's emotion

- regulation in late childhood. *Nonlinear Dynamics, Psychology and Life Sciences*, 16, 269-291.
- Lunkenheimer, E. S., Shields, A. M., & Cortina, K. S. (2007). Parental emotion coaching and dismissing in family interaction. *Social Development*, 16, 232-248. doi: 10.1111/j.1467-9507.2007.00382.x.
- Magai, C., & O'Neal, C. R. (1997). *Emotion as a child (child version)*. Long Island University, Brooklyn, NY.
- Marsh, H. W. & Grayson, D. (1995). Latent variable models of multitrait-multimethod data. In R. H. Hoyle (Ed.), *Structural Equation Modeling* (pp. 177-198). Thousand Oaks, CA: Sage.
- McHale J. P., Kuersten-Hogan, R., Lauretti, A., Rasmussen, J. L. (2000) Parental reports of coparenting and observed coparenting behavior during the toddler period. *Journal of Family Psychology*. 14, 220–236.
- Melby, J. N., Conger, K. J., & Puspitawati, H. (1999). Insider, participant observer, and outsider perspectives on adolescent sibling relationships. In F. M. Berardo (Series Ed.) & C. L. Shehan (Vol. Ed.), *Contemporary Perspectives on Family Research: Vol. 1. Through the Eyes of the Child: Re-visioning Children as Active Agents in Family Life* (pp. 329-351). Stanford, CT: JAI Press.
- Mitchell, S. K. (1979). Interobserver agreement, reliability, and generalizability of data collected in observational studies. *Psychological Bulletin*, 86, 376–390.
- Morris, A. S., & Silk, J. S. (2001). Parental influences on children's regulation of anger and sadness. Paper presented at the biennial meeting of the Society for Research in Child Development, Minneapolis, MN (April).

- Morris, A. S., Silk, J. S., Morris, M. D. S., Steinberg, L., Aucoin, K. J., & Keyes, A. W. (2011). The influence of mother-child emotion regulation strategies on children's expression of anger and sadness. *Developmental Psychology, 47*, 213-225. DOI: 10.1037/a0021021
- Morris, A. S., Silk, J. S., Steinberg, L., Meyers, S. S., & Robinson, L. R. (2007). The role of the family context in the development of emotion regulation. *Social Development, 16*, 361-388.
- Morris, A. S., Silk, J. S., Steinberg, L. D., Terranova, A. M., & Kithakye, M. S. (2010). Concurrent and longitudinal links between children's externalizing behavior in school and observed anger regulation in the mother-child dyad. *Journal of Psychopathology and Behavioral Assessment, 32*, 48-56. doi:10.1007/s10862-009-9166-9
- Nelson, R., Epstein, M., Griffith, A., & Hopper, J. (2007). Factor structure, internal consistency, and interrater reliability of the Early Childhood Behavior Problem and Screening Scale. *Topics in Early Childhood Special Education, 27*, 148-154.
- Nelson, J. A., Leerkes, E. M., O'Brien, M. O., Calkins, S. D., & Marcovitch, S. (2012). African American and European American mothers' beliefs about negative emotions and emotion socialization practices. *Parenting Science and Practice, 12*, 22-41. DOI: 10.1080/15295192.2012.638871
- Newland, R. P. & Crnic, K. A. (2011). Mother-child affect and emotion socialization processes across the late childhood period: Predictions of emerging behaviour problems. *Infant and Child Development, 20*, 371-388. DOI: 10.1002/icd.729

- O'Neal, C. R. & Magai, C. (2005). Do parents respond in different ways when children feel different emotions? The emotional context of parenting. *Development and Psychopathology, 17*, 467-487. doi: 10.1017/S0954579405050224
- Parke, R. D. (1994). Progress, paradigms, and unresolved problems: A commentary on recent advances in our understanding of children's emotions. *Merrill-Palmer Quarterly, 40*, 157-169.
- Parra, G. R., Olsen, J. P., Buckholdt, K., Jobe-Shields, L., & Davis, G. L. (2010). A pilot study of the development of a measure assessing adolescent reactions to parent responses to emotions. *Journal of Child and Family Studies, 19*, 596-606.
- Radloff, L. S. (1977). The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.
- Rose, A. J. (2002). Co-rumination in the friendships of girls and boys. *Child Development, 73*, 1830-1843.
- Rubin, K. H., Bukowski, W., & Parker, J. G. (2006). Peer interactions, relationships, and groups. In N. Eisenberg (Ed.), W. Damon (Series Ed.), *Handbook of child psychology: Vol. 3. Social emotional, and personality development*. (6th ed., pp. 571-645). New York: Wiley.
- Ryan, K. J. (1998). Hetero-method validity of self-reports, observational scales, and performance measures in the assessment of attention and impulsivity. *Proquest Dissertations and Theses*.
- Sabatelli, R. M., Anderson, S. A., Kosutic, I., Sanderson, J., & Rubinfeld, S. (2009). A validation study of the Youth Development Assessment Device. *Family Relations, 58*, 361-372. doi: 10.1111/j.1741-3729.2009.00558.x

- Schwartz, O. S., Sheeber, L. B., Dudgeon, P., & Allen, N. B. (2012). Emotion socialization within the family environment and adolescent depression. *Clinical Psychology Review, 32*, 447-453. doi:10.1016/j.cpr.2012.05.002
- Shortt, J. W., Stoolmiller, M., Smith-Shine, J. N., Eddy, J. M., & Sheeber, L. (2010). Maternal emotion coaching, adolescent anger regulation, and siblings' externalizing symptoms. *Journal of Child Psychology and Psychiatry, 51*, 799-808. doi: 10.1111/j.1469-7610.2009.02207.x.
- Statin, H. & Kerr, M. (2000). Parental monitoring: A reinterpretation. *Child Development, 71*, 1072-1085. DOI: 10.1111/1467-8624.00210
- Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence, 11*, 1–19.
- Steinberg, L. & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology, 52*, 83-110.
- Stocker, C. M., Richmond, M. K., & Rhoades, G. K. (2007). Family emotional processes and adolescents' adjustment. *Social Development, 16*, 310-325. doi: 10.1111/j.1467-9507.2007.00386.x.
- Thyer, B. A. & Myers, L. L. (1998). Social learning theory. *Journal of Human Behavior in the Social Environment, 1*, 33 — 52. DOI: 10.1300/J137v01n01\_03.
- Vandervoort, D. J. (2001). Cross-cultural differences in coping with sadness. *Current Psychology, 20*, 147-153.
- Vuchinich S., Angelelli J., Gatherum A. (1996). Context and development in family problem solving with preadolescent children. *Child Development, 67*, 1276–1288.

Wegmann, K. W., Thompson, A. M., & Bowen, N. K. (2011). A confirmatory factor analysis of the parent behavior scales on the ESSP for parents. *Social Work Research, 35*, 117-127.

Zeman, J., Cassano, M., Perry-Parrish, C., Stegall, S. (2006). Emotion regulation in children and adolescents. *Journal of Developmental and Behavioral Pediatrics, 27*, 155-168.

Zeman, J., Shipman, K., & Penza-Clyve, S. (2001). Development and Initial Validation of the Children's Sadness Management Scale. *Journal of Nonverbal Behavior, 25*, 187-205.



## APPENDICES

**Table 1.** *Internal consistency (alphas) for parent and youth reports of ES and ER.*

	Anger		Sadness	
	Youth Report	Parent Report	Youth Report	Parent Report
Neglecting	.72	.58	.51	.45
Overriding	.36	.41	.57	.59
Magnifying	.75	.74	.72	.66
Punishing	.64	.36	.16	.38
Coaching	.81	.67	.77	.78
Emotion Regulation	.74	.79	.61	.60

**Table 2.** *Descriptive statistics for anger factors.*

Variable	Range	<i>M</i>	<i>SD</i>	Skewness
Dismissing (parent)	3.5-11.5	7.22	1.36	.33
Magnifying (parent)	3-15	6.71	2.64	.36
Punishing (parent)	3-12	5.77	1.99	.59
Coaching (parent)	5-15	12.34	2.16	-.62
Dismissing (youth)	3-12.5	6.92	1.81	.33
Magnifying (youth)	3-15	6.38	3.21	.82
Punishing (youth)	3-15	5.73	2.55	1.00
Coaching (youth)	3-15	10.29	3.39	-.33
Comforting (observer)	0-.22	.01	.04	3.81
Validating (observer)	0-.68	.15	.14	1.23
Problem solving (observer)	0-.72	.06	.11	2.87
Teaching (observer)	0-.70	.03	.09	4.29
Minimizing (observer)	0-.28	.02	.04	2.71
Changing topic (observer)	0-.18	.02	.04	2.29
Invalidating (observer)	0-.56	.02	.05	6.66
Teasing (observer)	0-.28	.01	.03	4.25
Escalating (observer)	0-.26	.01	.03	4.95
Inappropriate sharing (observer)	0-.16	.00	.02	5.34
ER (parent)	0-2	1.00	.51	.08
ER (youth)	0-2	1.19	.52	-.18
ER (observer)	1-3.83	1.53	.45	1.30

**Table 3.** *Descriptive statistics for sadness factors.*

Variable	Range	<i>M</i>	<i>SD</i>	Skewness
Negative ES (parent)	3-11	5.16	1.89	.70
Coaching (parent)	3-15	13.16	2.19	-1.46
Negative ES (youth)	3-15	5.73	2.51	1.00
Coaching (youth)	3-15	10.98	3.31	-.38
Comforting (observer)	0-.80	.03	.09	5.30
Validating (observer)	0-1.33	.20	.18	2.42
Problem solving (observer)	0-.78	.05	.10	3.78
Teaching (observer)	0-.64	.03	.08	3.89
Negative ES (observer)	0-.63	.09	.13	1.97
ER (parent)	0-2	1.08	.44	-.07
ER (youth)	0-2	1.32	.49	-.32
ER (observer)	1-4	2.08	.67	.29

**Table 4.** Correlations among anger factors.

Variable	2	3	4	5	6	7	8	9	10	11	12	13	14
ES (parent ratings):													
1. Dismiss	.42***	.43**	.09	.20**	.12	.23**	-.05	.05	-.10	-.06	-.06	-.06	-.07
2. Magnify		.49***	-.04	.07	.11	.20**	-.15	.10	.06	.02	.08	-.07	-.09
3. Punish			-.11	.21**	.02	.19*	-.07	.01	-.07	-.04	-.02	-.15*	-.06
4. Coach				-.03	-.10	-.11	.15*	.08	.05	.12	.01	-.01	.06
ES (youth ratings):													
5. Dismiss (youth)					.52***	.51***	.02	-.02	-.07	-.02	-.12	-.02	-.06
6. Magnify (youth)						.66***	-.32***	-.03	-.12	-.02	-.05	.09	-.02
7. Punish (youth)							-.20**	-.12	-.13	-.04	-.16*	.03	-.06
8. Coach (youth)								.02	.11	.08	.11	-.06	.01
ES (observer ratings)													
9. Comfort (observer)									.10	.08	.17*	.01	-.04
10. Validate (observer)										.02	-.05	-.02	.08
11. Problem solve (observer)											.17*	.12	-.07
12. Teach (observer)												-.08	.18*
13. Minimize (observer)													.17*
14. Change topic (observer)													
15. Invalidate (observer)													
16. Tease (observer)													
17. Escalate (observer)													
18. Inappropriate (observer)													
ER:													
19. Parent ratings													
20. Youth ratings													
21. Observer ratings													

Table 3 continues

**Table 4.** Correlations among anger factors. (cont.)

Variable	15	16	17	18	19	20	21
ES (parent ratings):							
1. Dismiss	.02	.06	-.12	.07	-.09	-.13	.05
2. Magnify	-.01	-.04	-.01	.02	-.28***	-.18*	.10
3. Punish	-.09	-.03	-.03	.05	-.29***	-.16*	.16*
4. Coach	-.07	.05	-.07	-.03	.09	.10	-.12
ES (youth ratings):							
5. Dismiss (youth)	.11	.07	-.00	.11	-.07	-.04	.13
6. Magnify (youth)	.15	.02	.07	.04	-.16*	-.28***	.25***
7. Punish (youth)	.07	.12	-.06	-.03	-.23**	-.29***	.28***
8. Coach (youth)	-.04	-.02	-.10	-.02	.21**	.36***	-.27***
ES (observer ratings)							
9. Comfort (observer)	-.05	.04	.12	.16*	.01	-.11	.01
10. Validate (observer)	-.12	.07	-.06	.11	.05	.12	-.20**
11. Problem solve (observer)	.13	.08	-.09	-.05	.02	-.04	.03
12. Teach (observer)	-.08	-.07	-.07	-.01	.02	.05	-.08
13. Minimize (observer)	.35***	.64***	.01	-.09	.08	.13	-.03
14. Change topic (observer)	-.07	.12	-.00	.04	.07	.06	-.14*
15. Invalidate (observer)		.19*	-.03	-.03	.00	-.03	.06
16. Tease (observer)			-.00	-.05	.10	.12	-.06
17. Escalate (observer)				.31***	-.04	-.09	.01
18. Inappropriate (observer)					-.02	.04	-.00
ER:							
19. Parent ratings						.36***	-.23**
20. Youth ratings							-.19**
21. Observer ratings							

Note: \*\*\* $p < .001$ ; \*\* $p < .01$ , \* $p < .05$ ; ES = emotion socialization, ER = emotion regulation

**Table 5.** *Correlations among sadness factors.*

Variable	2	3	4	5	6	7	8	9	10	11	12
ES (parent ratings):											
1. Negative ES	-.29***	.13	-.13	-.13	-.01	-.05	-.03	-.09	-.11	-.02	.05
2. Coach		-.10	.20**	.08	.07	.05	-.06	.18*	-.01	.08	-.02
ES (youth ratings):											
3. Negative ES			-.31***	-.13	.04	-.08	-.06	.01	-.19**	-.12	.09
4. Coach				.14	.13	.05	.01	.08	.10	.19*	-.17*
ES (observer ratings)											
5. Comfort					.15	.02	-.08	-.02	-.07	-.09	-.12
6. Validate						.11	-.02	.13	-.10	-.15*	-.07
7. Problem solve							.20**	-.10	.10	.02	-.03
8. Teach								.03	.00	.14	-.11
9. Negative ES									-.18*	-.05	.10
ER:											
10. Parent ratings										.25***	-.14*
11. Youth ratings											-.05
12. Observer ratings											

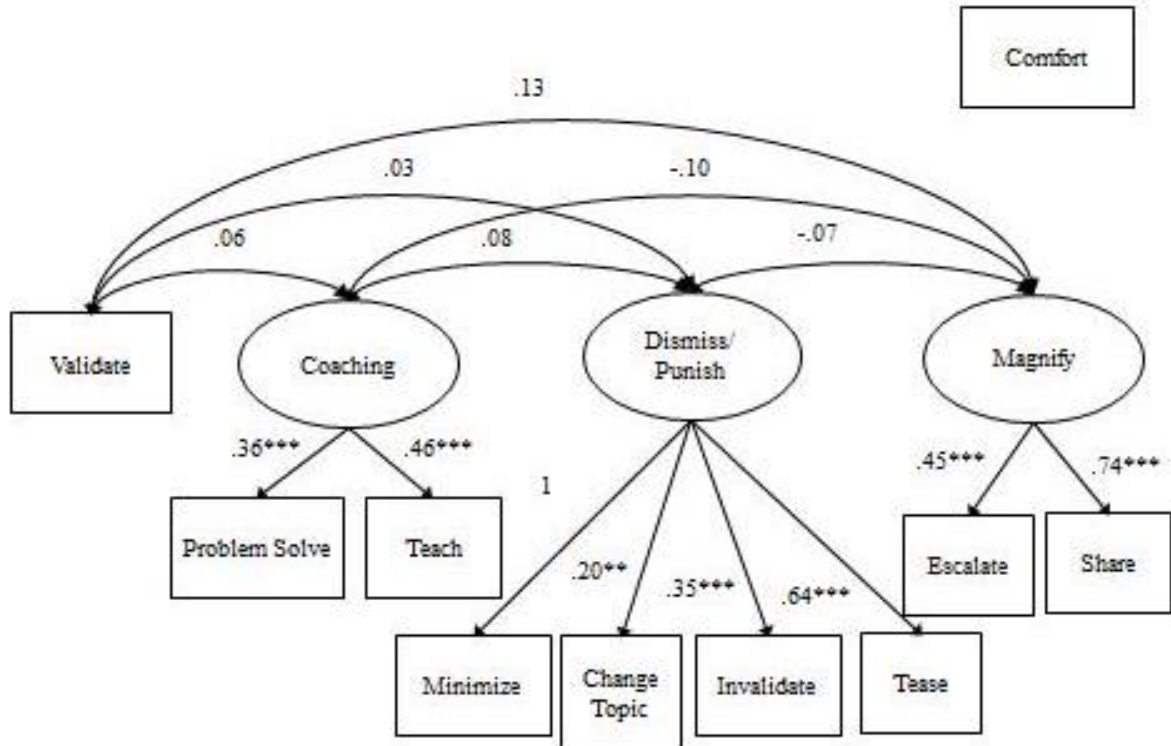
Note: \*\*\* $p < .001$ ; \*\* $p < .01$ , \* $p < .05$ ; ES = emotion socialization, ER = emotion regulation

**Table 6.** Standardized regression coefficients corresponding to covariances among error terms of indicators in Figure 5.

Variables	$\beta$
Punishing (parent) → Coaching (parent)	.26***
Punishing (parent) → Dismissing (parent)	.56***
Punishing (parent) → Magnifying (parent)	.56***
Coaching (parent) → Dismissing (parent)	.51***
Coaching (parent) → Magnifying (parent)	.26***
Dismissing (parent) → Magnifying (parent)	.54***
Dismissing (youth) → Magnifying (youth)	.75***
Dismissing (youth) → Punishing (youth)	.78***
Dismissing (youth) → Coaching (youth)	.75***
Magnifying (youth) → Punishing (youth)	.81***
Magnifying (youth) → Coaching (youth)	.42***
Punishing (youth) → Coaching (youth)	.55***
ER (parent) → Dismissing (parent)	.11 <sup>+</sup>
ER (youth) → Dismissing (youth)	.07
ER (youth) → Magnifying (youth)	-.07

Note: \*\*\* $p < .001$ , <sup>+</sup> $p < .10$ ; ER = emotion regulation

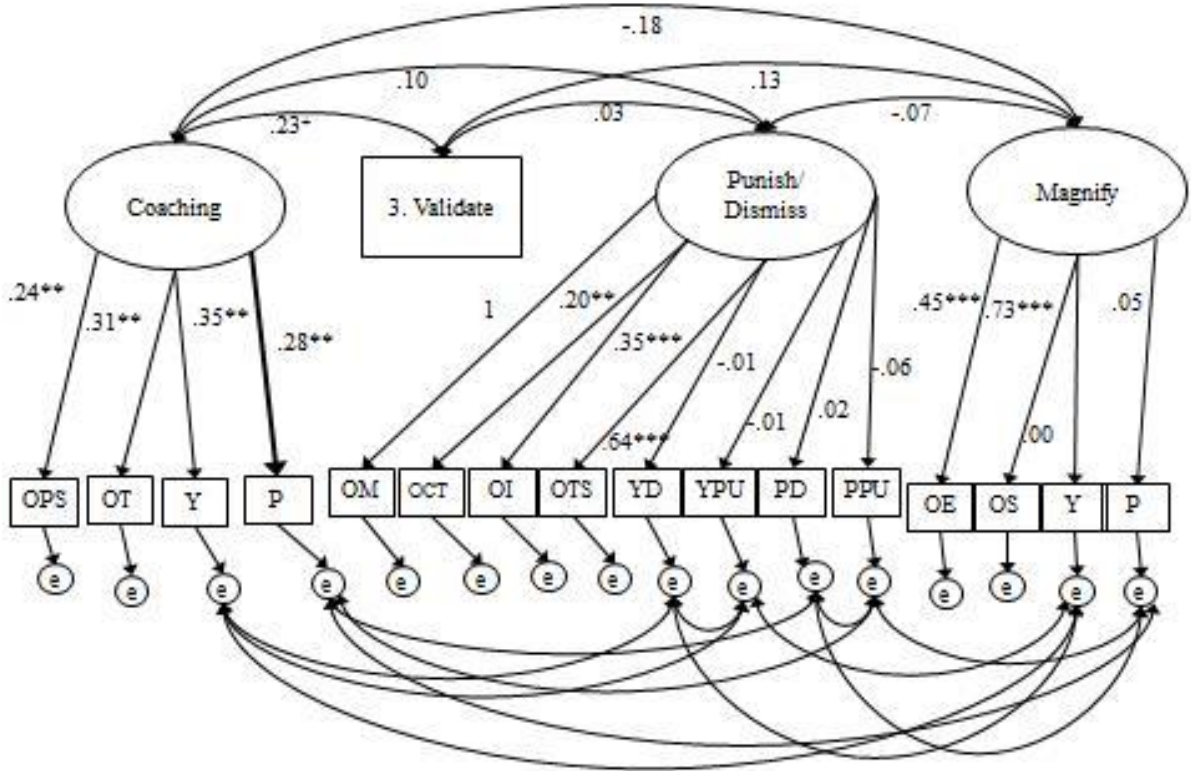
**Figure 1.** Confirmatory factor analysis for observed measure of anger socialization.



Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ ; estimates are standardized regression coefficients

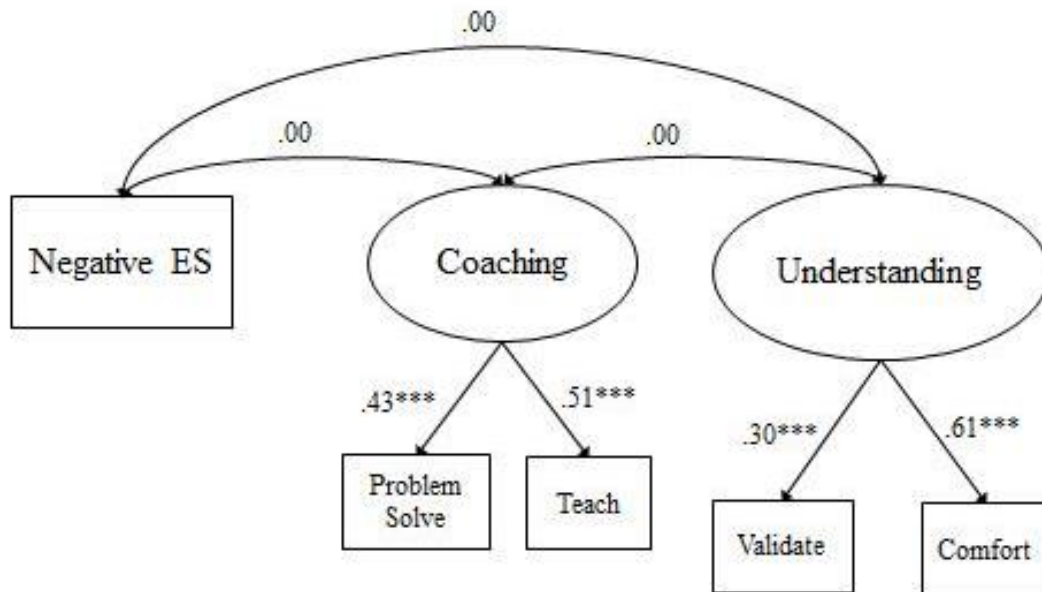


**Figure 2.** Multitrait-multimethod model for anger socialization.



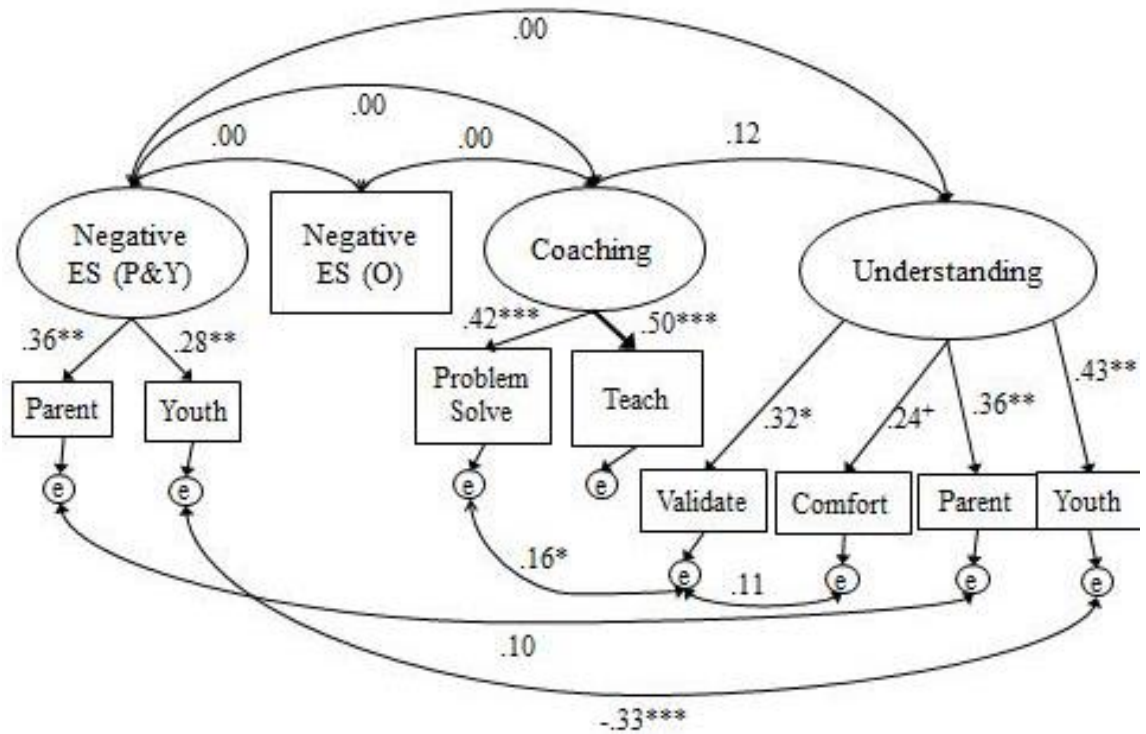
Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ ; O = observer report, Y = youth report, P = parent report, PS = problem solve, T = teach, M = minimize, CT = change topic, I = invalidate, TS = tease, D = dismiss, PU = punish, E = escalate, S = inappropriate sharing; estimates are standardized regression coefficients

**Figure 3.** *Confirmatory factor analysis for observed measure of sadness socialization.*



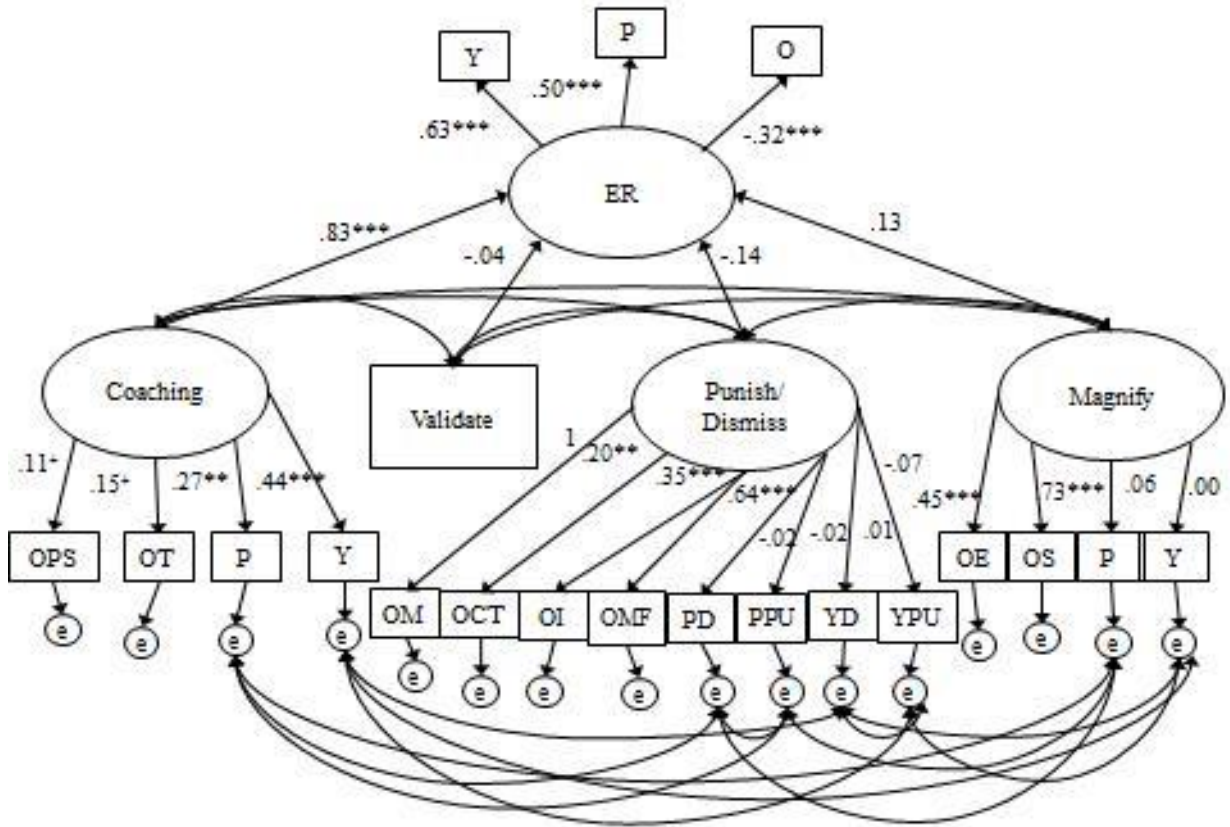
Note: \*\*\* $p < .001$ ; ES = emotion socialization, ER = emotion regulation; estimates are standardized regression coefficients; covariances among exogenous variables were set to zero to improve model fit as these were not significant.

**Figure 4.** Multitrait-multimethod model for anger socialization.



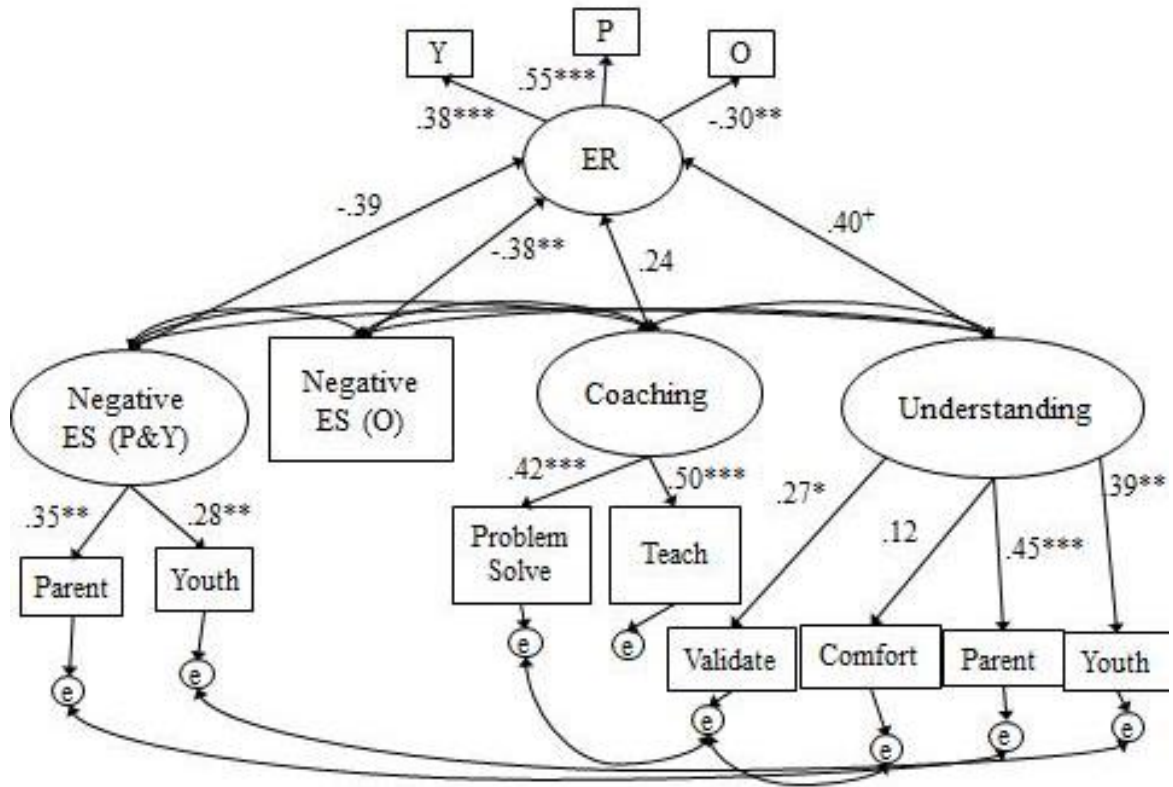
Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , <sup>+</sup> $p < .10$ ; O = observer report, Y = youth report, P = parent report; estimates are standardized regression coefficients; covariances among exogenous variables were set to zero to improve model fit as these were not significant.

**Figure 5.** Path model for link between anger socialization and ER.



Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ , <sup>+</sup> $p < .10$ ; O = observer report, Y = youth report, P = parent report, PS = problem solve, T = teach, M = minimize, CT = change topic, I = invalidate, TS = tease, D = dismiss, PU = punish, E = escalate, S = inappropriate shaaring; estimates are standardized regression coefficients; observer rating of ER loading is negative because it is a measure of emotional expression which is inversely related to regulation; see *Table 5* for covariance coefficients among errors for parent and youth reports of ES and ER factors

**Figure 6.** Path model for link between sadness socialization and ER.



Note:  $***p < .001$ ,  $**p < .01$ ,  $*p < .05$ ,  $^{+}p < .10$ ; O = observer report, Y = youth report, P = parent report; estimates are standardized regression coefficients; observer rating of ER loading is negative because it is a measure of emotional expression which is inversely related to regulation.

**APPENDIX A**  
**Emotion Socialization Styles**  
**FYDP Coding Manual**  
**October 2, 2012**

*OVERVIEW*

The following coding system was developed in order to measure how parents respond to their adolescents' emotions. The type of emotion socialization behaviors the parent displays will be coded. These behaviors fall under 4 different categories including coaching, overriding, punishing, and magnifying. Coaching involves those behaviors that encourage discussion and regulation of emotion. Parents using an overriding strategy discourage the youth's displays of emotion by suggesting emotions are not important. Punitive behaviors convey disapproval of emotional displays and are indicative of the punishing emotion socialization strategy. Parents who magnify emotions promote the escalation of their child's emotions rather than help them to regulate.

## Emotion Socialization (ES) Strategies

### Parental Responses to Youth Emotions

#### Coaching

Parental responses to emotion that encourage the expression of emotion, such as empathizing and providing comfort.

- Comforting behavior
  - touching (arm, hand)
  - clear physical gestures (e.g. father touching son on leg)
  - statements that are comforting in the situation
    - “Your grandmother loved you very much.”
    - “It will be okay.”
- Validation of feelings
  - Labeling of emotions
    - “So it makes you angry when...”
  - Validation of feelings
    - “I can see how that would make you angry”
    - “That must have painful”
    - “You have every right to be angry”
  - Indication of understanding of emotion stated
    - “Yeah, wow, I know; I can understand”
  - Reflection of emotion, rephrasing what youth says
    - “Yeah, you looked pretty shook up”
  - Asking questions to clarify emotions
    - “Were you mad at yourself for not going?”
    - “Did you feel bad about it?”
    - “Are you okay now?”
- Problem Solving about emotions:
  - Works through emotions and actively involved in discussion about coping
    - “How can I help you with your anger”
  - Active participation about emotions by discussing solutions
    - “What do you think you could do when you get angry”
- Teaching in regards to emotions:
  - In addition to simply responding to an emotion, parents may intentionally teach children strategies for regulating and expressing emotions.
    - "take a deep breath"
    - "think about something else"
  - Utilizing one’s own experience or life lessons to relate to the emotional state of the other

- “I remember when my father used to make me take out the trash, it made me mad to”
- “One thing to do when you are angry is to take 10 deep breathes and go get a drink of water”

### **Dismissing**

Parental responses to emotion that discourage the expression of emotion through minimizing or distracting from emotion.

- Minimizing emotions
  - Downplaying or not paying attention to the emotion of the child
    - “You weren’t that mad”
    - “That shouldn’t make you that upset”
    - “Don’t worry. No need to be scared.”
    - Laughing
  - Discounting/dismissing youth’s emotion when stated
    - “You weren’t angry, you were worried”
- Changing the topic

### **Punish**

Parental responses to emotion that discourage the expression of emotion by punishing or expressing disapproval of emotion.

- Invalidating/derogating emotions:
  - Making one feel bad for feeling a certain emotion
    - “If are really angry about that then that is just stupid”
    - “How are you supposed to be a good big brother if you allow your sister to make you mad”
  - Expressed disapproval of feelings or expressions
    - “You should be ashamed”
    - “Grow up”
    - “Stop crying”
- Making fun of feelings or teasing
  - Laughing
  - “Was she your girlfriend? Haha.”

### **Magnify**

Parental responses to emotion that encourage the expression of emotion through parental escalation of emotion, or expanding on expressed emotion.

- Escalation
- Inappropriate sharing of emotion
  - “That’s what gives me nightmares is to think about that poor 19-year-old guy.”



**CODING SHEET- Emotion Socialization – Coaching**

ID\_\_\_\_\_

CODED EMOTION\_\_\_\_\_

DATE\_\_\_\_\_

CODER\_\_\_\_\_

Location of event: \_\_\_\_\_ Total # of intervals\_\_\_\_\_

Start time of task (from list)\_\_\_\_\_ End time of the task (knock on door)\_\_\_\_\_

		<b>Coaching</b>			
<i>Time</i>	<i>Interval</i>	Comforting Behavior	Validation of feelings	Problem Solving about emotions	Teaching in regards to emotions
-	Int 1				
-	Int 2				
-	Int 3				
-	Int 4				
-	Int 5				
-	Int 6				
-	Int 7				
-	Int 8				
-	Int 9				
-	Int 10				
-	Int 11				
-	Int 12				
-	Int 13				
-	Int 14				
-	Int 15				
-	Int 16				
-	Int 17				
-	Int 18				
-	Int 19				
-	Int 20				
-	Int 21				
-	Int 22				
-	Int 23				

**CODING SHEET- Emotion Socialization – Dismissing, Punishing, & Magnifying**

ID \_\_\_\_\_

CODED EMOTION \_\_\_\_\_

DATE \_\_\_\_\_

CODER \_\_\_\_\_

Location of event: \_\_\_\_\_ Total # of intervals \_\_\_\_\_

Start time of task (from list) \_\_\_\_\_ End time of the task (knock on door) \_\_\_\_\_

<i>Time</i>	<i>Interval</i>	<b>Dismissing</b>		<b>Punishing</b>		<b>Magnifying</b>	
		Minimizing emotions	Changing the topic	Invalidating/derogating emotions	Making fun of feelings or teasing	Escalation	Inappropriate sharing of emotion
-	Int 1						
-	Int 2						
-	Int 3						
-	Int 4						
-	Int 5						
-	Int 6						
-	Int 7						
-	Int 8						
-	Int 9						
-	Int 10						
-	Int 11						
-	Int 12						
-	Int 13						
-	Int 14						
-	Int 15						
-	Int 16						
-	Int 17						
-	Int 18						
-	Int 19						
-	Int 20						
-	Int 21						
-	Int 22						
-	Int 23						

## APPENDIX B

### Oklahoma State University Institutional Review Board

Date: Tuesday, January 15, 2013  
IRB Application No HE131  
Proposal Title: Parental Emotion Socialization of Adolescents: Validation of an Observational Measure

Reviewed and Exempt  
Processed as:

**Status Recommended by Reviewer(s): Approved Protocol Expires: 1/14/2014**

Principal Investigator(s):

Cara Bosler	Michael Criss
233 HS	233 HES
Stillwater, OK 74078	Stillwater, OK 74078

---

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI, advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
2. Submit a request for continuation if the study extends beyond the approval period of one calendar year. This continuation must receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of this research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,



Shelia Kennison, Chair  
Institutional Review Board

VITA

Cara D. Bosler

Candidate for the Degree of

Doctor of Philosophy

Thesis: PARENTAL EMOTION SOCIALIZATION OF ADOLESCENTS:  
CREATION AND VALIDATION OF A MULTI-METHOD MEASURE

Major Field: Human Sciences with option in Human Development and Family Science

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Human Sciences at Oklahoma State University, Stillwater, Oklahoma in July, 2013.

Completed the requirements for the Master of Science in Human Development and Family Science at Oklahoma State University, Stillwater, Oklahoma in 2010.

Completed the requirements for the Bachelor of Science in Human Development and Family Sciences at Oklahoma State University, Stillwater, Oklahoma in 2006.

Experience:

January, 2008 - present: Graduate Research/Teaching Assistant, Department of Human Development and Family Science, Oklahoma State University, Stillwater, Oklahoma

August, 2005 – September, 2006: Family/Victim Advocate, The Saville Center, Stillwater, Oklahoma

Professional Memberships: Southwestern Psychological Association, Oklahoma Women in Higher Education