



GRADUATE SCHOOL  
EAST TENNESSEE STATE UNIVERSITY

East Tennessee State University  
Digital Commons @ East  
Tennessee State University

---

Electronic Theses and Dissertations

Student Works

---

5-2025

## Adolescent Externalizing Symptoms and Parent Emotion Socialization: An Examination of Longitudinal Effects and Differences by Adolescent Sex

Cheston West  
*East Tennessee State University*

Follow this and additional works at: <https://dc.etsu.edu/etd>



Part of the [Child Psychology Commons](#), [Clinical Psychology Commons](#), and the [Developmental Psychology Commons](#)

---

### Recommended Citation

West, Cheston, "Adolescent Externalizing Symptoms and Parent Emotion Socialization: An Examination of Longitudinal Effects and Differences by Adolescent Sex" (2025). *Electronic Theses and Dissertations*. Paper 4461. <https://dc.etsu.edu/etd/4461>

This Dissertation - unrestricted is brought to you for free and open access by the Student Works at Digital Commons @ East Tennessee State University. It has been accepted for inclusion in Electronic Theses and Dissertations by an authorized administrator of Digital Commons @ East Tennessee State University. For more information, please contact [digilib@etsu.edu](mailto:digilib@etsu.edu).

Adolescent Externalizing Symptoms and Parent Emotion Socialization: An Examination of  
Longitudinal Effects and Differences by Adolescent Sex

---

A dissertation  
presented to  
the faculty of the Department of Psychology  
East Tennessee State University

In partial fulfillment  
of the requirements for the degree  
Doctor of Philosophy in Psychology

---

by  
Cheston A. West  
May 2025

---

Rachel Miller-Slough, Ph.D., Chair

Alyson Chroust, Ph.D.

Diana Morelen, Ph.D.

Natasha Gouge, Ph.D.

Keywords: emotion socialization, externalizing symptoms, adolescence

## ABSTRACT

### Adolescent Externalizing Symptoms and Parent Emotion Socialization: An Examination of Longitudinal Effects and Differences by Adolescent Sex

by

Cheston A. West

Adolescence is an important developmental context with several changes in social and emotional functioning. Though adolescents are gaining independence from their caregivers, they still engage in dynamic interactions with their caregivers who remain key figures in their lives. When adolescents express emotions, caregivers engage in various behaviors in response to these expressions, a process known as emotion socialization. This process has mostly been examined as a parent-driven construct in which parent emotion socialization impacts child-level outcomes, namely internalizing symptoms, with limited research on externalizing symptoms. However, available literature demonstrates that child-level characteristics (e.g., externalizing symptoms) are linked to differences in parent emotion socialization. Extending on Eisenberg and colleagues' (1998) heuristic model of emotion socialization, the present study aims to examine externalizing behaviors as a child-level characteristic that may have impacts on parent emotion socialization strategies over time in a sample of adolescents. Participants were 87 adolescents (13-15 years old; 50 females) and their caregivers who completed self-report and other report measures across three time points. Change in adolescent externalizing symptoms did not predict change in parent emotion socialization over time. Supplementary analyses indicated that time 1 conduct problems did not predict change in parent emotion socialization. Future directions and clinical implications are discussed.

Copyright 2024 by Cheston A. West

All Rights Reserved

## ACKNOWLEDGEMENTS

To Dr. Miller-Slough, thank you for your continued support throughout my graduate school journey. Your instrumental mentorship and guidance have formed me into the clinician and clinical scientist I am today, and your unwavering patience, kindness, and support will always be remembered and valued. Thank you for allowing me to explore and grow as I continue to find my professional identity and my way into this field. To Dr. Gouge, thank you for encouraging me to mold my personality into every space I exist, especially collegiate settings. Thanks to you, I now am able to fully approach clinical practice and professional relationships with vibrancy, energy, and warmth. To my supervisors and mentors Dr. Miller-Slough, Dr. Gouge, Dr. Spica, Dr. Tate, and Dr. Melkonian, thank you for your encouragement, instruction, guidance, and passion that has undoubtedly molded my passion and love for the work we do and my excitement for my future in this field. To my committee, thank you for agreeing to be a part of my numerous projects and milestones and challenging me become a better clinical scientist. Lastly, to my parents, brother, family, and friends, thank you for your constant support throughout this long journey. Without you all, I would not be where I am today, and this journey would have been far less enjoyable and meaningful.

## TABLE OF CONTENTS

ABSTRACT .....	2
ACKNOWLEDGEMENTS .....	4
LIST OF TABLES .....	7
LIST OF FIGURES .....	8
Chapter 1. Introduction.....	9
Parent Emotion Socialization.....	9
Differences in Parent Emotion Socialization by Adolescent Gender .....	11
Parent Emotion Socialization and Youth Psychological Adjustment.....	13
Child Factors Influence Parent Emotion Socialization.....	14
Adolescent Externalizing Symptoms .....	17
Externalizing Symptoms and Parenting Behaviors.....	18
Externalizing Symptoms and Parent Emotion Socialization .....	19
Present Study .....	20
Chapter 2. Method .....	23
Participants.....	23
Procedure .....	23
Measures .....	24
Parent Emotion Socialization.....	24
Externalizing Symptoms.....	24
Data Analytic Plan and Preliminary Analyses.....	25
Chapter 3. Results .....	32
Unconditional Growth Models .....	32

Hypothesis Testing.....	33
Supplementary Analyses.....	35
Chapter 4. Discussion .....	38
Changes in Externalizing Symptoms on Parent Emotion Socialization .....	38
Strengths, Limitations, and Future Directions .....	44
Conclusion .....	48
References.....	50
APPENDICES .....	61
Appendix A: Emotions as a Child Scale.....	62
Appendix B: Strengths and Difficulties Questionnaire .....	63
VITA.....	64

## LIST OF TABLES

Table 1. Correlations and Descriptives of Study Variables .....	27
Table 2. Demographic Differences in Study Variables .....	28
Table 3. Unconditional Growth Models of Study Variables .....	33
Table 4. Adolescent Externalizing Symptoms in Relation to Parent Emotion Socialization Over Time.....	34
Table 5. Descriptive Statistics of Adolescent Hyperactivity/Inattention and Conduct Problems	35
Table 6. Adolescent Conduct Problems at Time 1 Predicting Parent Emotion Socialization Over Time.....	37



## LIST OF FIGURES

Figure 1. Heuristic Model of Emotion Socialization Eisenburg et al. (1998) .....	15
Figure 2. Proposed Hypotheses: Externalizing Symptoms Predict Changes in Parent Emotion Socialization Over Time .....	22

## **Chapter 1. Introduction**

Adolescence is a period in which children experience numerous changes in their socioemotional functioning (Booker & Dunsmore, 2017). As children develop, they engage in reciprocal relationships with their parents and caregivers, and these relationships change across development. Parent emotion socialization is one dynamic, reciprocal process that parents and children engage in that has implications for psychological adjustment (Eisenberg et al., 1998; Morris et al., 2017). Much of the prior literature on emotion socialization has focused on parent-driven models, examining unidirectional models of parent emotion socialization and its links to adolescent psychological and socioemotional adjustment, namely in relation to internalizing symptoms (e.g., Klimes-Dougan et al., 2007). Less research examines child-driven models, such as how child factors influence the ways in which parents socialize emotions, limiting understanding of the transactional nature of these relationships. The present study aims to further understanding of the impact of child-level factors, notably externalizing symptoms, on parent emotion socialization practices over time.

### **Parent Emotion Socialization**

As children develop, parents and children engage in interactions in which children's expressions of emotions are socialized based on their parents' reactions to these expressions (Eisenberg et al., 1998; Gottman et al., 1996). This process, known as parent emotion socialization, has implications for children's socioemotional and psychological adjustment as it allows for children to further understand the implications of experiencing positive and negative emotions (Eisenberg et al., 1998; Morris et al., 2017). This process has primarily been examined in early and middle childhood samples in relation to the expression of negative emotions, though research of emotion socialization in adolescence is steadily becoming more prevalent (e.g.,

Brand & Klimes-Dougan, 2010; Buckholdt et al., 2014; 2010, Klimes-Dougan et al., 2007).

Though adolescence is a period marked by increased independence, more autonomy, and increased reliance on other socializing agents such as peers (Miller-Slough & Dunsmore, 2016), parents continue to remain important figures in adolescents' emotional worlds (Zeman et al., 2013). O'Neal and Magai (2005) proposed five distinct strategies parents employ when responding to their children's emotions, each of which serve different functions. Parents *reward* emotional displays by responding in ways that promote validation and empathy and provide comfort for their children. When parents attempt to engage in methods of distracting children from their negative emotions, they engage in an *overriding* response. *Punitive* responses are employed when parents attempt to discourage or punish the expression of emotion and send messages that some emotions may be inappropriate to express based on situational or social context. Parents engage in *neglect* responses when they do not offer any response to emotional expressions. Lastly, *magnifying* responses occur when parents "match" or mirror their children's emotion, signaling that they are distressed by their child's negative emotions.

These responses to emotion have historically been examined in the literature as falling along supportive and unsupportive dimensions. Punish, magnify, and neglect responses were traditionally viewed as unsupportive responses in adolescence, whereas reward and override responses have been viewed as supportive responses (Brand & Klimes-Dougan, 2010; Klimes-Dougan et al., 2007; Shortt et al., 2016). However, these responses are highly contextual in nature as some responses may be considered supportive in some contexts or developmental periods and unsupportive in others. For instance, override responses have largely been examined as an unsupportive response in early and middle childhood samples (Fabes et al., 2002; Magai, 1996) as it may serve the function to minimize children's emotions. However, override responses

from parents during adolescence typically fall within a supportive domain as they serve a different function in that parents are providing some recognition of the emotion, but not overly responding to the emotion, thus possibly minimizing reinforcement of negative emotions (Brand & Klimes-Dougan, 2010; Miller-Slough & Dunsmore, 2016). Similar differences exist with magnify responses in adolescence, such that these responses may be considered unsupportive when adolescents are expressing sadness, but they do not serve the same role or have the same impact for expressions of anger or fear (Garside, 2004; Klimes-Dougan et al., 2001). Thus, there exists utility in examining these emotion socialization responses as individual responses serving independent functions, rather than dichotomizing them into supportive or unsupportive dimensions, which is especially important at different stages of development and expressions of varying emotions.

### ***Differences in Parent Emotion Socialization by Adolescent Gender***

Parents' socialization practices are also likely to be influenced by their child's gender (Eisenberg et al., 1998) with different associations related to boys and girls throughout development. These differences are largely examined in European American samples with evidence demonstrating parents are more apt to have conversations about emotions with daughters than sons (Adams et al., 1995; Fivush et al., 2000). Additionally, research in largely European American families in middle childhood samples have demonstrated that parents were more likely to reward boys' expressions of anger compared to those of girls, whereas parents were more likely to reward girls' expressions of worry or sadness compared to those of boys (Brand & Klimes-Dougan, 2010; Garside & Klimes-Dougan, 2002). Though most of the parent emotion socialization literature has been examined mothers (Cassano et al., 2006; Kehoe et al., 2014), current research suggests that fathers are more likely to engage in emotion socialization

practices that fall within a gendered schema compared to mothers, as they are more likely to engage in conversations relating to anger in boys and sadness in girls (Cassano et al., 2007). Overall, these results fall in line with meta-analytic research which demonstrates parents are more likely to be supportive of girls' expressions of sadness and worry, whereas boys receive more support for expressions of anger, falling within the domain of gendered stereotypes related to emotional expression (Chaplin & Aldao, 2013).

Despite the available research pointing to differences in parent emotion socialization strategies across childhood, there is comparatively less research on gender differences in adolescence and it provides mixed results based on parent and child reports of parent emotion socialization. In a sample of largely African American adolescents, boys reported receiving more punitive responses from parents than did girls (Jobe-Shields et al., 2014). Klimes-Dougan and colleagues (2007) conducted a longitudinal study with mostly of European American adolescents, in which girls reported more parental override responses to fear than did boys, and boys reported receiving more punitive responses to anger compared to girls. In the same study, parent reports of emotion socialization did not demonstrate any differences across adolescent gender (Klimes-Dougan et al., 2007). Seemingly, boys and girls may have different perceptions of their parents' emotion socialization practices, with nuanced differences emerging for the type of emotion socialization response and the emotion elicited. Additionally, it is important to note that many of these studies, in both childhood and adolescence, do not distinguish whether it was parents or children who reported on their gender and if they were reporting their sex assigned at birth or their current gender identity. Given adolescence is a critical time for gender identity development (see Steensma et al., 2013 for a review), it is important for the literature to adequately report on gender and sex differences to determine nuances in parents' responses to

negative emotion expressivity given that parents have been found to respond differently based on reported gender.

### ***Parent Emotion Socialization and Youth Psychological Adjustment***

Parent emotion socialization has been linked to a variety of adolescent outcomes, one being adolescent psychological adjustment. Cross-sectional research suggests supportive responses from parents have demonstrated links to lower levels of adolescent depression in both community (Desjardins & Leadbeater, 2011) and clinical (Shortt et al., 2016) samples. Supportive responses to negative emotion were also associated with lower internalizing symptoms in adolescents (Brand & Klimes-Dougan, 2010; Klimes-Dougan et al., 2007; Stocker et al., 2007). Conversely, unsupportive responses have largely been associated with higher levels of internalizing symptoms in European American and African American youth (Klimes-Dougan et al., 2007). Research on specific parent emotion socialization strategies indicates that punishment of negative emotions was linked to higher psychological distress in adolescents (Garside & Klimes-Dougan 2002), and parent invalidation of emotion related to internalizing symptoms through its effect on adolescent emotion dysregulation (Buckholdt et al., 2014). Parents' negative expressivity has related to higher levels of adolescent anxiety and depression (Luebbe and Bell, 2014) and broad internalizing symptoms (Stocker et al., 2007).

Much of the literature examining outcomes related to parent emotion socialization has focused on internalizing symptoms, with little research examining associations with externalizing symptoms. Prior research provides evidence of parents' invalidating responses (Buckholdt et al., 2014), unsupportive responses (Klimes-Dougan et al., 2007), and conflicts with parents and adolescents marked by high negativity (Moed et al., 2015) are associated with higher adolescent externalizing symptoms. Additionally, emotion coaching behaviors from

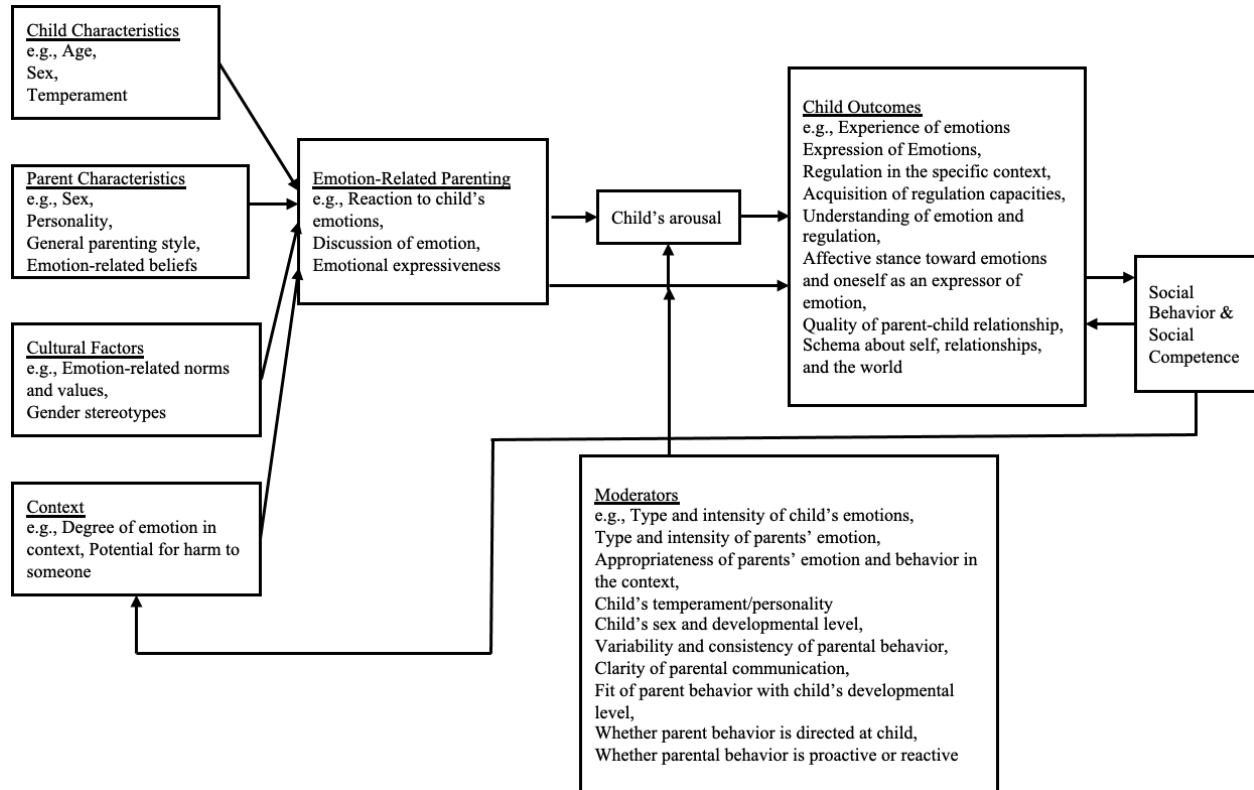
parents have been linked to lower levels of adolescent externalizing symptoms (Shortt et al., 2010). Extant literature on adolescent externalizing symptoms and parent emotion socialization is small, but growing. This emerging research will be useful in informing prevention and intervention efforts for adolescents.

### ***Child Factors Influence Parent Emotion Socialization***

Much of the literature reviewed thus far speaks to parent-driven models in which parenting behaviors and characteristics are examined in relation to child-level outcomes (i.e., internalizing and externalizing outcomes). However, research demonstrates that child behaviors also influence parenting behaviors. From the broader parenting literature, Lanford and colleagues (2011) conducted a longitudinal study with a majority European American sample, reporting that high levels of externalizing symptoms predicted higher rates of physical discipline from parents. As discussed, parent emotion socialization is a *reciprocal* process, in which children's behaviors can shape how their parents respond to their emotions. Eisenberg and colleagues (1998) proposed a heuristic model of emotion socialization, positing that emotion-related parenting practices are influenced by child-level characteristics, such as the child's age, gender, and temperament (Figure 1).

**Figure 1**

*Heuristic Model of Emotion Socialization Eisenberg et al. (1998)*



The available literature does provide some evidence that child-level characteristics have implications for parent emotion socialization. For instance, adolescents with clinical levels of depression received higher rates of unsupportive responses to expressions of negative emotions compared to their non-depressed counterparts (Shortt et al., 2016). Additionally, adolescents with higher rates of depression have received less support of both positive and negative emotions from mothers (Lougheed et al., 2015). Similar patterns have emerged related to adolescent anxiety symptoms. Parents of anxious kids were less likely to have conversations regarding emotions and were more likely to discourage the expression of negative emotions compared to children with lower levels of anxiety (Sueveg et al., 2008). Parents of anxious children were also



more likely to express negative and positive emotions than parents of less anxious children (Suveg et al., 2008). Other research demonstrates that when children demonstrated adaptive emotion regulation skills, their parents are more likely to engage in supportive parenting strategies (Morelen & Suveg, 2012). Taken together, there is theoretical support and empirical evidence that child characteristics impact parent emotion socialization, thus relying solely on parent-driven models may provide an incomplete picture of these parent-child interactions.

Though differences in parent emotion socialization patterns have been observed based on different child-level characteristics, these studies are largely cross-sectional, making it difficult to determine the direction of effects and therefore limiting understanding of the reciprocal nature of emotion socialization. Moreover, these differences are primarily examined related to internalizing symptoms, without much examination into other child-level behaviors, symptoms, or characteristics. Expanding on Eisenberg and colleagues (1998) heuristic model, youth externalizing symptoms are a child-level factor that may relate to parent emotion socialization strategies. There is a scarcity of research examining relationships between parent emotion socialization and adolescent externalizing symptoms, and even less research examining the child-driven effects of externalizing symptoms in this relationship (Miller-Slough & Dunsmore, 2016). The present study aims to bridge this gap, examining how adolescent externalizing symptoms relate to parent emotion socialization strategies. This research will contribute to extant research on the impacts of child-level processes on parent emotion socialization strategies, which would have implications for prevention and intervention efforts. Below, I provide a brief review of literature on externalizing symptoms and its relation to parenting behaviors, such as emotion socialization.

## **Adolescent Externalizing Symptoms**

Externalizing symptoms are common during childhood and adolescence, and have implications for youth's psychosocial adjustment (Campbell, 1995). Externalizing symptoms were present in approximately 7.6% of adolescents aged 13-17 in the United States (Kessler et al., 2012). Broadly, youth externalizing symptoms refers to aggression, hyperactivity, impulsivity, and oppositionality (Achenbach & Edelbrock, 1978). Frick and colleagues' (1993) meta-analytic research identified four domains of these behaviors in children and adolescents: aggression, oppositionality, property violations, and status violations. The aggression domain includes behaviors related to cruelty, fighting others, and bullying, and the oppositionality domain includes behaviors such as having a temper, defiance, and being argumentative. Behaviors related to rule breaking, substance use, and truancy fall within the status violations domain, whereas stealing, vandalism, and cruelty to animals are related to status violations. Externalizing symptoms are likely to experience significant change in both expression and frequency as children develop (Frick et al., 1993), with some youth displaying externalizing symptoms since early childhood and others for whom these behaviors are limited to adolescence (Moffitt, 1993). Understanding externalizing symptoms is key to supporting youth psychosocial adjustment, as it has been linked to increased risk of substance use, gambling, risky sexual behavior, self-harm, and depression (Kretchmer et al., 2014; Odgers et al., 2008)

The prevalence and trajectory of externalizing symptoms differs by child gender. Males have been found to be more likely to demonstrate externalizing symptoms than girls (Zimmerman & Messner, 2010). Cross-sectional research in children ages 9-17 demonstrated that though no gender differences were found in the domains of oppositionality and status violations, boys were more likely to engage in behaviors related to property violations and

aggressions as reported by parents (Lahey et al., 2000). Longitudinal evidence has shown that whereas boys engaged in more aggressive behaviors during early childhood, these symptoms largely decreased, and no gender differences were found within adolescence (Bongers et al., 2003). Moreover, more recent literature demonstrates that externalizing symptoms decrease at faster rates for adolescent boys than girls including rates of conduct problems (Keyes et al., 2018) and deviant behaviors (Moss et al., 2019). Given the nuanced differences in the trajectories of externalizing symptoms for boys and girls noted above, it is important to continue to examine these behaviors individually, as patterns related to externalizing symptoms may vary based on gender. Moreover, it attenuates the need to examine externalizing symptoms from a developmental perspective, rather than conceptualizing this construct as constant or stagnant across development. As such, examining externalizing symptoms longitudinally is critical in having a more complete understanding of not only causality and directions of effects, but also to further understand nuances in the trajectory of these symptoms.

### ***Externalizing Symptoms and Parenting Behaviors***

Findings from the broader parenting literature indicates reciprocal associations between parenting behaviors and externalizing symptoms. Georgiou and Charalampous (2023) found both parent- and child-driven effects related to parenting style and externalizing symptoms in preadolescents and adolescents over the course of 5 months. In their examination of parenting styles, authoritarian parenting had predicted higher rates of externalizing symptoms, whereas no effects were found for authoritative and permissive parenting. Bidirectional effects were observed, in that youth high in externalizing symptoms had parents who engaged in more authoritarian parenting, whereas youth low in externalizing symptoms had parents who engaged in authoritative parenting (Georgiou & Charalampous, 2023). In another longitudinal study, a

sample mainly comprised of African American families with children in early childhood demonstrated higher parenting quality was associated with lower externalizing symptoms related to Attention Deficit/Hyperactivity Disorder (ADHD) and Oppositional Defiant Disorder (ODD), and lower levels of externalizing symptoms was associated with higher parenting quality over time (Pearl et al., 2012). Taken together, extant literature demonstrates that parenting behaviors and externalizing symptoms are transactional, with bidirectional effects observed.

### ***Externalizing Symptoms and Parent Emotion Socialization***

Returning to Eisenberg and colleagues' (1998) heuristic model, youth externalizing symptoms may be a relevant child-level factor in relation to parent emotion socialization. Cross-sectional research with clinical samples indicates group-level differences in parent emotion socialization based on youth externalizing symptoms. For instance, in a sample of pre-school aged children with diagnoses of ODD and Conduct Disorder (CD), youth were less likely to have received emotion coaching from their mothers compared to children without these diagnoses (Kats & Windecker-Nelson, 2004). In an at-risk sample of adolescents, parents have been found to use less reward responses and more magnifying and punitive responses with adolescent who demonstrated higher rates of externalizing symptoms (Klimes-Dougan et al., 2007). Children with severe ADHD symptoms have reported that parents engage in higher rates of unsupportive and negative parenting strategies than children with less severe ADHD symptoms (Kaiser et al., 2011). However, these studies are largely cross-sectional, and directions of effects are not able to be determined. Longitudinal research examining relationships between parent emotion socialization and externalizing symptoms are scarce, though there is research that provides insight into these relationships. For instance, in a sample of primarily White adolescents of

German nationality, externalizing symptoms predicted higher rates of unsupportive responses to anger from parents from 6<sup>th</sup> to 9<sup>th</sup> grade (Otterpohl et al., 2022).

In sum, there is limited research on how parent emotion socialization relates to externalizing symptoms, but even less literature on how youth externalizing symptoms may shape specific parent emotion socialization responses. Gaining knowledge in this domain would greatly inform treatment efforts, as it would highlight how youth impact parenting responses and provide more context for providers implementing parenting programs to address externalizing symptoms. As one example, the Tuning into Kids (Havighurst et al., 2009) parenting program targets parent emotion socialization responses as an avenue to improve youth emotion regulation, youth psychosocial adjustment, and family functioning. This program has demonstrated improvement in parent-child communication and externalizing symptoms in early and middle childhood, as well as improved ADHD symptoms for pre-school aged children (Herbert et al., 2013). Moreover, this program has been adapted and implemented for adolescent populations (Tuning into Teens; Kehoe et al., 2014) and has similarly demonstrated improvements in teen externalizing difficulties, parent impulse control and emotion socialization, and family conflict (Havighurst et al., 2015). Understanding the ways in which youth behaviors shape parent emotion socialization could assist providers who implement such emotion socialization interventions, allowing for more targeted interventions.

### **Present Study**

Extant literature indicates that youth externalizing symptoms related to various parenting behaviors (e.g., parenting style, parenting quality; Lanford et al., 2011; Pearl et al., 2012). However, there is little research to date examining longitudinal effects of adolescent externalizing symptoms on parent emotion socialization, with one study demonstrating

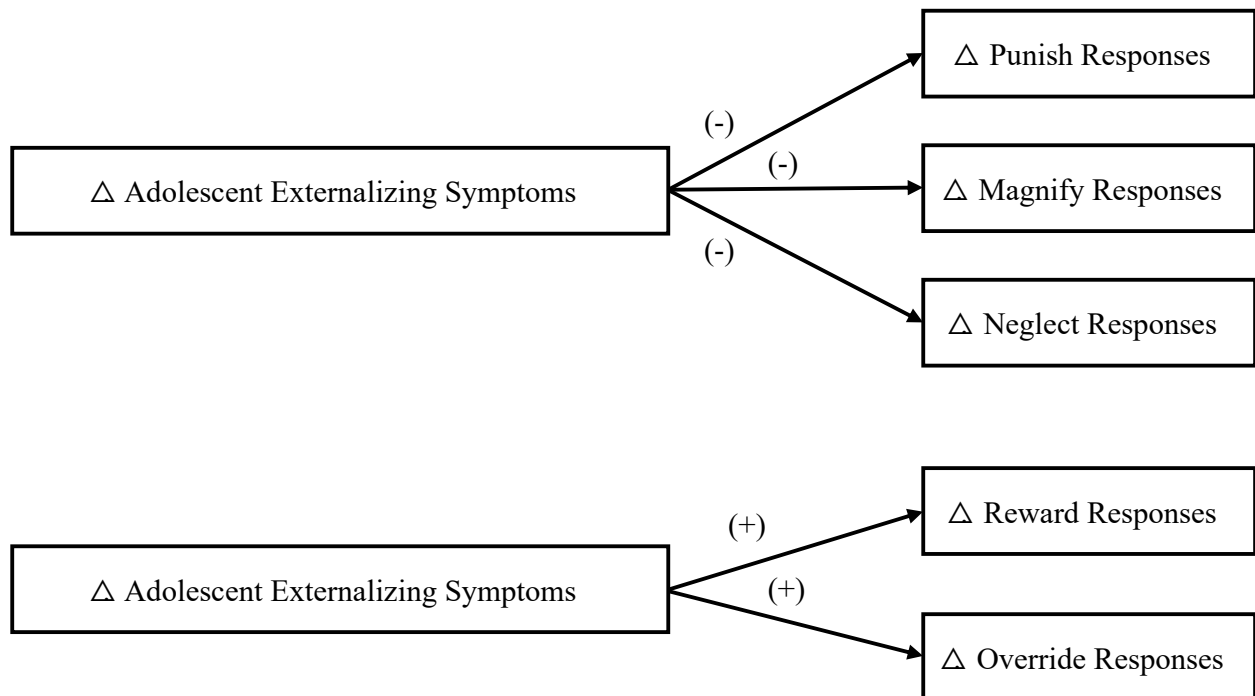
adolescent externalizing symptoms related to parents' increased unsupportive responses to anger (Otterpohl et al., 2022). The present study aims to address this gap by examining the effect of adolescent externalizing symptoms on specific parent emotion socialization responses (i.e., reward, override, magnify, punish, and neglect). This research will contribute to Eisenberg and colleagues' (1998) heuristic model of emotion socialization regarding which child-level characteristics are relevant for parent emotion socialization practices.

Based on the literature review above, the following hypotheses are offered (see Figure 2). Based on previous literature demonstrating externalizing symptoms predicted increased unsupportive responses from parents (Otterpohl et al., 2022), it is hypothesized that increases in adolescent externalizing symptoms will predict increases in parents' punitive response (H1), increased magnifying responses (H2), and increased neglect responses (H3). As prior research indicated that youth externalizing symptoms related to less supportive parent emotion socialization responses (Buckholdt et al., 2014; Klimes-Dougan et al., 2007), it is expected that increases in adolescent externalizing symptoms will predict decreased reward responses from parents (H4) and decreased override responses (H5). Given the limited literature on this topic, the same hypotheses are offered for adolescent boys and girls. Nonetheless, there is an abundance of research indicating that both externalizing symptoms and parent emotion socialization differ by youth gender (e.g., Klimes-Dougan et al., 2007; Zimmerman & Messner, 2010). It should be noted that the present study measured adolescent sex, rather than gender identity. As such, the remainder of the document will refer to adolescent sex to remain consistent with study methodology. Adolescent sex will be included during hypothesis testing in the proposed models, such that potential interactive effects can be detected.

**Figure 2**

*Proposed Hypotheses: Externalizing symptoms Predict Changes in Parent Emotion Socialization*

*Over Time*



## Chapter 2. Method

### Participants

Participants were 87 adolescents aged 13-15 years ( $M$  age = 14.23,  $SD$  = 0.48; 50 females) and their caregivers. Adolescents identified as 79% European American, 3.4% identified as other/race ethnicity, 2.3% Biracial, 2.3% African American, and 1.1% Asian American. Adolescents' caregivers were 83.9% mothers, 14.9% fathers, and 1.1% grandmothers with 83.7% of caregivers married, 11.6% divorced, 2.3% separated, and 2.3% single. Caregivers largely reported having a college degree (51.7%), with 12.6% of caregivers having some college education, 19.5% with a graduate degree, 4.6% with some graduate education, 10.3% with a high school degree, and 1.1% with some high school education.

### Procedure

Participants completed study procedures at three time points during the spring of adolescents' 8<sup>th</sup> grade year ( $n$  = 87), fall of their 9<sup>th</sup> grade year ( $n$  = 57), and fall of their 10<sup>th</sup> grade year ( $n$  = 42) from 2014 to 2016 in southeastern United States. Families were recruited via mailing lists, flyers, and through a pre-existing database containing information of families who were interested in participating in research studies. During each time point, families were sent packets containing an informed consent, informed assent, and questionnaires, and adolescents independently completed their own questionnaire packet. Participants received a \$10 gift card after completion of each time point, with an additional \$25 gift card being awarded to participants who completed measures across all three time points ( $n$  = 35)



## Measures

### *Parent Emotion Socialization*

Adolescents reported on their perceptions of how their caregivers generally responded to their expressions of anger, worry, and sadness independently using the Emotions as a Child Scale (EAC; O'Neal & Magai, 2005). The EAC is comprised of 15 items with responses rated on a 5-point Likert scale (1 = *not at all like my parent*, 5 = *a lot like my parent*). Five subscales are formed using the EAC: Reward, Override, Magnify, Punish, and Neglect. Example items for subscales include “When I was upset, my parent comforted me” (Reward), “When I was upset, my parent told me not to worry” (Override), “When I was upset, my parent got very upset” (Magnify), “When I was upset, my parent let me know that they did not approve of me being upset (Punish), and “When I was upset, my parent did not pay attention to my feelings” (Neglect). Adolescents’ perceptions of parents’ responses to discrete emotions of anger, sadness, and worry were highly correlated ( $r_s = .44 - .88$ ), and responses were averaged to examine a broad, negative emotion across the 5 subscales as a result. The internal consistency has been adequate in prior literature (Garside & Klimes-Dougan, 2002) and internal consistencies for subscales in the present study were adequate across time points ( $\alpha_s = .79 - .90$  at Time 1;  $\alpha_s = .74 - .91$  at Time 2;  $\alpha_s = .71 - .95$  at Time 3). All subscales were utilized in the present study.

### *Externalizing Symptoms*

Parents reported on their child’s externalizing symptoms using the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The SDQ is a 25-item measure rated on a 3-point Likert scale (1 = *not true*, 3 = *certainly true*) and is comprised of five subscales: Emotional Symptoms, Conduct Problems, Hyperactivity/Inattention, Peer Relationship Problems, and Prosocial Behavior. The present study utilized the Conduct Problems and

Hyperactivity/Inattention subscales to create a composite Externalizing symptoms scale, as has been done in prior studies with adequate reliability (Georgiou & Charalampous, 2023).

Reliability for the hyperactivity subscale was adequate across time points ( $\alpha$ s = .86 - .93) and inadequate across time points for the conduct scale ( $\alpha$ s = .16 - .56). Example items for these subscales include “Restless, overactive, cannot sit still for long” (Hyperactivity/Inattention) and “Often loses temper” (Conduct Problems). When combined, the externalizing scale demonstrated adequate reliability across time points in the present study ( $\alpha$ s = .78 - .93).

### **Data Analytic Plan & Preliminary Analyses**

All study variables were examined to evaluate for skewness and kurtosis (See Table 1 for descriptive statistics) and study variables did not demonstrate multicollinearity. Of all the study variables, externalizing symptoms demonstrated excess positive skew (skew = 2.61) with a leptokurtic distribution (kurtosis = 8.73). To address kurtosis, log and natural log transformations were performed on the externalizing symptoms variable; however, this variable remained excessively kurtotic following transformations. Independent samples *t*-tests and one-way ANOVAs were conducted to examine potential demographic covariates across all three time points related to caregiver education, parent figure, adolescent sex, and adolescent race/ethnicity (Table 2). Parents without a college degree had higher reported rates of punish responses compared to parents with a college degree at time point 1 only. At time point 3, caregivers with a college degree were more likely to exhibit higher rates of reward responses and lower rates of neglect responses. Regarding differences by parent figure, fathers were reported to be more likely reward adolescents’ displays of emotions across all three time points than were mothers. Additionally, at time points 2 and 3, fathers were reported to be more likely to engage in override responses and less likely to engage in neglect responses. No significant differences related to

adolescent race/ethnicity or sex were observed ( $ps > .05$ ). Caregiver education and parent figure were entered into all subsequent analyses for hypothesis testing. As noted earlier, adolescent sex was also entered into models for hypothesis testing given prior research on adolescent sex differences in adolescent externalizing symptoms and parent emotion socialization practices (see HLM 2.0 model equations for hypothesis testing below).

**Table 1***Correlations and Descriptives of Study Variables*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	<i>M</i>	<i>SD</i>
1. REW T1	1																		4.02	0.75
2. PUN T1	-0.14	1																	2.46	0.67
3. NEG T1	-0.84**	0.16	1																1.96	0.78
4. MAG T1	0.03	0.30**	0.06	1															2.09	0.66
5. OVR T1	0.64**	0.17	-0.56**	0.06	1														2.98	0.68
6. EXT T1	0.06	-0.02	0.03	0.07	-0.21	1													10.76	2.17
7. REW T2	0.54*	-0.18	-0.50**	-0.12	0.45**	-0.28*	1												3.87	0.74
8. PUN T2	-0.07	0.52**	0.15	0.08	0.14	-0.20	-0.03	1											2.39	0.62
9. NEG T2	-0.52**	0.26	0.55**	0.24	-0.38**	0.18	-0.88**	0.18	1										2.03	0.74
10. MAG T2	0.04	0.23	0.16	0.53**	0.10	-0.20	0.07	0.36**	0.08	1									2.06	0.55
11. OVR T2	0.45**	0.03	-0.34*	-0.24	0.55**	-0.29*	0.69**	0.34	-0.63**	0.07	1								2.91	0.65
12. EXT T2	-0.07	-0.04	0.14	0.02	-0.10	0.77**	-0.13	-0.01	0.09	-0.16	-0.14	1							10.71	2.78
13. REW T3	0.68**	-0.20	-0.55**	0.07	0.56**	-0.09	0.72**	-0.11	-0.61**	-0.06	0.54**	-0.04	1						3.87	0.88
14. PUN T3	-0.27	0.59**	0.24	0.22	-0.12	0.05	-0.16	0.68**	0.27	0.29	0.11	0.11	-0.16	1					2.56	0.72
15. NEG T3	-0.75**	0.28	0.70**	0.00	-0.61**	0.06	-0.77**	0.17	0.76**	0.18	-0.58**	0.03	-0.90**	0.27	1				2.00	0.82
16. MAG T3	-0.03	0.19	0.14	0.48**	0.00	-0.10	0.15	0.32	0.05	0.51**	0.16	0.02	0.24	0.43**	-0.15	1			2.30	0.68
17. OVR T3	-0.35*	0.25	-0.32*	0.12	0.43	-0.01	0.47**	0.34*	-0.43*	0.26	0.51**	0.08	0.68**	0.49**	-0.58**	0.34*	1		2.95	0.67
18. EXT T3	-0.01	-0.02	0.04	-0.03	-0.07	0.82**	-0.19	-0.11	0.05	-0.16	-0.09	0.85**	-0.13	0.11	0.07	-0.14	0.03	1	10.81	2.63

Note: \* $p < .05$ ; \*\* $p < .001$ ; T1 = Time Point 1; T2 = Time Point 2; T3 = Time Point 3; REW = Reward; PUN = Punish; NEG = Neglect; MAG = Magnify; OVR = Override; EXT = Externalizing Symptoms

**Table 2***Demographic Differences in Study Variables*

	Time 1			Time 2			Time 3		
	No college Degree	College Degree	<i>t</i>	No college Degree	College Degree	<i>t</i>	No college Degree	College Degree	<i>t</i>
	<i>M (SD)</i>	<i>M (SD)</i>		<i>M (SD)</i>	<i>M (SD)</i>		<i>M (SD)</i>	<i>M (SD)</i>	
REW	3.81 (0.87)	4.09 (0.71)	-1.49	3.64 (0.74)	3.95 (0.72)	-1.43	3.33 (1.05)	4.09 (0.71)	-2.29*
PUN	2.73 (0.79)	2.37 (0.60)	2.19*	2.47 (0.73)	2.36 (0.58)	.58	2.68 (0.91)	2.51 (0.63)	.69
NEG	2.14 (0.99)	1.90 (0.70)	1.23	2.32 (0.68)	1.92 (0.73)	1.85	2.41 (0.90)	1.82 (0.72)	2.29*
MAG	2.20 (0.77)	2.05 (0.63)	.84	2.04 (0.36)	2.07 (0.61)	-.18	2.29 (0.83)	2.30 (0.62)	-.60
OVR	2.99 (0.62)	2.97 (0.70)	.13	2.81 (0.51)	2.94 (0.70)	-.69	2.72 (0.78)	3.05 (0.61)	-1.42
EXS	10.91 (2.58)	10.71 (2.05)	.35	11.20 (3.84)	10.53 (2.56)	0.8	11.77 (3.77)	10.38 (1.86)	-1.26
	Mothers	Fathers	<i>t</i>	Mothers	Fathers	<i>t</i>	Mothers	Fathers	<i>t</i>
	<i>M (SD)</i>	<i>M (SD)</i>		<i>M (SD)</i>	<i>M (SD)</i>		<i>M (SD)</i>	<i>M (SD)</i>	
REW	3.95 (0.77)	4.44 (0.49)	-2.21*	3.76 (0.70)	4.45 (0.70)	-2.72*	3.75 (0.87)	4.71 (0.30)	-4.85**
PUN	2.42 (0.66)	2.67 (0.71)	.21	2.35 (0.63)	2.543 (0.55)	-.83	2.53 (0.76)	2.73 (0.41)	-.57
NEG	2.01 (0.78)	1.57 (0.60)	.06	2.11 (0.72)	1.51 (0.65)	2.34*	2.11 (0.80)	1.16 (0.29)	5.13**

MAG	2.06 (0.68)	2.17 (0.62)	.6	2.04 (0.57)	2.12 (0.48)	-.37	2.25 (0.70)	2.62 (0.48)	-1.13
OVR	2.92 (0.70)	3.29 (0.46)	.08	2.80 (0.60)	3.52 (0.63)	-3.16*	2.87 (0.65)	3.53 (0.52)	-2.16*
EXS	10.88 (2.28)	10.15 (1.46)	1.1	10.80 (2.99)	10.22 (1.09)	.57	10.78 (2.78)	11.00 (1.22)	-.17

---

*Note:* \* $p < .05$ ; \*\* $p < .001$ ; REW = Reward; PUN = Punish; NEG = Neglect; MAG = Magnify; OVR = Override; EXS = Externalizing Symptoms

To examine attrition rate, participants were dummy coded based on their completion of a number of time points. This coding was modeled off how hierarchical linear modeling (HLM) which was used for hypothesis testing, handles missing data. Specifically, participants are included in analyses if there is data for at least two of three time points (Raudenbush et al., 2011). As such, participants who completed one time point were coded as a 0 ( $n = 23$ ) and participants who completed at least two of three time points were coded as a 1 ( $n = 64$ ). Chi-square tests were then conducted to determine if attrition was attributed to child sex, parent education, and adolescent race/ethnicity which demonstrated no significant attrition was attributed to these demographic variables ( $ps > .05$ ).

Hierarchical Linear Modeling 2.0 was utilized to examine both within- and between-subjects effects across three time points (Raudenbush et al., 2011; Raudenbush & Byrk, 2002). Time was coded in months (Time 1 = 0, Time 2 = 8, and Time 3 = 13) to examine change over time. First, unconditional growth models were conducted to determine variability and change over time for all study variables. In these models, time was entered as a Level 1 independent variable and study variables (youth externalizing symptoms, parent emotion socialization behaviors) were examined as Level 1 dependent variables. Level 2 variables included demographic covariates (parent education and parent figure) and child sex was included to examine sex differences.

**Level 1 Model:**

$$STUDY\_VARIABLE_{ti} = \pi_{0i} + \pi_{1i}*(TIME\_POINT_{ti}) + e_{ti}$$

**Level 2 Models:**

$$\pi_{0i} = \beta_{00} + \beta_{01}*(COLLEGE\_EDUCATION_i) + \beta_{02}*(CHILD\_SEX_i) + \beta_{03}*(PARENT\_FIGURE_i) + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}*(COLLEGE\_EDUCATION_i) + \beta_{12}*(CHILD\_SEX_i) + \beta_{13}*(PARENT\_FIGURE_i).$$

Following the examination of unconditional growth models, linear growth models were conducted to test effects of adolescent externalizing symptoms on each individual parent emotion socialization response over time. In these models, time point and adolescent externalizing symptoms were entered as a Level 1 variables. Adolescent sex and parent education were entered as Level 2 variables to control for demographic differences and to examine differences related to adolescent sex.

**Level 1 Model:**

$$EAC\_VARIABLE_{ti} = \pi_{0i} + \pi_{1i}*(TIME\_POINT_{ti}) + \pi_{2i}*(EXTERNALIZING\_SYMPTOMS_{ti}) + e_{ti}$$

**Level 2 Models:**

$$\pi_{0i} = \beta_{00} + \beta_{01}*(COLLEGE\_EDUCATION_i) + \beta_{02}*(CHILD\_SEX_i) + \beta_{03}*(PARENT\_FIGURE_i) + r_{0i},$$

$$\pi_{1i} = \beta_{10} + \beta_{11}*(COLLEGE\_EDUCATION_i) + \beta_{12}*(CHILD\_SEX_i) + \beta_{13}*(PARENT\_FIGURE_i)$$

$$\pi_{2i} = \beta_{20} + \beta_{21}*(COLLEGE\_EDUCATION_i) + \beta_{22}*(CHILD\_SEX_i) + \beta_{23}*(PARENT\_FIGURE_i).$$



## Chapter 3. Results

### Unconditional Growth Models

Prior to hypothesis testing, unconditional growth models were conducted to examine if change over time was present for each study variable. Results of the unconditional growth models did not demonstrate change over time for any study variable (i.e., adolescent externalizing symptoms, parent emotion socialization responses; ( $ps > .05$ ; Table 3). Though change over time was not demonstrated, there was significance at the level of the intercept for all study variables indicating between-subjects variability in these variables.

**Table 3**

*Unconditional Growth Models of Study Variables*

	Reward		Punish		Neglect		Magnify		Override		Externalizing Symptoms	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Intercept, $\beta_{00}$	3.62*	.25	2.64*	.22	2.02*	.25	2.05*	.21	2.78*	.22	11.54*	.79
Parent Edu, $\beta_{01}$	.27	.19	-.36	.16	-.23	.19	-.13	.16	.01	.16	-.17	.59
Child Sex, $\beta_{02}$	.2	.16	-.13	.14	.16	.16	-.02	.14	.19	.14	-.32	.51
Parent Fig, $\beta_{03}$	.07	.15	.12	.13	.02	.15	.10	.13	.06	.13	-.41	.47
Time, $\beta_{10}$	-.05	.03	-.02	.02	.05	.03	-.02	.03	-.05	.03	-.03	.07
Parent Edu, $\beta_{11}$	.02	.02	.02	.02	-.01	.16	.02	.02	.02	.02	-.05	.04
Child Sex, $\beta_{12}$	-.01	.02	.01	.01	-.02	.15	.03	.01	.00	.02	.02	.04
Parent Fig, $\beta_{13}$	.03	.00	.00	.02	-.02	.02	.00	.02	.27	.02	.04	.05

Variance Components	Reward	Punish	Neglect	Magnify	Override	Externalizing Symptoms
Level 1	0.26	0.21	0.23	.22	0.24	1.36
Residual	0.29*	0.22*	0.33*	.19*	0.19	4.19*

Note: \* $p < 0.01$ ; Parent Edu = Parent Education; Parent Fig = Parent Figure

### Hypothesis Testing

It was hypothesized that increases in adolescent externalizing symptoms across time points would predict increases in caregiver punitive responses (H1), magnifying responses (H2), and neglect responses (H3). These hypotheses were not supported, as change in adolescent externalizing symptoms were unrelated to changes in any of the aforementioned parent emotion socialization responses ( $ps > .05$ ; Table 4). Moreover, there were no differences in these relations by adolescent sex, which were not hypothesized but included as an exploratory research question.

Conversely, it was hypothesized that increases in externalizing symptoms would predict decreases in the use of reward (H4) and override (H5) responses. These hypotheses were also not supported, with no significant relations between adolescent externalizing symptoms with parental reward or override ( $ps > .05$ ; Table 4). There were no interactive effects of adolescent sex.

**Table 4***Adolescent Externalizing Symptoms in Relation to Parent Emotion Socialization Over Time*

	Reward		Punish		Neglect		Magnify		Override	
	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept, $\beta_{00}$	3.61*	.25	2.63*	.22	2.02*	.25	2.05*	.22	2.8*	.22
Parent Education, $\beta_{01}$	.26	.19	-.36	.16	-.21	.19	-.12	.16	.01	.16
Child Sex, $\beta_{02}$	.21	.16	-.13	.14	.15	.16	-.02	.14	.19	.14
Parent Figure, $\beta_{03}$	.07	.15	.13	.13	.01	.15	.1	.13	.05	.13
Time, $\beta_{10}$	-.05	.03	-.02	.03	.05	.03	-.02	.03	-.06	.03
Parent Education, $\beta_{11}$	.02	.02	.02	.02	-.02	.02	.02	.02	.02	.02
Child Sex, $\beta_{12}$	-.01	.02	.01	.01	-.02	.02	.03	.01	.00	.02
Parent Figure, $\beta_{13}$	.03	.02	.00	.02	-.02	.02	.00	.02	.03	.02
Externalizing Symptoms, $\beta_{20}$	.03	.15	-.04	.15	-.06	.16	-.07	.14	.12	.18
Parent Education, $\beta_{21}$	.11	.1	.06	.09	-.06	.09	.03	.09	-.03	.1
Child Sex, $\beta_{22}$	.14	.1	.05	.09	-.12	.09	.04	.09	.06	.1
Parent Figure, $\beta_{23}$	-.12	.15	.02	.14	.08	.15	.02	.14	-.13	.16
Variance Components	Reward		Punish		Neglect		Magnify		Override	
Residual	.26		.21		.24		.22		.25	
Intercept	.29*		.21*		.33*		.18*		.18*	

*Note: \*p < 0.01*

## Supplementary Analyses

Given that the primary analyses did not yield any significant findings, further analyses were conducted examining adolescent hyperactivity and conduct problems separately, which were both summed together to create an externalizing variable. Descriptive statistics for hyperactivity and conduct problems across all three time points, except conduct problems at time 1, indicated excessive skew and kurtosis for each variable at all time points, largely due to limited variability in the data (Table 5). As adolescent conduct problems at time 1 did not demonstrate excessive skew or kurtosis, this variable was included in supplementary analyses as a predictor of change in caregiver emotion socialization responses over time.

**Table 5**

*Descriptive Statistics of Adolescent Hyperactivity/Inattention and Conduct Problems*

	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Hyperactivity T1	4.79	1.79	3.09	10.26
Conduct Problems T1	5.45	.67	1.50	2.18
Hyperactivity T2	4.90	2.26	2.76	6.73
Conduct Problems T2	5.36	.85	2.83	8.44
Hyperactivity T3	4.89	2.02	2.85	8.68
Conduct Problems T3	5.49	.90	2.45	6.66

*Note:* T1 = Time Point 1; T2 = Time Point 2; T3 = Time Point 3

Each parent emotion socialization response was examined in its own analysis. Time point was entered at Level 1. Adolescent sex, parent education, parent figure, and conduct problems at time 1 entered into Level 2.

### **Level 1 Model**

$$EAC\_VARIABLE_{ti} = \pi_{0i} + \pi_{1i}*(TIME\_POINT_{ti}) + e_{ti}$$

### **Level 2 Model**

$$\pi_{0i} = \beta_{00} + \beta_{01}*(COLLEGE\_EDUCATION_i) + \beta_{02}*(CHILD\_SEX_i) +$$

$$\beta_{03}*(PARENT\_FIGURE_i) + \beta_{04}*(TIME\_1\_CONDUCT\_PROBLEMS) + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}*(COLLEGE\_EDUCATION_i) + \beta_{12}*(CHILD\_SEX_i) +$$

$$\beta_{13}*(PARENT\_FIGURE_i) + \beta_{14}*(TIME\_1\_CONDUCT\_PROBLEMS_i).$$

Similarly, these linear growth models did not demonstrate any significant findings ( $ps > .05$ , Table 6). Thus, adolescent conduct problems at Time 1 did not predict change in parent emotion socialization responses.

**Table 6***Adolescent Conduct Problems at Time 1 Predicting Parent Emotion Socialization Over Time*

	Reward		Punish		Neglect		Magnify		Override	
	B	SE	B	SE	B	SE	B	SE	B	SE
Intercept, $\beta_{00}$	3.28*	.77	2.21*	.67	2.12*	.78	2.26*	.75	2.89*	.72
Parent Edu, $\beta_{01}$	.14	.19	-.20	.17	-.09	.19	-.21	.19	-.11	.18
Child Sex, $\beta_{02}$	.34	.16	-.12	.14	.08	.16	-.04	.15	.24	.15
Parent Figure, $\beta_{03}$	.32	.23	.31	.19	-.21	.22	.14	.21	.20	.20
CP T1, $\beta_{04}$	.03	.12	.01	.10	.00	.12	-.04	.11	-.02	.11
Time, $\beta_{10}$	.01	.08	-.02	.07	.01	.07	.02	.08	-.02	.08
Parent Edu, $\beta_{11}$	.02	.02	.02	.02	-.01	.02	.02	.02	.03	.02
Child Sex, $\beta_{12}$	-.02	.02	.02	.02	-.01	.01	.02	.02	.00	.02
Parent Figure, $\beta_{13}$	.01	.02	-.03	.02	-.01	.02	-.01	.02	.01	.02
CP T1, $\beta_{14}$	-.01	.01	.00	.01	.00	.01	.00	.01	.00	.01
Variance Components	Reward		Punish		Neglect		Magnify		Override	
Level 1	.22		.23		.20		0.22		.23	
Residual	.22*		.12*		.26*		0.18*		.16*	

Note: \* $p < 0.01$ ; Parent Edu = Parent Education; CP T1 = Conduct Problems Time 1

## **Chapter 4. Discussion**

Parent emotion socialization has long been researched as a unidirectional process, with extant literature largely examining the effects of parent emotion socialization behaviors on adolescent psychological adjustment (Eisenberg et al., 1998; Morris et al., 2017). However, Eisenberg and colleagues' (1998) heuristic model of emotion socialization highlights that child-level characteristics have theoretical implications regarding their impact on caregiver emotion socialization behaviors. Burgeoning research has begun to provide empirical support for this aspect of their model indicating that child-level factors, such as externalizing symptoms (e.g., ADHD symptoms; ODD, Conduct Disorder symptoms) are linked to caregiver emotion socialization patterns across age groups (Kats & Windecker-Nelson, 2004; Klimes-Dougan, 2007; Otterpohl et al., 2022). There is limited exploration of these child-driven effects with adolescent samples and many studies with child or adolescent samples are cross-sectional. This research largely looks at supportive and unsupportive emotion socialization processes, broadly, rather than looking at discrete aspects of emotion socialization behaviors. The present study attempted to expand on Eisenberg and colleagues' (1998) model of emotion socialization by examining changes in adolescent externalizing symptoms in relation to changes in parent emotion socialization responses over time.

### **Changes in Externalizing Symptoms on Parent Emotion Socialization**

As previously noted, increases in adolescent externalizing symptoms were expected to be associated with increased caregiver use of punish (H1), magnify (H2), and neglect (H3) responses. Increases in adolescent externalizing symptoms were expected to be associated with decreased caregiver use of reward (H4) and override (H5) responses. These hypotheses were offered for both adolescent boys and girls, though sex differences were explored. Contrary to

hypotheses and extant literature, the findings were largely nonsignificant. Changes in adolescent externalizing symptoms were unrelated to changes in caregiver emotion socialization responses over time. Supplementary analyses examined adolescent hyperactivity and conduct problems separately and determined that there was limited variability in these variables across time points, with the exception of adolescent conduct problems at time 1. Time 1 conduct problems was then examined as a predictor of change in adolescent externalizing symptoms over time. Adolescent conduct problems at Time 1 did not predict change in parent emotion socialization behaviors over time.

Extant literature has demonstrated a link between parent emotion socialization and externalizing symptoms, with evidence for parent-driven and child-driven effects across age groups (e.g., Klimes-Dougan, 2007; Morris et al., 2017). The present study did not replicate these findings, which could be attributed to the lack of variability within the present sample. Parent reports of adolescent externalizing symptoms were excessively kurtotic (Kurtosis > 8) suggesting limited variability in externalizing symptoms across time points. This lack of variability limits the ability to detect any effects.

This sample also had lower externalizing scores, suggesting that the sample was largely healthy and did not demonstrate clinically elevated externalizing symptoms, which is to be expected in a community sample. Prior cross-sectional and longitudinal studies that have linked externalizing symptoms to higher rates of unsupportive parent emotion socialization and lower rates of supportive emotion socialization responses (e.g., Klimes-Dougan et al., 2007; Otterpohl et al., 2022) had samples with higher rates of externalizing symptoms despite utilizing community samples. For instance, Klimes-Dougan and colleagues (2007) engaged in specific recruitment practices to target children with emotional and behavioral problems, lending the



sample to contain adolescents with higher externalizing symptoms. As such, the results of the present study may suggest that consistent low levels of adolescent externalizing symptoms do not lead to changes in parent emotion socialization responses over time, whether supportive or unsupportive. However, as evidenced by and in the context of prior literature (Klimes-Dougan et al., 2007), it may be that as adolescents demonstrate increases in externalizing symptomology, parents may begin to demonstrate changes in parenting behaviors.

It also may be pertinent to consider developmental stage when interpreting the results of the current study. Much of the prior literature examining both broad parenting practices and styles and emotion socialization have largely examined pre-school aged children and children in early to late childhood, including both clinical and community samples. These studies demonstrate that externalizing symptoms and children with ADHD symptoms, ODD, and Conduct Disorder are predictive of later negative parenting practices and unsupportive emotion socialization (Georgiou & Charalampus, 2023; Kaiser et al., 2011; Pearl et al., 2012). When parents have teens that are exhibiting externalizing symptoms at low levels, it may fall within their schema of typical “acting out” adolescent behavior, compared to their expectations of younger children. When younger children exhibit externalizing symptoms, parents may more quickly demonstrate changes in parenting strategies to address these behaviors. However, parents of adolescents may believe that low levels of externalizing symptoms are typical, and they may not demonstrate changes in parenting to accommodate these behaviors. Additionally, at this point in development, parents have had longstanding relationships with their child. As such, they may have established a more entrenched pattern in ways they respond to their teen’s negative emotions. This may limit the amount of change in parent emotion socialization behaviors across adolescence as well.

The present study also exclusively relied on adolescent-report of parent emotion socialization, to which they indicated no changes in emotion socialization over time. These findings may represent a methodological issue as solely relying on an adolescent's perspective may diminish the ability to detect nuanced patterns of parent behaviors. Perhaps adolescent-report obtains a broader perspective of how parents have responded to their emotions in childhood thus far, rather than a specific measurement of how their parents respond to their moments at that point in their development. Other studies have relied on parent-report (e.g., Buckholdt et al., 2014) and observational methods (e.g., Miller-Slough & Dunsmore, 2020) when examining parent emotion socialization. There may be utility in gaining other measurements of emotion socialization, as it may offer different perspectives and more specific measurements that translate to different findings both over time and across reporters/observational methods. Future studies may seek to incorporate parent report and observational methods when examining emotion socialization to determine if discrepancies in reports of this construct exist and if there are changes in reported emotion socialization.

There may be other contextual factors that were not accounted for in the present study, but documented in other studies, that contribute to the effects of adolescent externalizing symptoms on parent emotion socialization behaviors. The absence of this data may be another potential explanation for the lack of findings, particularly when these constructs are the mechanism for change. Parenting stress is one factor that may explain the relationship between adolescent externalizing symptoms and negative parenting reactions such as unsupportive emotion socialization practices. Increases in externalizing symptoms in children have been associated with increases in parenting stress in extant literature (Mackler et al., 2015; Van Dijk et al., 2022). Indeed, parenting stress and emotion dysregulation in parents have also been linked to

both unsupportive parenting practices (Zahn-Waxler et al., 2002) and parenting stress in both cross-sectional and longitudinal studies (de Maat et al., 2021; Kochanova et al., 2021). As children and adolescents begin to exhibit higher rates of externalizing symptoms, parents may have negative, internal experiences such as stress and emotion dysregulation which may, in turn, impact their ability to effectively parent in emotionally-laden situations with their children. For instance, Mackler and colleagues (2015) found that parenting stress mediated the relationship between child externalizing symptoms and negative parent reactions across four time points. Moreover, it may be that, as children, begin to demonstrate higher rates of externalizing symptoms, parents may begin to recognize that current parenting strategies may not demonstrate the same level of effectiveness, resulting in changes in parenting behaviors to accommodate new disruptive behaviors. In sum, the proposed model for the present study may benefit from considering mechanisms of change or inclusion of other constructs, such as parenting stress or parent emotion dysregulation, that can account for some of the variance in study variables, resulting in a more clearly specified model.

Though there were no significant findings regarding the relationship between parent emotion socialization and adolescent externalizing symptoms over time, preliminary analyses did yield important findings that are relevant in understanding patterns of emotion socialization. Surprisingly, fathers were reported to be more likely to reward and override and less likely to neglect their adolescent's emotional displays compared to mothers which is contrary to prior literature that posits mothers exhibit in more supportive and fathers exhibit in more unsupportive responses (Brown et al., 2015; Cassano et al., 2007; Klimes-Dougan et al., 2007). Some explanation for these findings might be explained by the use of adolescent report of parent emotion socialization in the current study. Given that mothers typically engage in more

supportive than unsupportive responses, teens may expect mothers to be more supportive and fathers to be more unsupportive at baseline. Emotion socialization practices exhibited by parents that are contrary to their beliefs or expectations may hold more salience for these adolescents, leading them to be more likely to report on these behaviors. Additionally, parents with a college degree were reported to be more rewarding and less punitive and neglectful towards their adolescents. These preliminary findings are similar to other findings that assert parents in low-income families engage in more punitive parenting practices than other parents (e.g., Pinderhughes et al., 2000). Though these findings were not hypothesized, they are still relevant in expanding on Eisenberg and colleagues (1998) heuristic model of emotion socialization by shedding light to contextual factors that may influence emotion socialization practices in families. It also further exhibits the need to recruit more diverse populations in regard to caregiver status, socioeconomic status, race/ethnicity, sex and gender, and more to fully understand complex family processes to promote functioning within the home.

Taken together, these findings provide further understanding of socioemotional processes in the family system, specifically related to how adolescent disruptive behaviors relate to family emotion communication patterns over time. These results demonstrate that perhaps at consistently low levels of externalizing symptoms, caregivers' emotion socialization remains relatively stable over time. However, as externalizing symptoms increase in severity, parenting behaviors may subsequently become dependent on these symptoms. Future longitudinal work is needed with at-risk and clinical samples to more fully explore this link. Understanding these processes is critical to treatment and intervention planning when utilizing emotion socialization interventions, such as *Tuning into Kids* (Havighurst et al., 2009) and *Tuning into Teens* (Kehoe et al., 2014). Additionally, continuous research on the impacts of externalizing symptoms on

internal processes in parents (e.g., parenting stress, parent emotion dysregulation) is vital to understand pathways from adolescent externalizing symptoms to parent emotion socialization to better understand targets for intervention. Importantly, the emotion socialization interventions noted above have specific components to target parents' and caregivers' own internal emotional states in order to improve their ability to respond to negative emotional displays. As such, understanding when children's externalizing symptoms cause stress and dysregulation for parents is vital in appropriately addressing changes in parenting behaviors based on these symptoms, and will allow for more tailored treatment options.

### **Strengths, Limitations, and Future Directions**

The present study has several strengths that enhance the methodological rigor and provision of information relevant to extant literature and future research. To start, the current study employed a longitudinal design for data collection, enhancing the ability to draw causal and directional effects over time. Moreover, the study examined child-driven effects. Much of the extant literature regarding emotion socialization is cross-sectional and examines parent-driven models. Additionally, the current study utilized a sample of adolescents as much of the literature on emotion socialization has primarily examined children in early and middle childhood. The current study, though results were non-significant, aids in the understanding of the relationship between adolescent externalizing symptoms and parent emotion socialization behaviors over time and provides further research on Eisenberg & colleagues (1998) heuristic model of emotion socialization.

Regarding other methodological strengths, adolescents reported on their perceptions of their parents' emotion socialization practices, which has been implicated in the current literature of having been more strongly related to adolescent well-being and outcomes compared to

parents' own reports of their emotion socialization practices (Hendriks et al., 2018; Janssen et al., 2021). There were also reports of mother and father emotion socialization practices, furthering research on fathers when the current literature largely examines mother-child dyads (Kehoe et al., 2014). However, it is still important to note that the sample mostly consisted of mother respondents, providing only limited data on how fathers perceived their children's externalizing symptoms. Nonetheless, fathers were still included in this study and marks some, albeit limited, understanding of these processes with multiple caregivers. Lastly, the present study examined a variety of emotion socialization responses. Parent emotion socialization behaviors are often grouped into supportive or unsupportive dimensions (Brand & Klimes-Dougan, 2010; Klimes-Dougan et al., 2007; Shortt et al., 2016) making it difficult to draw conclusions regarding discrete and nuanced emotion socialization practices that may be adaptive or maladaptive based on a child's developmental period. Not only does examining discrete emotion socialization responses provide more information regarding parenting behaviors in the context of adolescents' emotions, but it is also dually benefitted by examining in a longitudinal sample as these practices may change in their function of the response across developmental periods (e.g., override and magnify responses; Brand and Klimes-Dougan 2010; Fabes et al., 2002; Magai 1996; Miller-Slough & Dunsmore, 2016).

Several notable limitations exist in this study despite the aforementioned strengths. There was limited variability and lower scores overall regarding externalizing symptomology across all three time points. This limited the ability to detect significant effects and examining change over time may not be plausible, limiting our understanding of the implications of adolescent externalizing symptomology and its impact on familial patterns of communication of emotions over time. The sample was fairly homogenous in terms of diversity of adolescent and parent

race/ethnicity, socioeconomic status, and the caregiver relationship to the adolescent (e.g., mother, father, grandmother, etc.). Though the present study expanded current literature by including fathers within the sample, children under the care of extended family or other caretakers is vital in understanding these processes in a diverse family system and to promote healthy functioning in a breadth of home environments. Moreover, emotion socialization practices vary based on various cultural factors, such as race/ethnicity, and socioeconomic status (Brown et al., 2015; Eisenberg et al., 2020; Raval & Walker, 2019). In order to increase the generalizability of the current literature and to fulfill a need of more diverse and culturally representative and responsive research, more heterogeneous samples are critical in understand complex and nuanced family interactions in efforts to aid in intervention and prevention strategies. It is important to note, however, that the current sample is representative of the sociocultural context for which the data was collected and may be generalizable within this context. Regardless, diversity within various sociocultural contexts is still present, and more diverse samples are needed to fully understand the population for which we study.

Though the present study utilized multiple reporters, a multi-method design would also be beneficial. Observational methods, such as ecological momentary assessment or specific tasks aimed at eliciting externalizing symptoms and emotion socialization practices in laboratory settings, would provide a more comprehensive understanding of perceptions of one's own behaviors, the perceptions of others' behaviors, and objective observations of these processes. Parent report of their teen's externalizing symptoms and youth's report of their parents' emotion socialization practices may be subject to biased reports (Grimm, 2010) as they may be underreporting the severity of these symptoms and behaviors and the scores may not be

reflective of their true perceptions in an effort to maintain others' positive perceptions towards their family system.

The present study also focused on parent socialization of a broad negative emotion. Prior research has demonstrated that parents differ in how they respond to discrete negative emotions (sadness, anger, worry; Zeman et al., 2010), highlighting a need for more understanding of factors that may impact their responses to these discrete emotions. Lastly, the study was limited in its measurement of adolescent demographic information. Though the study attempted to analyze differences in externalizing symptoms related to adolescent sex, it is important to note that adolescence is a period in which some children are increasingly aware of their gender identity (Steensma et al., 2013), which relates their socioemotional adjustment. Adolescents' parents reported on their child's sex at time 1 only. This limits the ability to not only capture possible changes in gender identity across adolescence but limits our understanding of patterns of emotion socialization related to differing gender identity. Given that adolescence is met with large changes in socioemotional functioning (Booker & Dunsmore, 2017) and possible changes related to gender identity, adolescent report of their own gender identity at each time point is critical in furthering our understanding of a diverse group of individuals and understanding patterns related to parenting behaviors.

Taken together, future research should continue to utilize longitudinal research methods to examine the relationship between parent emotion socialization and other child-level factors implicated within Eisenberg and colleagues (1998) heuristic model of emotion socialization. Moreover, given the *reciprocal* process of emotion socialization, it is highly encouraged that future research continue to utilize child-driven models and perhaps examine the bidirectionality of these relationships rather than conceptualizing these dynamic processes as a unidirectional



process. It is also imperative to increase the diversity and representativeness of our research samples to increase generalizability and to further understand nuances in various parenting processes in an effort to translate research to an improved understanding of and clinical interventions for a diverse patient population. Future research may also use various methods for data collection (e.g., adolescent report of externalizing symptoms, observational methods) and more specific examination of discrete negative emotions for more nuanced data collection and understanding of complex processes. Lastly, other socializers, such as siblings, teachers, grandparents, is necessary in understanding this process in a complicated and ever changing social environment.

## **Conclusion**

The present study examined changes in adolescent externalizing symptoms over time in relation to changes in discrete parent emotion socialization responses using a sample of adolescents and their parents. Additionally, adolescent conduct problems at time 1 were examined in relation to changes in emotion socialization responses. Change in externalizing symptoms were unrelated to changes in parent emotion socialization behaviors. The lack of findings are likely due to a lack of variability of externalizing symptoms over time and a relatively low prevalence of externalizing symptoms. Though there was a lack of significant findings, these results point to many fruitful directions for future research. The results suggest that at maintained low levels of externalizing symptoms, parents' strategies for responding to their adolescents' emotions are fairly consistent. However, based on prior literature, when adolescents begin demonstrating higher rates of these symptoms, increased unsupportive and decreased supportive parenting behaviors may be evident. Understanding both low and high level of externalizing symptoms and their impact on parenting behaviors is vital in adequately

understanding the family system and appropriately monitoring and changing treatment planning relative to changing levels of adolescent externalizing symptoms.

## References

- Achenbach, T. M., & Edelbrock, C. S. (1978). The classification of child psychopathology: A review and analysis of empirical efforts. *Psychological Bulletin*, 85(6), 1275–1301. <https://doi.org/10.1037/0033-2909.85.6.1275>
- Adams, S., Kuebli, J., Boyle, P. A., & Fivush, R. (1995). Gender differences in parent-child conversations about past emotions: A longitudinal investigation. *Sex Roles: A Journal of Research*, 33(5–6), 309–323. <https://doi.org/10.1007/BF01954572>
- Bongers, I. L., Koot, H. M., van der Ende, J., & Verhulst, F. C. (2003). The normative development of child and adolescent problem behavior. *Journal of Abnormal Psychology*, 112(2), 179–192. <https://doi.org/10.1037/0021-843X.112.2.179>
- Booker, J. A., & Dunsmore, J. C. (2017). Affective social competence in adolescence: Current findings and future directions. *Social Development*, 26(1), 3-20. <https://psycnet.apa.org/doi/10.1111/sode.12193>
- Bor, W., Sanders, M. R., & Markie-Dadds, C. (2002). The effects of triple p-positive parenting program on preschool children with co-occurring disruptive behavior and attentional/hyperactive difficulties. *Journal of Abnormal Psychology*, 30, 571-587. <https://doi.org/10.1023/A:1020807613155>
- Brand, A. E., & Klimes-Dougan, B. (2010). Emotion socialization in adolescence: The roles of mothers and fathers. *New directions for child and adolescent development*, 2010(128), 85-100. <https://doi.org/10.1002/cd.270>
- Breaux, R., Eadeh, H.-M., Swanson, C. S., & McQuade, J. D. (2022). Adolescent emotionality and emotion regulation in the context of parent emotion socialization among adolescents with neurodevelopmental disorders: A call to action with pilot data. *Research on Child*

- and Adolescent Psychopathology, 50(1), 77–88. <https://doi.org/10.1007/s10802-021-00833-w>
- Brown, G. L., Craig, A. B., & Halberstadt, A. G. (2015). Parent gender differences in emotion socialization behaviors vary by ethnicity and child gender. *Parenting, Science and Practice*, 15(3), 135–157. <https://doi.org/10.1080/15295192.2015.1053312>
- Buckholdt, K. E., Parra, G. R., & Jobe-Shields, L. (2014). Intergenerational transmission of emotion dysregulation through parental invalidation of emotions: Implications for adolescent internalizing and externalizing symptoms. *Journal of Child and Family Studies*, 23, 324–332. <https://doi.org/10.1007/s10826-013-9768-4>
- Campbell, S. B. (1995). Behavior problems in preschool children: A review of recent research. *Child Psychology & Psychiatry & Allied Disciplines*, 36(1), 113–149. <https://doi.org/10.1111/j.1469-7610.1995.tb01657.x>
- Cassano, M., Adrian, M., Veits, G., & Zeman, J. (2006). The inclusion of fathers in the empirical investigation of child psychopathology: An update. *Journal of Clinical Child and Adolescent Psychology*, 35(4), 583–589. [https://doi.org/10.1207/s15374424jccp3504\\_10](https://doi.org/10.1207/s15374424jccp3504_10)
- Cassano, M., Perry-Parrish, C., & Zeman, J. (2007). Influence of gender on parental socialization of children's sadness regulation. *Social Development*, 16(2), 210-231. <https://psycnet.apa.org/doi/10.1111/j.1467-9507.2007.00381.x>
- Chaplin, T. M., & Aldao, A. (2013). Gender differences in emotion expression in children: a meta-analytic review. *Psychological bulletin*, 139(4), 735–765. <https://doi.org/10.1037/a0030737>
- de Maat, D. A., Jansen, P. W., Prinzie, P., Keizer, R., Franken, I. H. A., & Lucassen, N. (2021). Examining longitudinal relations between mothers' and fathers' parenting stress,

- parenting behaviors, and adolescents' behavior problems. *Journal of Child and Family Studies*, 30(3), 771–783. <https://doi.org/10.1007/s10826-020-01885-0>
- Desjardins, T. L., & Leadbeater, B. J. (2011). Relational victimization and depressive symptoms in adolescence: Moderating effects of mother, father, and peer emotional support. *Journal of Youth and Adolescence*, 40, 531–544. <https://doi.org/10.1007/s10964-010-9562-1>.
- Eisenberg, N. (2020). Findings, issues, and new directions for research on emotion socialization. *Developmental Psychology*, 56(3), 664–670. <https://doi.org/10.1037/dev0000906>
- Eisenberg, N., Cumberland, A., & Spinrad, T. L. (1998). Parental socialization of emotion. *Psychological Inquiry*, 9(4), 241–273. [https://doi.org/10.1207/s15327965pli0904\\_1](https://doi.org/10.1207/s15327965pli0904_1)
- Fabes, R. A., Poulin, R. E., Eisenberg, N., & Madden-Derdich, D. A. (2002). The Coping with Children's Negative Emotions Scale (CCNES): Psychometric properties and relations with children's emotional competence. *Marriage & Family Review*, 34(3–4), 285–310. [https://doi.org/10.1300/J002v34n03\\_05](https://doi.org/10.1300/J002v34n03_05)
- Fairchild, G., van Goozen, S. H. M., Calder, A. J., & Goodyer, I. M. (2013). Research review: Evaluating and reformulating the developmental taxonomic theory of antisocial behaviour. *Journal of Child Psychology and Psychiatry*, 54(9), 924–940. <https://doi.org/10.1111/jcpp.12102>
- Fivush, R., Brotman, M. A., Buckner, J. P., & Goodman, S. H. (2000). Gender differences in parent–child emotion narratives. *Sex Roles*, 42, 233–253. <https://doi.org/10.1023/A:1007091207068>
- Frick, P. J., Lahey, B. B., Loeber, R., Tannenbaum, L., Van Horn, Y., Christ, M. A. G., Hart, E. A., & Hanson, K. (1993). Oppositional defiant disorder and conduct disorder: A meta-

- analytic review of factor analyses and cross-validation in a clinic sample. *Clinical Psychology Review*, 13(4), 319–340. [https://doi.org/10.1016/0272-7358\(93\)90016-F](https://doi.org/10.1016/0272-7358(93)90016-F)
- Garside, R. B. (2004). Parental socialization of discrete positive and negative emotions: Implications for emotional functioning. (Doctoral dissertation, The Catholic University of America, 2003). *Dissertation Abstracts International*, 65, 4828.
- Garside, R. B., & Klimes-Dougan, B. (2002). Socialization of discrete negative emotions: Gender differences and links with psychological distress. *Sex Roles*, 14.
- Georgiou, S. N. & Charalampous, K. (2023). Parental styles and adolescent externalizing problems: A cross-lagged model examining the direction of influence. *Psychology in the Schools*, 1-15. <https://doi.org/10.1002/pits.23046>
- Goodman R. (1997). The Strengths and Difficulties Questionnaire: a research note. *Journal of child psychology and psychiatry, and allied disciplines*, 38(5), 581–586. <https://doi.org/10.1111/j.1469-7610.1997.tb01545.x>
- 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(3), 243–268. <https://doi.org/10.1037/0893-3200.10.3.243>
- Grimm, P. (2010). Social Desirability Bias. In Wiley International Encyclopedia of Marketing (eds J. Sheth and N. Malhotra). <https://doi.org/10.1002/9781444316568.wiem02057>
- Havighurst, S. S., Wilson, K. R., Harley, A. E., & Prior, M. R. (2009). Tuning into kids: An emotion-focused parenting program – initial findings from a community trial. *Journal of Community Psychology*, 37, 1008-1023. <https://doi.org/10.1002/jcop.20345>

- Hendricks, A. M., Van der Giessen, D., Stams, G. J. J. M., & Overbeek, G. (2018). The association between parent-reported and observed parenting: A multi-level meta-analysis. *Psychological Assessment, 30*(5), 621-633. <https://doi.org/10.1037/pas0000500>
- Janssen, L. H. C., Verkuil, B., van Houtum, L. A. E. M., Wever, M. C. M., & Elzinga, B. M. (2021). Perceptions of parenting in daily life: Adolescent-parent differences and associations with adolescent affect. *Journal of Youth and Adolescence, 50*(12), 2427-2443. <https://doi.org/10.1007/s10964-021-01489-x>
- Herbert, S. D., Harvey, E. A., Roverts, J. L., Wichowski, K., & Lugo-Candelas, C. I. (2013). A randomized controlled trial of a parent training and emotion socialization programs for families of hyperactive preschool-aged children. *Behavior Therapy, 44*(2), 302-316. <https://doi.org/10.1016/j.beth.2012.10.004>
- Jobe-Shields, L., Buckholdt, K. E., Parra, G. R., & Tillery, R. N. (2014). Adolescent reactions to maternal responsiveness and internalizing symptomatology: A daily diary investigation. *Personal Relationships, 21*, 335–348. <https://doi.org/10.1111/pere.12034>
- Kaiser, N. M., McBurnett, & Pfiffner, L. J. (2011). Child ADHD severity and positive and negative parenting as predictors of child social functioning: Evaluation of three theoretical models. *Journal of Attention Disorders, 15*(3), 193–203. <https://doi.org/10.1177/1087054709356171>.
- Katz, L. F., & Windecker-Nelson, B. (2004). Parental meta-emotion philosophy in families with conduct-problem children: Links with peer relations. *Journal of Abnormal Child Psychology, 32*(4), 385–398. <https://doi.org/10.1023/B:JACP.0000030292.36168.30>

- Kehoe, C. E., Havighurst, S. S., & Harley, A. E. (2014). Tuning in to teens: Improving parent emotion socialization to reduce youth internalizing difficulties. *Social Development, 23*(2), 413-431. <https://doi.org/10.1111/sode.12060>
- Kessler, R. C., Avenevoli, S., Costello, E. J., Georgiades, K., Green, J. G., Gruber, M. J., He, J., Koretz, D., McLaughlin, K. A., Petukhova, M., Sampson, N. A., Zaslavsky, A. M., & Merikangas, K. R. (2012). Prevalence, persistence, and sociodemographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry, 69*(4), 372–380. <https://doi.org/10.1001/archgenpsychiatry.2011.160>
- Keyes, K. M., Gary, D. S., Beardslee, J., Prins, S. J., O'Malley, P. M., Rutherford C., & Schulenberg J. (2018). Joint effects of age, period, and cohort on conduct problems among American adolescents from 1991 through 2015. *American Journal of Epidemiology 187*(3), 548–557. <https://doi.org/10.1093/aje/kwx268>
- Klimes-Dougan, B., Brand, A., & Garside, R. B. (2001, August). Factor structure, reliability, and validity 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. D., Kendziora, K., & Garside, R. B. (2007). Parental emotion socialization in adolescence: differences in sex, age and problem status. *Social Development, 16*(2), 326–342. <https://doi.org/10.1111/j.1467-9507.2007.00387.x>



- Kochanova, K., Pittman, L. D., & Pabis, J. M. (2021). Parenting stress, parenting, and adolescent externalizing problems. *Journal of Child and Family Studies*, 30(9), 2141–2154.  
<https://doi.org/10.1007/s10826-021-01996-2>
- Kretschmer, T., Hickman, M., Doerner, R., Emond, A., Lewis, G., Macleod, J., Maughan, B., Munafò, M. R., & Heron, J. (2014). Outcomes of childhood conduct problem trajectories in early adulthood: Findings from the ALSPAC study. *European Child & Adolescent Psychiatry*, 23(7), 539–549. <https://doi.org/10.1007/s00787-013-0488-5>
- Lahey, B. B., Schwab-Stone, M., Goodman, S. H., Waldman, I. D., Canino, G., Rathouz, P. J., Miller, T. L., Dennis, K. D., Bird, H., & Jensen, P. S. (2000). Age and gender differences in oppositional behavior and conduct problems: A cross-sectional household study of middle childhood and adolescence. *Journal of Abnormal Psychology*, 109(3), 488–503.  
<https://doi.org/10.1037/0021-843X.109.3.488>
- Lansford, J. E., Criss, M. M., Laird, R. D., Shaw, D. S., Pettit, G. S., Bates, J. E., & Dodge, K. A. (2011). Reciprocal relations between parents' physical discipline and children's externalizing behavior during middle childhood and adolescence. *Development and psychopathology*, 23(1), 225–238. <https://doi.org/10.1017/S0954579410000751>
- Lougheed, J. P., Hollenstein, T., Lichtwarck-Aschoff, A., & Granic, I. (2015). Maternal regulation of child affect in externalizing and typically-developing children. *Journal of Family Psychology*, 29(1), 10-19. <https://psycnet.apa.org/doi/10.1037/a0038429>
- Luebke, A. M., & Bell, D. J. (2014). Positive and negative family emotional climate differentially predict youth anxiety and depression via distinct affective pathways. *Journal of Abnormal Child Psychology*, 42, 897–911. <https://doi.org/10.1007/s10802-013-9838-5>

- Mackler, J. S., Kelleher, R. T., Shanahan, L., Calkins, S. D., Keane, S. P., & O'Brien, M. (2015). Parenting stress, parental reactions, and externalizing behavior from ages 4 to 10. *Journal of Marriage and Family*, 77(2), 388–406. <https://doi.org/10.1111/jomf.12163>
- Magai, C. (1996). Emotions as a child: Adult version. Unpublished scale, Long Island University, Brooklyn, New York.
- Miller-Slough, R. & Dunsmore, J. C. (2016). Parent and friend emotion socialization in adolescence: Associations with psychological adjustment. *Adolescent Research Review* 1(4), 1-19. <https://doi.org/10.1007/s40894-016-0026-z>
- Moed, A., Gershoff, E. T., Eisenberg, N., Hofer, C., Losoya, S., Spinrad, T. L., & Liew, J. (2015). Parent–adolescent conflict as sequences of reciprocal negative emotion: Links with conflict resolution and adolescents' behavior problems. *Journal of Youth and Adolescence*, 44, 1–16. <https://doi.org/10.1007/s10964-014-0209-5>
- Moens, M. A., Weeland, J., Van der Giessen, D., Chhangur, R. R., & Overbeek, G. (2018). In the Eye of the Beholder? Parent-Observer Discrepancies in Parenting and Child Disruptive Behavior Assessments. *Journal of Abnormal Child Psychology*, 46(6), 1147–1159. <https://doi.org/10.1007/s10802-017-0381-7>
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, 100(4), 674–701. <https://doi.org/10.1037/0033-295X.100.4.674>
- Morris, A. S., Criss, M. M., Silk, J. S., & Houtberg, B. J. (2017). The impact of parenting on emotion regulation during childhood and adolescence. *Child Development Perspectives*, 11(4), 233–238. <https://doi.org/10.1111/cdep.12238>

- Moss, S. L., Santaella-Tenorio, J., Mauro, P.M., Keyes, K. M., Martins, S. S. (2019). Changes over time in marijuana use, deviant behavior and preference for risky behavior among US adolescents from 2002 to 2014: Testing the moderating effect of gender and age. *Addiction* 114(4), 674–686. <https://doi.org/10.1111/add.14506>
- Odgers, C. L., Moffitt, T. E., Broadbent, J. M., Dickson, N., Hancox, R. J., Harrington, H., Poulton, R., Sears, M. R., Thomson, W. M., & Caspi, A. (2008). Female and male antisocial trajectories: From childhood origins to adult outcomes. *Development and Psychopathology*, 20(2), 673–716. <https://doi.org/10.1017/S0954579408000333>
- 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(2), 467–487. <https://doi.org/10.1017/S0954579405050224>
- Otterphol, N., Wild, E., Havighurst, S. S., Stiensmeier-Pelster, J., & Kehoe, C. E. (2022). The interplay of parental response to anger, adolescent anger regulation, and externalizing internalizing problems: A longitudinal study. *Research on Child and Adolescent Psychopathology*, 50, 225-239. <https://doi.org/10.1007/s10802-021-00795-z>
- Pearl, A. M., French, B. F., Duman, J. E., Moreland, A. D., & Prinze, R. (2012). Bidirectional effects of parenting quality and child externalizing behavior in predominantly single parent, under-resource, African American families. *Journal of Child and Family Studies*, 23(2), 177-188. <https://doi.org/10.1007/s10826-012-9692-z>
- Peterson, D., Esbensen, F.-A., Taylor, T. J., & Freng, A. (2007). Youth violence in context: The roles of sex, race, and community in offending. *Youth Violence and Juvenile Justice*, 5(4), 385–410. <https://doi.org/10.1177/1541204006297369>

- Pinderhughes, E. E., Dodge, K. A., Bates, J. E., Pettit, G. S., & Zelli, A. (2000). Discipline responses: influences of parents' socioeconomic status, ethnicity, beliefs about parenting, stress, and cognitive-emotional processes. *Journal of Family, 14*(3), 380–400.  
<https://doi.org/10.1037//0893-3200.14.3.380>
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical Linear Models. Applications and Data Analysis Methods* (2<sup>nd</sup> ed.). Sage Publications.
- Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., Congdon, R. T., & Du Toit, M. (2011). *HLM 7*. Scientific Software International.
- Raval, V. V., & Walker, B. L., (2019). Unpacking 'culture': Caregiver socialization of emotion and child functioning in diverse families. *Developmental Review, 51*, 146-174.  
<https://doi.org/10.1016/j.dr.2018.11.001>
- Shortt, J. W., Katz, L. F., Allen, N. B., Leve, C., Davis, B., & Sheeber, L. B. (2016). Emotion socialization in the context of risk and psychopathology: Mother and father socialization of anger and sadness in adolescents with depressive disorder. *Social Development, 25*(1), 27-46. <https://doi.org/10.1111%2Fsode.12138>
- Shortt, J. W., Stoolmiller, M., Smith-Shine, J. N., Mark Eddy, J., & Sheeber, L. (2010). Maternal emotion coaching, adolescent anger regulation, and siblings' externalizing symptoms. *Journal of Child Psychology and Psychiatry, 51*, 799–808. <https://doi.org/10.1111/j.1469-7610.2009.02207.x>
- Smokowski, P. R., Evans, C. B. R., Cotter, K. L., & Webber, K. C. (2014). Ethnic identity and mental health in American Indian youth: Examining mediation pathways through self-esteem, and future optimism. *Journal of Youth and Adolescence, 43*(3), 343–355.  
<https://doi.org/10.1007/s10964-013-9992-7>

Steensma, T. D., Kreukels, B. P. C., de Vries, A. L. C., & Cohen-Kettenis, P. T. (2013). Gender identity development in adolescence. *Hormones and Behavior*, *64*(2), 288–297.

<https://doi.org/10.1016/j.yhbeh.2013.02.020>

Stocker, C. M., Richmond, M. K., Rhoades, G. K., & Kiang, L. (2007). Family emotional processes and adolescents' adjustment. *Social Development*, *16*, 310-325.

<https://psycnet.apa.org/doi/10.1111/j.1467-9507.2007.00386.x>

Suveg, C., Sood, E., Barmish, A., Tiwari, S., Hudson, J. L., & Kendall, P. C. (2008). “I’d rather not talk about it”: Emotion parenting in families of children with an anxiety disorder. *Journal of Family Psychology*, *22*, 875-884.

<https://psycnet.apa.org/doi/10.1037/a0012861>

Tackett, J. L., Martel, M. M., & Kushner, S. C. (2012). Temperament, externalizing disorders, and attention-deficit/hyperactivity disorder. In M. Zentner & R. L. Shiner (Eds.), *Handbook of temperament*. (pp. 562–580). The Guilford Press.

Van Dijk, W., de Moor, M. H. M., Oosterman, M., Huizink, A. C., & Matvienko-Sikar, K. (2023). Corrigendum: Longitudinal relations between parenting stress and child internalizing and externalizing symptoms: Testing within-person changes, bidirectionality and mediating mechanisms. *Frontiers in Behavioral Neuroscience*, *17*.

<https://doi.org/10.3389/fnbeh.2023.1296453>

Van Roy, B., Veenstra, M., & Clench-Aas, J. (2008). Construct validity of the five-factor Strengths and Difficulties Questionnaire (SDQ) in pre-, early, and late adolescence). *Journal of child psychology and psychiatry*, *49*(12), 1304-1312.

<https://doi.org/10.1111/j.1469-761.2008.01942.x>

- Webster-Stratton, C., Reid, J., & Beauchaine, T. (2011). Combining parent and child training for young children with ADHD. *Journal of Clinical Child & Adolescent Psychology, 40*, 191-203. <https://doi.org/10.1080/15374416.2011.546044>.
- Zahn-Waxler, C., Duggal, S., & Gruber, R. (2002). Parental psychopathology. In M. H. Bornstein (Ed.), *Handbook of parenting: Social conditions and applied parenting* (2<sup>nd</sup> ed., pp. 295–327). Lawrence Erlbaum Associates Publishers.
- Zeman, J., Cassano, M., & Adrian, M. C. (2013). Socialization influences on children's and adolescents' emotional self-regulation processes. In K. C. Barrett, N. A. Fox, G. A. Morgan, D. J. Fidler, & L. A. Daunhauer (Eds.), *Handbook of self-regulatory processes in development: New directions and international perspectives* (pp. 79–101). Psychology Press.
- Zimmerman, G. M., & Messner, S. F. (2010). Neighborhood context and the gender gap in adolescent violent crime. *American Sociological Review, 75*(6), 958–980. <https://doi.org/10.1177/0003122410386688>

## APPENDICES

### Appendix A: Emotions as a Child Scale

#### Emotions as a Child: [Parent], [Emotion]

Think of a few times when you felt [EMOTION] in the past year. When you were [emotion] in the past year, how often would your [parent] respond in these ways?

1. When I was [emotion], my [parent] responded to my [emotion].	Never	Not very Often	Sometimes	Often	Very Often
2. When I was [emotion], my [parent] told me to stop being [emotion].	Never	Not very Often	Sometimes	Often	Very Often
3. When I was [emotion], my [parent] helped me deal with the issue that made me [emotion].	Never	Not very Often	Sometimes	Often	Very Often
4. When I was [emotion], my [parent] got very [emotion].	Never	Not very Often	Sometimes	Often	Very Often
5. When I was [emotion], my [parent] told me that I was acting younger than my age.	Never	Not very Often	Sometimes	Often	Very Often
6. When I was [emotion], my [parent] asked me what made me [emotion].	Never	Not very Often	Sometimes	Often	Very Often
7. When I was [emotion], my [parent] told me not to worry.	Never	Not very Often	Sometimes	Often	Very Often
8. When I was [emotion], my [parent] expressed that she/he was very [emotion].	Never	Not very Often	Sometimes	Often	Very Often
9. When I was [emotion], my [parent] let me know she/he did not approve of my being [emotion].	Never	Not very Often	Sometimes	Often	Very Often
10. When I was [emotion], my [parent] bought me something I liked.	Never	Not very Often	Sometimes	Often	Very Often
11. When I was [emotion], my [parent] told me to cheer up.	Never	Not very Often	Sometimes	Often	Very Often
12. When I was [emotion], my [parent] took time to focus on me.	Never	Not very Often	Sometimes	Often	Very Often
13. When I was [emotion], my [parent] got very upset.	Never	Not very Often	Sometimes	Often	Very Often
14. When I was [emotion], my [parent] did not pay attention to my [emotion].	Never	Not very Often	Sometimes	Often	Very Often
15. When I was [emotion], my [parent] comforted me.	Never	Not very Often	Sometimes	Often	Very Often

## Appendix B: Strengths and Difficulties Questionnaire: Hyperactivity and Conduct Items

Please indicate whether the following statements are Not True, Somewhat True, or Certainly True about your child.

1. Restless, overactive, cannot sit still for long	Not True	Somewhat True	Certainly True
2. Often loses temper	Not True	Somewhat True	Certainly True
3. Generally well-behaved, usually does what adults request	Not True	Somewhat True	Certainly True
4. Constantly fidgeting or squirming	Not True	Somewhat True	Certainly True
5. Often fights with other youth or bullies them	Not True	Somewhat True	Certainly True
6. Easily distracted, concentration wanders	Not True	Somewhat True	Certainly True
7. Often lies or cheats	Not True	Somewhat True	Certainly True
8. Thinks things out before acting	Not True	Somewhat True	Certainly True
9. Steals from home, school, or elsewhere	Not True	Somewhat True	Certainly True
10. Good attention span, sees work through to the end	Not True	Somewhat True	Certainly True



VITA

CHESTON A. WEST

- Education: Ph.D. Psychology, concentration in Clinical Psychology, East Tennessee State University, Johnson City, Tennessee 2025
- M.A. Clinical Psychology, East Tennessee State University, Johnson City, Tennessee, 2022
- B.S. Psychology, East Tennessee State University, Johnson City, Tennessee, 2017
- Professional Experience: Psychology Intern, The University of Alabama at Birmingham, Birmingham, Alabama, 2024 – 2025
- Neuropsychometrist, Tennessee Neuropsychology, Knoxville Tennessee, 2023 - 2024
- Graduate Assistant, East Tennessee State University, Johnson City, Tennessee, 2020 – 2024
- Research Assistant, University of Tennessee, Knoxville, Tennessee, 2019 - 2020
- Selected Publications: Miller-Slough, R.L. Parungao, D., West, C., & Dunsmore, J. (2024). Emotion-related processes between parents and adolescents: Evidence for bidirectional effects over time. *Journal of Genetic Psychology*. DOI: 10.1080/00221325.2024.2384383

Miller-Slough, R.L., West, C., & Parungao, D. (2023). Maternal and paternal emotion socialization relates to adolescent self-compassion. *Mental Health and Prevention*.

DOI: 10.1016/j.mph.2023.200290

Honors and Awards:

Doctoral Student Excellence in Service Award Winner, 2024

1<sup>st</sup> Place Poster Award, Rural Health Association of Tennessee,  
2023