

Socialization of coping: Processes that shape child coping

by

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B.A., Wichita State University, 2002
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AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Department of Sociology, Anthropology, and Social Work
College of Arts and Sciences

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Manhattan, Kansas

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Abstract

This study examines how coping develops from early family experiences through childhood behavior and into the social environments of adolescence. Using longitudinal data from 4,897 families in the Future of Families and Child Wellbeing Study, structural equation modeling tested a developmental cascade linking problematic parental conduct and discipline practices in early childhood, child behavioral functioning in middle childhood, and adolescent social skills and delinquency at age fifteen. Results showed a stable sequence across all models: problematic parental conduct predicted both non-aggressive and aggressive discipline; non-aggressive discipline predicted adaptive social behavior; and aggressive discipline predicted externalizing problems. Middle-childhood externalizing behavior strongly predicted adolescent delinquency, whereas adaptive social behavior predicted stronger adolescent social skills. Peer delinquency and neighborhood support and cohesion contributed unique variance in adolescent outcomes without altering the core developmental pathways. Findings indicate that coping socialization unfolds across multiple ecological layers, with family interactions establishing early appraisal and regulation tendencies that peers and neighborhoods later reinforce or redirect. The study advances theoretical integration by identifying coping socialization as a mechanism linking developmental and criminological processes and highlights multilevel intervention opportunities to strengthen adaptive coping and reduce delinquency.

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Table of Contents

List of Figures	x
List of Tables	xi
Acknowledgements	xii
Dedication	xiii
Epigraphs	xiii
Chapter 1 - Introduction.....	1
Background of the Problem	1
Statement of the Problem.....	5
Purpose of the Study	7
Criminological Context.....	9
Gap in the Literature	10
Research Hypotheses	11
Significance of the Study	11
Chapter 2 - Literature Review.....	14
Emotion Acquisition	17
Foundations of Coping.....	20
<i>Adaptive vs Maladaptive Coping</i>	22
Contextual Influences on Coping.....	24
Copability.....	25
Agents of Socialization & Structural Influences	29
<i>Families: Primary Socialization</i>	30
<i>Problematic Parental Conduct</i>	32
<i>Peers Socialization</i>	36
<i>Neighborhood Environments and Supportive Contexts</i>	38
Criminological Perspectives	41
<i>Socialization and the Development of Emotional Repertoires</i>	42
<i>Social Control and the Regulation of Coping Responses</i>	43
<i>Structural Pressure and Emotional Strain</i>	45
<i>Social Learning and the Formation of Behavioral Scripts</i>	47

<i>Relational Regulation and Dysregulation</i>	49
<i>Developmental Timing and Vulnerability to Maladaptive Coping</i>	50
<i>Ecological Context and Opportunity Structures</i>	51
Synthesis	52
<i>Integrating Criminological Perspectives With Coping Theory</i>	53
Gaps in the Literature.....	54
Conceptual Framework	58
Present Study	61
Chapter 3 - Methods.....	66
Sample.....	66
Measures	67
<i>Primary Model Measures</i>	67
Caregiver Problematic Conduct (Wave 3).....	67
<i>Parental Drug Involvement (Wave 3).</i>	68
<i>Parental Incarceration (Wave 3).</i>	68
<i>Measurement Model for Problematic Parental Conduct (Wave 3).</i>	68
Caregiver Discipline (Wave 4).	69
Child Functioning (Age 9).	70
<i>Child Behavior Checklist – Externalizing Behavior (Wave 5).</i>	70
<i>Adaptive Social Behavior Inventory (Wave 5).</i>	71
Adolescent Delinquency (Wave 6).	71
Adolescent Social Skills (Wave 6).	72
<i>Covariates</i>	73
<i>Supplemental Model Measures</i>	73
Peer Influence	73
Neighborhood Influence.	74
Data Cleaning.....	75
Data Analysis Plan	75
<i>Missing Data</i>	76
<i>Primary SEM Model</i>	77
<i>Supplemental Models</i>	78

Model Fit.....	79
Sensitivity Checks.....	79
Chapter 4 - Results.....	82
Descriptive Statistics.....	82
<i>Sample Characteristics</i>	82
<i>Bivariate Analyses</i>	82
Primary Model Results	83
<i>Measurement Model Results for Problematic Parental Conduct (Wave 3).</i>	83
<i>Primary Model Fit</i>	84
<i>Primary Model Structural Paths.</i>	85
Problematic Parental Conduct → Caregiver Discipline.	85
Caregiver Discipline → Child Behavioral Functioning.....	85
Child Behavioral Functioning→ Adolescent Outcomes.....	85
Direct Effects of Early Externalizing Behavior.	86
<i>Primary Model Residual Covariances</i>	86
Supplemental Model 1 Results: Delinquent Peer Influence	86
<i>Peer Influence Model Fit</i>	86
<i>Delinquent Peer Structural Paths</i>	88
Peer Effects in Adolescence.....	88
Direct Effects of Early Externalizing Behavior.	88
<i>Delinquent Peer Residual Covariances</i>	89
Supplemental Model 2 Results: Neighborhood Support and Cohesion.....	89
<i>Neighborhood Model Fit</i>	89
<i>Neighborhood Structural Paths</i>	90
Neighborhood Effects in Adolescence.....	91
Direct Effects of Early Externalizing Behavior.	91
<i>Neighborhood Residual Covariances</i>	92
Chapter 5 - Discussion	93
Summary of Findings.....	93
Interpretation of Findings	95
<i>Primary Developmental Model</i>	95

<i>Delinquent Peer Influence Supplemental Model</i>	97
<i>Neighborhood Support and Cohesion Supplemental Model</i>	98
<i>Overall Synthesis</i>	99
Macro-Level and Ecological Interpretation	100
Integration With Criminological Theory	102
Proposed Integrated Model	105
Contribution to the Field	107
Implications	109
<i>Coping Supports for Individuals</i>	109
Individual and Family-Level Interventions.	109
School-Based Social and Emotional Learning.	110
<i>Ecological Implications</i>	112
<i>How Systems Can Reinforce Adaptive Coping</i>	113
Limitations	115
<i>Dataset Constraints</i>	115
<i>Measurement Issues</i>	115
<i>Generalizability</i>	116
Conclusion	117
<i>Future Directions</i>	117
References	122
Appendix A - Other Tables	146
Appendix B - Variable descriptions	148

List of Figures

Figure 2.1: Developmental coping process linking strain to behavioral outcomes	16
Figure 2.2: Developmental model of emotion acquisition.....	20
Figure 2.3: Integrated Criminological–Coping Conceptual Framework	59
Figure 2.4: Hypothesized structural equation model for the primary analysis.	63
Figure 4.1: Primary structural equation model with unstandardized path coefficients	84
Figure 4.2: Peer delinquency supplemental structural equation model	87
Figure 4.3: Neighborhood support and cohesion supplemental structural equation model.....	90

List of Tables

Table 4.1: Demographic characteristics.....	82
Table 4.2: Pairwise correlation matrix for study variables	83
Table 4.3: Model fit indices for the primary structural equation model	84
Table 4.4: Model fit indices for the peer influence structural equation model.....	87
Table 4.5: Model fit indices for the neighborhood support and cohesion structural equation model.....	90
Appendix Table A 1: Descriptive statistics for study variables.....	146
Appendix Table A 2: Full SEM model coefficients	147
Appendix Table B 1: Wave 4 Non-Aggressive Discipline Subscale.....	148
Appendix Table B 2: Wave 4 Aggressive Discipline Composite Subscale.....	149
Appendix Table B 3: Wave 5 Externalizing CBCL Scale	150
Appendix Table B 4: Wave 5 ASBI Scale.....	152
Appendix Table B 5: Wave 6 Delinquency Subscale.....	153
Appendix Table B 6: Wave 6 SSRS Scale.....	154
Appendix Table B 7: Wave 6 Delinquent Peer Influence Subscale	155
Appendix Table B 8: Wave 6 Neighborhood Collective Efficacy Scale.....	156

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Dedication

To the people who believed in my potential long before I did.

Epigraphs

A learning experience is one of those things that say, "You know that thing you just did? Don't do that." – Douglas Adams, 2000.

"Learn from the mistakes of others. You can never live long enough to make them all yourself." – *Groucho Marx*

Chapter 1 - Introduction

Background of the Problem

In recent years, schools and national surveys have reported steady increases in childhood and adolescent behavioral difficulties, including aggression, defiance, and emotional outbursts (CDC, 2023; NCES, 2023). During the 2021–22 school year, approximately 2.4 million K–12 public school students, about five percent of enrollment, received at least one out-of-school suspension (NCES, 2023), and youth placement in residential facilities rose from about 24,900 in 2021 to roughly 29,300 in 2023 (OJJDP, 2024). These trends highlight the importance of understanding how early caregiving and social environments shape the coping skills children rely on when responding to stress. Children who grow up in unpredictable, coercive, or emotionally strained contexts often struggle to develop adaptive coping strategies, making early caregiving a critical foundation for later emotional and behavioral regulation (Cicchetti & Lynch, 1993; Compas et al., 2001; Evans & Kim, 2013).

Early caregiving lays the groundwork for the emotion-regulation skills children develop, shaping how they learn to interpret stress and manage their reactions. Emotion regulation refers to the processes children use to manage their emotional reactions, and it develops gradually across childhood through biological maturation, social interaction, and environmental exposure. Babies are not born knowing how to calm themselves; they learn this skill from caregivers who soothe them when they are upset, label emotions, and provide predictable routines (Ainsworth et al., 1978; Bowlby, 1988). These early interactions help children learn what their feelings mean and how to handle stressful situations. As children grow, their thinking skills improve, allowing them to better understand their emotions, think ahead, and adjust their behavior (Eisenberg et al., 2010; Thompson, 1994). These skills form the foundation for coping, which refers to the ways

people try to deal with stress and stay emotionally steady (Lazarus & Folkman, 1984). Coping is not an automatic process. Instead, it requires noticing emotions, figuring out what might help, and choosing a response that can reduce stress or solve the problem (Compas et al., 2001).

Coping acquisition, or how children learn their own ways of handling stress, occurs across childhood and adolescence through repeated exposure to stressors and through observation of how others respond to challenges. However, coping acquisition begins far earlier than childhood or adolescence. Infants rely on caregivers for co-regulation, consistent soothing, predictable routines, and responsive interaction which form the earliest foundations of emotion regulation. When early caregiving is stable and attuned, infants develop expectations that distress can be managed and support is available. When caregiving is inconsistent, unpredictable, or emotionally unavailable, early regulatory systems develop under strain, creating vulnerabilities that can carry forward into later coping patterns (Ainsworth et al., 1978; Bowlby, 1988). Children learn coping strategies by watching caregivers handle frustration, conflict, and uncertainty (Bandura, 1977b). They also learn through reinforcement when certain behaviors reduce tension or elicit support (Akers, 1998). Schools, peers, and community environments further shape coping by showing children what is acceptable when dealing with emotions, solving problems, or handling conflict (Bronfenbrenner, 1979). These experiences create a set of coping habits that children draw upon when they encounter stress (Compas et al., 2001; Eisenberg et al., 2010). A central principle of developmental coping theory is that emotional arousal shapes how children appraise stressful situations, and these appraisals guide the coping strategies they select (Compas et al., 2001; Gross, 1998). Some children develop a wide range of helpful strategies that allow them to regulate emotion, seek support, and solve

problems (Compas et al., 2001). Others develop a smaller or more rigid set of responses, relying on avoidance, suppression, or impulsive action (Aldao et al., 2010).

Coping plays a central role in behavioral outcomes because it determines how individuals respond to stress either adaptively or maladaptively. Adaptive coping (e.g., problem solving, seeking support, reframing a situation) supports emotional stability and healthy social interactions (Folkman & Moskowitz, 2000; Gross, 1998). It allows children to manage frustration, negotiate conflict, and maintain relationships. Maladaptive coping (e.g., avoidance, emotional suppression, impulsive reactions) provides short-term relief but undermines long-term adjustment (Aldao et al., 2010). Avoidance, suppression, and impulsive action can reduce distress temporarily, but they often make emotions stronger and create new problems (Nolen-Hoeksema, 1991). Children who rely on maladaptive coping are more likely to display acting-out behaviors such as aggression, defiance, and rule breaking (Dodge & Pettit, 2003; Eisenberg et al., 2010). These behaviors reflect attempts to manage distress with limited tools. Over time, repeated reliance on maladaptive coping can solidify into patterns that increase vulnerability to risky behaviors, academic difficulties, and delinquency. These developmental patterns align with core criminological theories that describe how emotional strain, learned behavioral scripts, and limited self-regulatory capacity contribute to delinquent outcomes. Strain theory emphasizes that negative experiences generate emotional pressure that individuals must regulate, making maladaptive coping a likely pathway from strain to externalizing behavior (Agnew, 1992, 2006). Social learning perspectives explain how children adopt behavioral responses they observe and see reinforced in their environments, including aggressive or rule-breaking strategies that temporarily relieve distress (Akers, 1998). Self-control theory further suggests that early difficulties with regulation and impulsivity increase the likelihood of

immediate, short-sighted reactions to stress, which can manifest as delinquent behavior (Hirschi, 1969/2010). Together, these frameworks clarify why maladaptive coping is not only a developmental concern but also a criminological mechanism that helps explain the emergence of delinquent behavior.

Even the most practiced coping strategies have limits, and when stress exceeds a child's regulatory capacity, coping can break down entirely. Coping collapse occurs when stress becomes too overwhelming for a child to manage. High stress, chronic adversity, or repeated exposure to conflict can overwhelm coping resources and limit the options children feel they have (Evans & Kim, 2013; Shonkoff et al., 2012b). When children cannot calm themselves or see the situation differently, they often default to quick reactions that bring short-term relief, such as aggression, withdrawal, substance use, or impulsive behavior (Anderson & Bushman, 2002; Sinha, 2008). Coping collapse does not occur in isolation. It reflects the interaction of emotional sensitivity, stressful environments, and limited access to supportive relationships (Cicchetti & Lynch, 1993; Conger et al., 1994). Understanding how coping develops and why it collapses is essential for explaining patterns of behavior across childhood and adolescence.

To understand why coping sometimes fails, it is necessary to examine the everyday environments where children first learn how to manage stress. Children learn to cope inside social environments that shape the stress they face and the strategies they come to rely on. Daily routines, exposure to hardship, and the predictability of caregiving differ across families, and these differences influence how children manage emotional pressure (Evans & Kim, 2013). Social expectations and the ways adults and peers respond to children's behavior vary across racial and gendered experiences, which affects how children interpret stress and which responses feel available to them (Conger et al., 1994). Peer groups introduce examples of how to express

emotions or handle conflict, and neighborhood conditions influence safety, support, and the level of chronic stress children must navigate (Bronfenbrenner, 1979).

Statement of the Problem

Many youth struggle to develop coping repertoires that allow them to manage stress, regulate emotions, and respond constructively to challenges. Emotional dysregulation predicts aggression, impulsivity, withdrawal, and other behavioral difficulties across development (Eisenberg et al., 2010; Dodge & Pettit, 2003). These behavioral patterns emerge when children cannot calm themselves, make sense of stressful situations, or use strategies that reduce distress (Compas et al., 2001). In these moments, youth often respond with anger, avoidance, withdrawal, or impulsive action rather than with constructive coping. These responses reflect attempts to manage overwhelming internal states with limited tools rather than deliberate choices to engage in harmful behavior. When coping repertoires remain narrow, children become more vulnerable to externalizing problems, internalizing symptoms, and unhelpful or risky ways of dealing with stress, including both delinquent and self-directed forms of harm (Aldao et al., 2010; Nolen-Hoeksema, 1991). Early coping tendencies forecast long-term patterns of behavioral and emotional functioning across childhood and adolescence (Dodge & Pettit, 2003; Eisenberg et al., 2010). National data underscore the scale of these challenges: approximately 2.7 million public-school students receive at least one out-of-school suspension each year (U.S. Department of Education, 2021), and suspended youth are significantly more likely to exhibit later externalizing behavior and justice-system involvement (Mowen & Brent, 2016). Longitudinal research further shows that early externalizing behavior increases the likelihood of adolescent delinquency two- to four-fold (Moffitt, 2018).

Children also learn coping responses through observation and reinforcement from individuals such as teachers, and peers. Environments that model healthy problem solving, open emotional communication, and supportive responses help children develop adaptive strategies (Bandura, 1977b). Environments that model hostility, coercion, or avoidance teach children to rely on short-term reactions that may feel relieving in the moment but make things worse over time (Colvin et al., 2002; Conger et al., 1994). These learned patterns can include aggression, defiance, withdrawal, or self-injury (Klonsky, 2007), depending on the scripts children observe and the strategies that reduce tension in the moment. When children repeatedly experience stress without access to supportive relationships or effective coping models, they often rely on the most accessible behaviors, even when those behaviors undermine long-term adjustment. Patterns of difficulty managing emotions, limited coping options, and exposure to maladaptive models create a developmental context in which emotional pressure frequently leads to harmful behavior, raising questions that criminological theories have not fully resolved. Consistent with this pattern, exclusionary discipline is one of the strongest school-based predictors of later arrest, with suspended students nearly three times more likely to be referred to juvenile court (Office for Civil Rights, 2021). Among youth who enter detention, approximately 70% meet criteria for at least one mental health disorder, highlighting the developmental vulnerabilities that accompany maladaptive coping (Teplin et al., 2013). These developmental vulnerabilities raise critical questions about how emotional pressure becomes behavioral action, a process that criminological theories attempt to explain.

Criminological perspectives identify structural pressures, social learning, and emotional strain as contributors to delinquency (Agnew, 1992, 1998; Colvin et al., 2002), but they do not fully explain how children convert emotional pressure into action. Strain can heighten distress

(Agnew, 2006), and learning processes shape behavioral scripts, yet the mechanism that links emotional overload to behavioral outcomes remains underdeveloped. Without a clear understanding of how youth manage emotional pressure, it is difficult to explain why some respond to stress with problem solving while others escalate into risky behavior or harmful coping. Maladaptive coping represents a key but understudied pathway that connects early experiences to later behavioral outcomes (Agnew, 2013; Anderson & Bushman, 2002). The absence of a developmental mechanism that explains how emotional processes shape behavior limits the ability to understand the origins of delinquency and related forms of distress. Clarifying that mechanism defines the central purpose of the present study. The developmental significance of this gap is evident in long-term outcomes: youth who exhibit persistent maladaptive coping and externalizing behavior are substantially more likely to experience school dropout, substance use, and adult criminal involvement (Odgers et al., 2008).

Purpose of the Study

The purpose of this study is to examine how early caregiving environments, defined here as the period from infancy through early childhood, shape the development of children's coping capacity and how these early processes forecast later behavioral outcomes. It brings together developmental research on coping and criminological perspectives to clarify how children learn to manage emotional pressure and why some youth respond to stress with adaptive strategies while others rely on maladaptive strategies.

Delinquency is conceptualized in this study as one possible outcome of maladaptive coping. In this study, delinquency refers specifically to externalizing forms of behavioral dysregulation, including aggression, rule breaking, and related acting out behaviors rather than minor, normative misbehavior. Early caregiving practices may strengthen or weaken the

capacity to cope adaptively, shaping whether youth respond to stress with problem solving, withdrawal, aggression, or other behavioral outlets. Focusing on coping socialization rather than isolated parenting behaviors allows the project to evaluate how caregiving environments contribute to vulnerability or resilience during the transition from childhood to adolescence.

This study uses longitudinal data from the Future of Families and Child Wellbeing Study to examine how early caregiving environments shape the development of coping capacity and how coping capacity relates to later behavioral outcomes. Instead of treating parenting behaviors as stand-alone predictors, the analysis considers how broader caregiving climates support or hinder the socialization of coping and how these early processes influence children's emerging responses to stress. This approach makes it possible to view coping development as a dynamic, socially learned process that unfolds across childhood and contributes to vulnerability or resilience during adolescence.

The problematic parental conduct construct is modeled as a latent factor because illicit drug use and incarceration each represent distinct forms of caregiver problematic conduct that directly model rule-violating, dysregulated responses to strain. Drug use reflects substance-based coping and behavioral instability, while incarceration reflects system-level consequences of antisocial behavior and chronic conflict with authority. Using both mother and father indicators captures the full behavioral climate children observe and internalize. Together, these four indicators represent the specific forms of externalizing behavior that theoretically transmit maladaptive coping scripts to children, making them the appropriate indicators for the latent construct.

Criminological Context

The combination of developmental and criminological perspectives naturally leads to a closer examination of the theories that describe strain, learning, and control. The present study draws on criminological frameworks that explain how emotional pressure, social environments, and relational dynamics shape behavioral responses. Agnew's General Strain Theory identifies negative emotion as the engine that drives behavioral responses, explaining how exposure to social stressors produces emotional strain that youth must regulate and how coping strategies vary based on available skills, learned scripts, and social supports (Agnew, 1992, 2006). Strain therefore establishes the emotional conditions under which behavior emerges, creating the context in which learning processes take on central importance. Learning theories highlight how families and peers model and reinforce coping scripts through observation and differential reinforcement (Akers, 1998; Sutherland, 1947), providing a framework for understanding how youth acquire the behavioral patterns they use to manage strain.

Extending these ideas, coercive family process theory (Patterson, 1982) offers a more detailed account of how early caregiving environments contribute to the development of maladaptive coping and behavioral tendencies. The theory explains how harsh, inconsistent, or dysregulated caregiver behavior reinforces escalating cycles of negative interaction, strengthening children's externalizing tendencies over time. These coercive cycles form early behavioral scripts that influence how children respond to stress and conflict, linking early family dynamics to later problem behavior.

In addition to these developmental and learning-based perspectives, social control and social support theories emphasize the relational conditions that influence youths' ability to regulate emotion and behavior. These perspectives underscore how the quality of relationships

can strengthen or weaken regulatory capacity (Colvin et al., 2002; Hirschi, 1969/2010), clarifying how variations in attachment, supervision, and support shape the coping processes that contribute to delinquent behavior.

Gap in the Literature

Although prior research identifies several components of the developmental process linking early caregiving, coping, and behavioral outcomes (Aldao et al., 2010; Compas et al., 2001; Eisenberg et al., 2010; Morris et al., 2007; Skinner & Zimmer-Gembeck, 2007), relatively few studies integrate coping acquisition, emotion regulation, and delinquency within a single developmental framework. Criminological theory describes the structural and interpersonal pressures that contribute to crime (Agnew, 1992) but typically addresses these processes at a broader level rather than detailing how early emotional and caregiving dynamics shape the coping mechanisms that translate strain into behavior. Developmental research has only occasionally connected coping development to delinquency (Compas et al., 2001). Large longitudinal studies have examined parenting and child outcomes, yet they have less frequently evaluated whether caregiving practices function as mechanisms of coping socialization. The Future of Families and Child Wellbeing Study (FFCWS), a nationally representative birth cohort following families from infancy through adolescence, provides one of the most comprehensive datasets for examining these developmental processes (see also Conger et al., 1994). This gap makes clear the need to examine how early caregiving contributes to the development of coping capacity and how those capacities relate to adolescent delinquency. To address this gap, the study draws on criminological and developmental perspectives that explain how coping emerges across early caregiving and social environments.

Research Hypotheses

Criminology theory and research suggests that coping develops through early caregiving, interpersonal interaction, and exposure to social environments that model and reinforce behavioral responses as described in social learning, coercive family process, and social control perspectives. These experiences shape the strategies children learn, the flexibility of their coping repertoires, and the likelihood that coping becomes adaptive or maladaptive across development. Based on this framework, the study tests the following hypotheses:

1. Supportive, consistent, and regulated caregiving will predict the development of adaptive coping strategies, while harsh, inconsistent, or emotionally unavailable caregiving will predict the development of maladaptive coping strategies.
2. Differences in family climate, peer dynamics, and neighborhood conditions will predict variation in coping repertoires across childhood and adolescence, with more supportive contexts fostering adaptive coping and more stressful contexts fostering maladaptive coping.
3. Maladaptive coping strategies will increase the likelihood of delinquent or harmful behavior, and adaptive coping strategies will reduce the likelihood of delinquent or harmful behavior.

Significance of the Study

This integration of developmental and criminological perspectives addresses a gap in prior research, which has yet to fully clarify how emotional processes convert stress into action or how early caregiving experiences shape the coping repertoires that guide behavior across development. By evaluating whether behavioral responses in later childhood, including externalizing problems and social skills, serve as pathways linking early caregiving conditions to adolescent outcomes, the study identifies how coping socialization contributes to developmental

trajectories. This focus directly aligns with the identified gap by offering a developmental mechanism that explains how early experiences shape coping capacity and how coping capacity influences delinquency and emotional functioning in adolescence.

Identifying coping capacity as a central mechanism advances theoretical understanding of how emotional processes connect to delinquent behavior. Criminological theories often describe the contexts that lead to crime but leave the emotional processes connecting strain to action underdeveloped. By positioning coping as the bridge between emotional arousal and behavioral response, the work clarifies a mechanism that has been implied but rarely articulated within criminology.

The contribution to developmental science lies in demonstrating how early caregiving environments shape the acquisition of coping strategies. Although developmental research recognizes that children learn regulation skills through interaction, it has not fully connected these processes to later behavioral outcomes. By highlighting how caregiving practices influence the development of adaptive or maladaptive coping repertoires, the analysis strengthens the developmental pathway linking early experiences to adolescent behavior.

Reframing delinquency as a maladaptive coping response also extends criminological perspectives. This perspective emphasizes the emotional functions that delinquent behavior may serve, offering a more nuanced understanding of why individuals engage in harmful behavior even when they recognize its risks. Such reframing helps explain why individuals exposed to similar structural conditions diverge in their behavioral outcomes.

Finally, the findings carry practical significance for prevention and intervention efforts. By identifying coping capacity as a modifiable factor, the results support programs that strengthen emotion regulation, teach adaptive coping strategies, and enhance supportive

caregiving environments. These insights can inform family-based interventions, school-based social-emotional learning programs, and community initiatives aimed at reducing risky behavior across development. Understanding coping as a developmental mechanism also informs policy efforts aimed at reducing youth exposure to chronic stress and improving access to supportive caregiving environments. A fuller understanding of these developmental and behavioral patterns requires examining the broader scientific foundations of emotion regulation and coping, which provide the context for how coping capacities emerge and operate across childhood and adolescence.

Chapter 2 - Literature Review

Emotion regulation and coping develop through biological, psychological, and social processes that shape how individuals interpret stress and respond to adversity. Research on early emotional development shows that these processes begin in caregiving relationships and expand through interactions with peers, schools, communities, and broader ecological settings (Ainsworth et al., 1978; Bronfenbrenner, 1979; Eisenberg et al., 2010; Morris et al., 2007; Thompson, 2014; Zimmer-Gembeck & Skinner, 2016). To understand coping development, it is essential to trace how these environments build upon one another rather than viewing them as isolated influences. Each environment introduces new demands and new behavioral models, which influence how individuals learn to manage emotion, evaluate strain, and select coping strategies across development (Bandura, 1977; Compas et al., 2017; Lazarus & Folkman, 1984; Skinner & Zimmer-Gembeck, 2016).

Developmental research shows that coping grows through appraisal, modeling, reinforcement, and environmental feedback (Bandura, 1977; Bronfenbrenner, 1979; Compas et al., 2017; Lazarus & Folkman, 1984; Skinner & Zimmer-Gembeck, 2016). These mechanisms determine whether individuals rely on adaptive strategies that support long-term adjustment or on maladaptive strategies that provide short-term relief but increase vulnerability to future stress (Aldao et al., 2010; Compas et al., 2001). At the same time, these individual-level processes unfold within broader structural and cultural contexts that shape which coping strategies are learned, practiced, and reinforced. Structural and cultural conditions further shape coping by altering exposure to adversity, access to resources, and the social scripts individuals observe and internalize (Bourdieu, 1984; Bradley & Corwyn, 2002; Clark et al., 1999; Collins, 2000; Courtenay, 2000; Crenshaw, 2013; Massey, 2007; Wilson, 2012). Socioeconomic inequality,

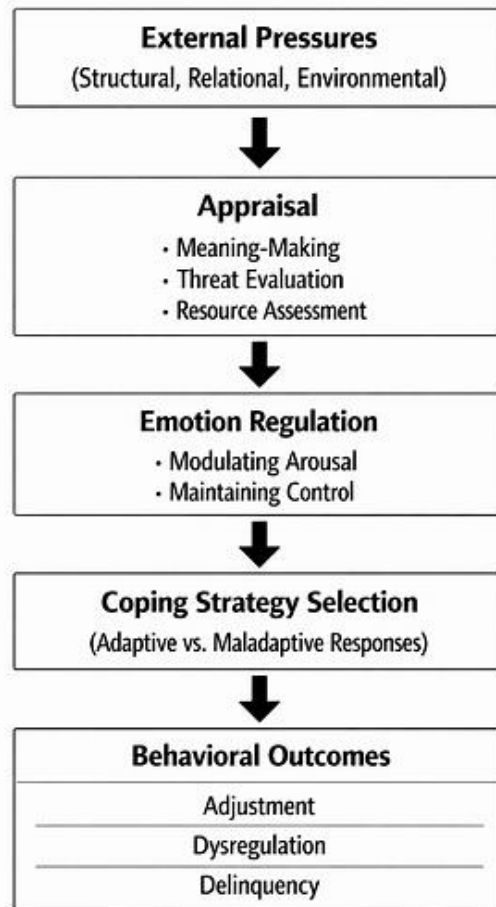
racialized stress, and gendered expectations influence which coping strategies appear viable and which become habitual across development (Bradley & Corwyn, 2002; Clark et al., 1999; Courtenay, 2000).

When adversity becomes chronic or environments are coercive, coping repertoires can narrow. Under these conditions, individuals increasingly rely on reactive responses such as aggression, impulsivity, or defiance, patterns linked to behavioral dysregulation and later maladjustment (Anderson & Bushman, 2002; Compas et al., 2001; Huesmann et al., 1984). Findings regarding adverse childhood experiences (ACEs) further show that chronic, clustered adversities disrupt regulatory systems, heighten emotional reactivity, and increase reliance on maladaptive coping strategies (McLaughlin et al., 2014; Merrick et al., 2018; Sheridan & McLaughlin, 2014). Criminological perspectives clarify why these patterns emerge by highlighting the structural and interpersonal pressures that heighten emotional strain. However, these frameworks often leave the internal coping processes underexplained. Although criminological research identifies the structural, cultural, and relational forces that shape behavioral outcomes, emotional regulation and coping processes clarify how individuals interpret and manage the pressures generated by those environments. General Strain Theory (GST) and related perspectives demonstrate that strain interacts with negative affect, regulatory capacity, and coping responses to shape behavioral outcomes, underscoring the value of integrating environmental pressures with coping-based mechanisms of action (Agnew, 2013, 2017; Hay & Meldrum, 2010; Moon et al., 2011; Piquero & Sealock, 2004).

A more complete account of coping requires linking external pressures to the internal processes that govern appraisal, regulation, and strategy selection. These processes involve evaluating the meaning of stressful events, modulating the emotional responses they evoke, and

choosing coping strategies that guide behavioral action. Figure 2.1 illustrates this sequence, showing how external pressures interact with appraisal, regulation, and coping strategy selection to shape behavioral outcomes. This connection clarifies how strain becomes emotionally meaningful, how individuals evaluate their capacity to respond, and why some youth escalate into reactive behavior while others maintain regulation under comparable conditions. An integrated developmental framework needs to explain how emotional capacities form, how coping strategies are learned, and how structural and relational contexts shape the conditions under which coping succeeds or breaks down. This approach provides a coherent foundation for understanding how individuals learn to manage stress, how environments shape coping repertoires, and how emotional pressure can escalate into maladaptive or delinquent behavior (Agnew, 1992; Aldao et al., 2010; Compas et al., 2001).

Figure 2.1: Developmental coping process linking strain to behavioral outcomes



Emotion Acquisition

Emotion develops through a layered process that brings together biological tendencies, cognitive interpretation, and social learning. Rather than arising from fixed, automatic reactions, emotions are constructed through the brain's ongoing effort to make sense of bodily signals using past experience and cultural knowledge (Barrett, 2017a, 2017b; Frijda, 1986; Hoemann et al., 2019). From this perspective, emotion is an active meaning-making process shaped by prediction, categorization, and learning from others.

Appraisal processes play a central role in how individuals understand and respond to stress. Appraisal theory explains that people evaluate events and their own ability to handle them, and these evaluations shape the emotional responses that follow (Lazarus, 1991; Lazarus

& Folkman, 1984; Moors et al., 2013; Smith & Lazarus, 1990). Primary appraisals determine whether a situation feels threatening, challenging, or positive, while secondary appraisals focus on whether one has the resources to cope. These judgments influence both immediate reactions and longer-term patterns of behavior, showing that the meaning assigned to an event, not just physiological arousal, drives emotional experience.

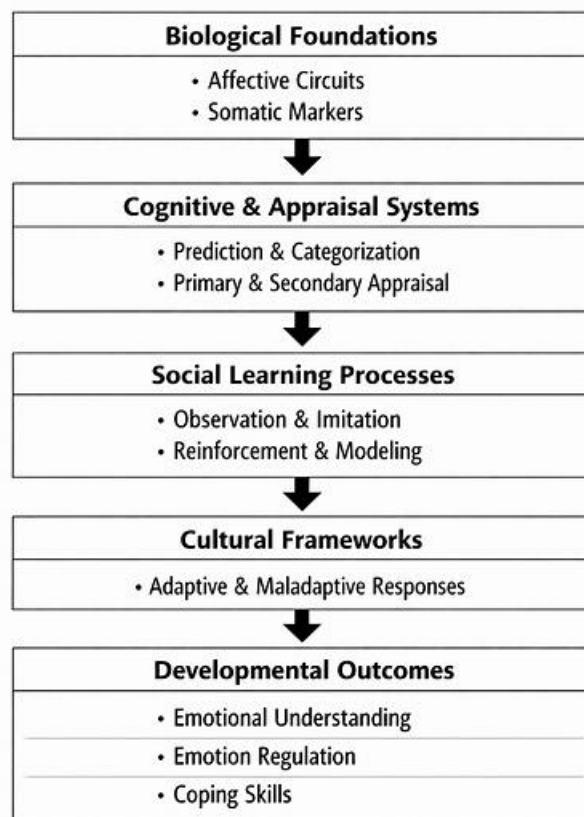
To make appraisal processes effective, children must develop the social and cognitive skills needed to understand emotional cues. Empathy and prosocial behavior begin early and develop through interaction with caregivers and peers (Eisenberg et al., 1998; Eisenberg et al., 2002; Eisenberg, Spinrad, & Eggum, 2010; Newton, Thompson, & Goodman, 2016; Schachner et al., 2018; Thompson, 2015). As children develop self-awareness and perspective taking, they become better able to interpret others' emotions, regulate their own responses, and coordinate behavior within social relationships (Eisenberg et al., 1998; Eisenberg et al., 2002; Zahn-Waxler et al., 1992).

The development of relational skills depend on neural systems that support judgment and behavioral control. Neuroscientific work demonstrates that emotional development is closely tied to the brain systems that guide evaluation and decision making. When these systems are disrupted, individuals lose access to the somatic markers that help them weigh options and anticipate outcomes (Bechara et al., 1997; Damasio, 1994). Subcortical regions generate quick emotional reactions, while higher order areas help interpret context, imagine outcomes, and assign meaning (LeDoux, 1996; Phelps et al., 2014). Cultural frameworks further shape these processes by influencing which emotions are noticed, how they are interpreted, and how they should be expressed or regulated (Mesquita & Albert, 2007; Mesquita & Frijda, 1992; Ochsner & Gross, 2005; Phan et al., 2002).

Neural and cultural influences gain significance through everyday social interaction. Children learn how to express and manage emotion by participating in family routines, observing others, and receiving feedback from caregivers, teachers, and peers (Barrett, 2017a; Cole et al., 2019; Vygotsky, 1980). Cultural norms guide which emotions are encouraged or discouraged (Dzokoto et al., 2018), while social learning processes (i.e., modeling, imitation, and reinforcement) teach children how to respond to stress and regulate their feelings (Bandura, 1977). Families, schools, and neighborhoods provide the daily experiences that help children understand emotional situations and practice regulation strategies, consistent with ecological models of development (Bronfenbrenner, 1979).

Across development, biological, cognitive, social, and cultural forces create the foundation for coping skills that develop across childhood and adolescence. Emotion and coping emerge from the combined effects of bodily responses, appraisals, social learning, and environmental feedback (Bandura, 1977; Lazarus & Folkman, 1984), and early emotional abilities support the coping strategies that continue to develop over time (Compas et al., 2001; Eisenberg et al., 2010; Zimmer-Gembeck & Skinner, 2016). Figure 2.2 summarizes this developmental system by illustrating how biological foundations, appraisal processes, social learning, and cultural frameworks interact to support the emergence of emotional understanding, regulation, and coping across development.

Figure 2.2: Developmental model of emotion acquisition.



Foundations of Coping

Coping refers to the deliberate, goal-directed strategies individuals use to manage stress, regulate emotions, and adapt to challenging situations (Lazarus & Folkman, 1984). Coping develops from the emotional capacities formed early in life, with the shift from spontaneous reaction to intentional regulation marking its emergence as a distinct process. While emotions can arise automatically, their regulation requires deliberate action (Thompson, 1994). Each affective situation demands a tailored response, and effective coping involves selecting and executing cognitive or behavioral actions rather than relying on automatic reactivity (Compas et al., 2001; Zimmer-Gembeck & Skinner, 2016). Although some coping responses may become rapid or habitual through repetition, they remain conceptually distinct from automatic emotional reactions because they require deliberate evaluation and strategy selection.

The shift from emotional interpretation to coping begins when individuals evaluate the demands of a situation and judge their capacity to respond. Coping begins with evaluative processes through which individuals interpret the significance of an event and assess their capacity to respond (Carver et al., 1989; Lazarus & Folkman, 1984). These appraisals activate coping processes that draw on cognitive, behavioral, and social resources. Beyond these individual evaluations, the Stress Process Model situates coping within a broader system of stressors, mediators, and outcomes, emphasizing how personal resources such as self-efficacy and social support shape responses to strain (Pearlin et al., 1981).

The evaluative and regulatory skills that support coping continue to develop across childhood and adolescence as part of broader self-regulation capacities, shaped by social learning and reinforcement (Compas et al., 2001; Zimmer-Gembeck & Skinner, 2016). Social learning plays a central role with coping development. Caregivers label and regulate distress, peers model emotional and behavioral responses, and institutions enforce feeling norms. Through attention, retention, imitation, and motivation, children internalize observed coping behaviors (Bandura, 1977). Reinforcement processes further stabilize coping patterns by signaling which responses are effective, acceptable, or socially rewarded. Social cues indicate when a tactic is appropriate, and differential reinforcement shapes repetition by rewarding coping behaviors that reduce distress or gain approval while withholding reinforcement for strategies that escalate conflict or prolong discomfort. Imitation helps coping scripts spread across contexts, and feedback loops link each coping attempt to future contingencies, gradually consolidating coping repertoires over time (Akers, 1998; Bandura, 2001). Together, these mechanisms portray coping as a multidimensional, socially learned system that prepares individuals to evaluate and respond to stress.

Stress arises when perceived demands exceed available resources (Lazarus & Folkman, 1984). Appraisal determines whether individuals view a situation as a threat, challenge, or loss and whether they perceive sufficient internal and external resources to manage it. Appraisals shape physiological responses and action tendencies and guide individuals toward problem-focused or emotion-focused coping (Cannon, 1939; Smith & Lazarus, 1990). Since coping unfolds through primary appraisal, secondary appraisal, and strategy execution, these processes operate together in a feedback loop that continually updates how individuals interpret and respond to stress (Lazarus, 1966). Successful coping reduces perceived threats, while failed attempts prompt reevaluation of both the stressor and one's resources (Folkman et al., 1986). The way individuals interpret demands and resources during appraisal governs the coping strategies they select, which creates the distinction between adaptive and maladaptive coping (Aldao et al., 2010; Compas et al., 2001).

Adaptive vs Maladaptive Coping

Adaptive and maladaptive coping differ in their long-term effects on regulation rather than in the immediate relief they provide. Adaptive coping refers to intentional strategies that manage stressors or ease their emotional effects in ways that foster resilience and help maintain healthy functioning (Lazarus & Folkman, 1984). Adaptive responses typically enhance regulation, reduce physiological arousal, and support flexible engagement with challenges. Mindfulness, access to positive social support, and cognitive reappraisal represent core adaptive domains that improve emotional stability and long-term adjustment (Cohen & Wills, 1985; Gross, 1998; Kabat-Zinn, 1990). Mindfulness promotes present-moment awareness and reduces automatic reactivity, social support buffers stress through emotional and instrumental pathways, and cognitive reappraisal alters the meaning of a situation to shift its emotional impact. Brief

behavioral skills such as paced breathing, grounding, or strategic pauses complement these domains by offering accessible tools for moment-to-moment regulation (Linehan, 1993).

Adaptive coping strengthens over time when individuals experience success using these strategies. Successful coping builds self-efficacy and strengthens adaptive patterns (Chesney et al., 2006; Cohen & Wills, 1985). Coping flexibility, or the ability to drop ineffective strategies and try new ones, relates to lower depression, anxiety, and distress (Kato, 2012). When adaptive strategies are limited or out of reach, individuals often turn to responses that bring short term relief but weaken long term functioning. Limited access to adaptive strategies heightens vulnerability to regulatory difficulties, creating conditions under which maladaptive coping patterns are more likely to emerge (Compas et al., 2001; Merrick et al., 2018).

Maladaptive coping disrupts long-term adjustment by interfering with problem solving, emotional processing, and physiological recovery. Maladaptive coping provides short-term relief but undermines long-term adjustment by disrupting problem solving, emotion processing, and physiological recovery (Compas et al., 2001; Lazarus & Folkman, 1984). Maladaptive strategies fall into four broad categories: avoidance-based coping, emotional suppression, substance-based coping, and aggressive coping. Avoidance-based coping includes denial, disengagement, distraction, withdrawal, and procrastination, which block emotional processing, prolong distress, and erode coping flexibility (Carver et al., 1989; Hayes et al., 1996; Nolen-Hoeksema, 1991; Steel, 2007; Weiss, 1974). Emotional suppression limits expression without easing internal distress, heightens sympathetic arousal, and strains interpersonal functioning (Aldao et al., 2010; Gross & John, 2003; Gross & Levenson, 1997; Polivy & Herman, 2002). Substance-based coping numbs distress but disrupts reward-stress circuits, increases craving, and weakens self-regulation (Sinha, 2008; Temple et al., 2017; Volkow et al.,

2016). Aggressive coping includes overt aggression, hostility, passive-aggressive behavior, revenge seeking, and self-harm used as affect regulation, temporarily reducing tension while reinforcing hostility and maladjustment (Anderson & Bushman, 2002; Huesmann et al., 1984; Klonsky, 2007; McCullough et al., 1998; Sheridan & McLaughlin, 2014).

Maladaptive strategies persist when adaptive skills are underdeveloped, when immediate rewards reinforce harmful patterns, or when coping self-efficacy is low (Chesney et al., 2006; Compas et al., 2001). Habit formation further entrenches these patterns, as repeated coping responses, adaptive or maladaptive, become automatic over time, and habitual responses unfold within environments that shape when, how, and why individuals deploy particular coping strategies (Yin & Knowlton, 2006).

Contextual Influences on Coping

Coping effectiveness depends not only on the strategies individuals know but also on the timing, emotional context, and environmental conditions in which those strategies are used.

Proactive coping refers to efforts to anticipate and prepare for future stressors before they occur, such as practicing emotion-regulation skills ahead of a challenging interaction or building routines that reduce the likelihood of stress escalation (Aspinwall & Taylor, 1997; Schwarzer & Fuchs, 1996). Reactive coping, in contrast, responds to stress as it occurs or afterward (Lazarus & Folkman, 1984). Reactive strategies can be effective, but they are more vulnerable to breakdown when individuals lack regulatory capacity or when emotions escalate quickly.

Coping is also emotion-specific: strategies that reduce depressive affect may be counterproductive for anger or high arousal states (Gross, 2002). For example, exercise (boxing) may alleviate depressive symptoms but can intensify aggressive impulses when individuals are already angry (Boecker et al., 2008).

These contextual demands mean that coping depends as much on the environment as on the individual. Supportive settings, early skill development, and strong coping self-efficacy increase the likelihood that adaptive strategies can be used effectively across situations (Aspinwall & Taylor, 1997; Chesney et al., 2006; Schwarzer & Fuchs, 1996). Families, peers, schools, and communities model emotional responses and shape how children learn to interpret stress (Skinner & Zimmer-Gembeck, 2007). Yet the ability to apply learned strategies under pressure depends on internal regulatory capacity, not just exposure to adaptive models.

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Copability

Copability refers to the internal regulatory capacity that supports emotional regulation, creates a pause under stress, and enables the deliberate selection of adaptive coping strategies. It parallels deterrability, which concerns weighing external consequences before acting (Gottfredson & Hirschi, 1990). Copability draws on regulation skills, adaptive strategy knowledge, and psychological resilience rather than external threat calculations (Gross, 1998;

Lazarus & Folkman, 1984; Masten, 2001). Together, regulation skills, coping knowledge, and resilience support deliberate action under stress. Copability functions as a composite capacity that integrates regulation, flexibility, and deliberate strategy selection, and it strengthens through practice, supportive relationships, and environments that frame regulation.

Variation in copability becomes visible when individuals face stressors that demand rapid regulation. Individuals may rely on maladaptive strategies in specific moments while functioning adaptively in other domains. High copability supports problem solving, cognitive reframing, and help-seeking, whereas low copability increases reliance on avoidance, rumination, substance use, or explosive reactions that provide short-term relief but erode long-term regulation (Aldao et al., 2010). Stressors can overwhelm personal and social mediators such as self-efficacy, regulation skills, or community support, removing the opportunity for pause-and-plan coping and creating a non-copable zone (Pearlin et al., 1981). Viewing copability as dynamic highlights opportunities for interventions that strengthen reappraisal, attentional control, distress tolerance, and resilience.

The development of copability depends on biological sensitivity and early environmental conditions that shape emerging regulatory systems. Early environments influence regulation skills through modeling and reinforcement (Bandura, 1977; Bronfenbrenner, 1979), while genetic vulnerabilities such as low-activity MAOA heighten reactivity to adverse experiences and amplify maladaptive emotional patterns (Caspi et al., 2002). Trauma and chronic stress activate the HPA axis and alter prefrontal–limbic circuits, increasing impulsivity, emotional numbing, and risk-seeking while reducing the neural flexibility required for pause-and-plan coping (Gunnar & Quevedo, 2007; McEwen, 2007; Shonkoff et al., 2012; Tomoda et al., 2009). Acute strain further narrows coping repertoires toward the most accessible reactive responses

(Agnew, 1992; Agnew, 2017). When biological sensitivity, early adversity, or chronic stress disrupt these regulatory systems, deficits in copability emerge. Ultimately, biological and environmental pressures erode copability by weakening the capacity for regulation, flexibility, and deliberate strategy selection under stress.

Interpersonal trauma provides one of the clearest illustrations of how chronic threat erodes copability by disrupting the neurobiological systems that support regulation and deliberate action. Domestic and intimate partner violence expose individuals to persistent threat, reshaping stress-response systems and narrowing coping repertoires. Children who witness family violence show significant internalizing and externalizing symptoms, including heightened anxiety, depressive features, aggression, attentional disruption, and impaired emotion regulation (De Bellis & Zisk, 2014; Kitzmann et al., 2003). Early exposure also increases the likelihood of experiencing or perpetrating intimate partner violence in adulthood (Maury et al., 2023; Whitfield et al., 2003). In adults, repeated intimate partner violence exhausts stress-response systems and alters prefrontal and limbic circuits responsible for decision making and emotional control (Inslicht et al., 2006; McEwen, 2007). These neurobiological changes weaken the capacity for pause-and-plan responding, making reactive, survival-oriented behaviors more likely and further constricting the coping repertoire.

These patterns parallel findings from the ACEs framework, which shows that clustered early adversities in childhood reduce prefrontal and hippocampal volume and entrench reactive coping patterns (Dong et al., 2004; Felitti et al., 1998; Shonkoff et al., 2012; Tomoda et al., 2009). High ACE scores predict depression, substance misuse, interpersonal violence, and chronic disease (Felitti et al., 1998; Hughes et al., 2017), and repeated adversity activates the HPA axis, reduces prefrontal and hippocampal volume, and further entrenches reactive coping

(Dong et al., 2004; Shonkoff et al., 2012; Tomoda et al., 2009). These neural changes heighten hypervigilance, impulsivity, avoidance, and aggression, especially when combined with ongoing environmental stressors or violence exposure (Evans et al., 2008; Sheridan & McLaughlin, 2014; Widom, 1989). Yet the erosion of copability in trauma and high-adversity contexts also reveals a deeper point: some conditions impair regulatory systems so fundamentally that the limits of copability become unmistakable.

The limits of copability become clearer when examining conditions that fundamentally impair regulatory systems. Severe neurodevelopmental or acquired conditions such as intellectual disability, fetal alcohol spectrum disorders, or traumatic brain injury reduce abstract reasoning, working memory, inhibitory control, and distress tolerance (Cicerone et al., 2011; Developmental Disabilities Primary Care Program, 2019; Diamond, 2013; Girgis et al., 2025; Mattson et al., 2019; Pennington & Ozonoff, 1996; Rabinowitz & Levin, 2014; Schalock et al., 2010). Severe psychiatric conditions such as psychotic disorders, major mood disorders, and autism spectrum conditions increase rumination, impulsivity, or rigid regulatory patterns (American Psychiatric Association, 2022; Berthoz & Hill, 2005; Green et al., 2004; Joormann & Gotlib, 2008; Mazefsky et al., 2013). Substance use alters reward circuits and weakens prefrontal control, which increases reliance on maladaptive coping (American Psychiatric Association, 2022; Goldstein & Volkow, 2011; Volkow & Koob, 2015). Other conditions such as ADHD, PTSD, and personality-related vulnerabilities reduce attentional control, increase emotional reactivity, or narrow coping flexibility (American Psychiatric Association, 2022; Barkley, 1997; Brewin et al., 2000; Castellanos et al., 2006; Hare, 2003; Linehan, 1993; Verona et al., 2005). Even neurological conditions such as stroke and early dementia weaken impulse control, working memory, and executive planning (Cumming et al., 2013; Rolls, 2012). Many

individuals with these conditions require continual external support, and independent coping rarely returns to full strength even with intervention. Structured routines, therapeutic supports, and environmental stability can preserve functioning despite substantial vulnerabilities.

Restorative processes also influence copability by replenishing the regulatory resources required for deliberate coping. Sleep plays a central role in emotional recovery. Deep and REM sleep repair tissue, regulate immunity, and process emotional experiences, which reduces the emotional charge of distressing memories and stabilizes next-day mood (Diekelmann & Born, 2010; Stickgold & Walker, 2005; Van Cauter & Plat, 1996). Sleep loss weakens reappraisal, increases emotional reactivity, and reduces self-control (Yoo et al., 2007). Even partial sleep restriction harms emotional and social functioning, especially in adolescents (Tomaso et al., 2021). Sleep provides cognitive and emotional resources that support regulation and coping. While physiological recovery restores the resources that support regulation, copability ultimately develops within social environments that teach, reinforce, or constrain coping skills. As these restorative processes replenish the internal capacity for regulation, the environments in which individuals live determine how those capacities are shaped, expressed, and reinforced.

Agents of Socialization & Structural Influences

The social environments that shape daily emotional learning also determine how children acquire, refine, and apply coping strategies. Children acquire their earliest coping scripts through family and peer interactions that teach distress soothing, conflict resolution, and impulse control (Bronfenbrenner, 1979). As youth grow, school climates, community institutions, and parental workplaces reshape these patterns. Supportive teachers strengthen problem solving confidence, while neighborhood disorder or parental job loss strains family stability and forces early coping scripts to adjust (Conger et al., 1994; Danziger & Lin, 2009; Pianta & Stuhlman,

2004). Cultural norms around help-seeking, authority, and self-reliance shape whether early coping patterns develop into adaptive or maladaptive strategies and which coping responses children view as acceptable (Eisenberg et al., 2010; Hofstede, 2001; Kim et al., 2008; Markus & Kitayama, 1991; Skinner & Zimmer-Gembeck, 2007). Consistent reinforcement of adaptive strategies strengthens resilience. Socializing forces also shape emerging copability by determining whether early coping scripts expand into flexible regulatory capacity or narrow into reactive patterns under strain.

Broader socialization systems extend these early influences by creating the models, demands, and opportunities that guide how children learn to regulate distress across development. Families, peers, schools, and neighborhoods each create distinct demands and opportunities that guide how children learn to regulate distress and respond to adversity. These environments differ in structure and resources, so children receive uneven exposure to support, conflict, supervision, and institutional stability. As youth move through these settings, they revise early coping patterns to match the expectations, risks, and norms of each context. Environmental influences begin shaping coping in the earliest social context, where family relationships establish the first patterns of regulation and distress management.

Families: Primary Socialization

Family relationships provide the earliest and most influential context for learning how to regulate emotion and manage stress. Children develop their earliest emotion regulation strategies through attachment in the primary family. Secure attachment forms when caregivers respond sensitively to distress, offer comfort, model calm problem solving, and label emotions. These interactions tune children's stress systems and support adaptive coping (Ainsworth et al., 1978; Bowlby, 1988; Cassidy & Shaver, 2016). When caregivers fail to provide stability,

children often lack a reliable framework for managing strong emotions and often rely on disorganized or avoidant strategies. Parenting styles further shape emotional responses. Authoritative caregivers (supportive but firm adults) guide children through conflict and support regulated expression, while authoritarian parents (strict adults with low-warmth) suppress emotion and teach internalization or defiance. Permissive caregivers (enablers) weaken distress tolerance by failing to set boundaries, or children may also learn coercive coping when aggressive outbursts lead parents to withdraw or relax limits (Baumrind, 1991; Patterson, 1982). Discipline practices function as coping instruction because they teach children which strategies reduce distress, resolve conflict, or avoid punishment.

Family adversity intensifies the developmental pressures that shape coping and copability. Children exposed to chronic abuse often adopt disorganized strategies to manage distress in unpredictable environments (Cicchetti & Lynch, 1993; Hesse & Main, 2000). These tactics may reduce anxiety briefly but disrupt self-soothing and coherent internal working models, undermining long-term emotion regulation and increasing the likelihood of reenacting abuse later in life (Lyons-Ruth & Block, 1996; Widom, 1989). Caregivers' trauma histories compound these patterns. Persistent post-traumatic stress disorder reduces emotional availability and models dysregulated stress responses that children internalize (Lieberman & Van Horn, 2011; Schechter et al., 2010), and parental trauma can alter offspring stress-response systems unless addressed through targeted intervention (Yehuda, 2002). Chronic interpersonal threat, including domestic and intimate partner violence, further reshapes stress-response systems and increases the likelihood of later involvement with intimate partner violence in adulthood (Maury et al., 2023; Whitfield et al., 2003). Findings from the ACEs framework show that clustered early adversities reduce prefrontal and hippocampal volume and consolidate reactive coping

patterns (Dong et al., 2004; Felitti et al., 1998; Shonkoff et al., 2012; Tomoda et al., 2009).

Together, these early attachment-based disruptions weaken copability across development and heighten vulnerability to maladaptive coping.

Family systems also transmit coping tendencies across generations. Expectations around discipline, communication, emotional expression, and conflict often mirror earlier generations because children learn how to interpret stress and regulate emotion by watching caregivers manage daily demands. Intergenerational continuity emerges when caregivers rely on the coping strategies they learned in childhood, creating familiar family patterns unless new experiences or supports introduce alternative options. Within this broader developmental context, problematic parental conduct such as substance use and incarceration function as significant family stressors that shape children's coping development through emotional disruption and the modeling of antisocial norms. In the empirical models below, problematic parental conduct is operationalized using Future of Families (FFCWS) indicators of mother and father drug use and incarceration, consistent with the dataset's longitudinal measures of family functioning.

Problematic Parental Conduct

Substance Abuse. Parental substance use represents a chronic family stressor that disrupts the emotional climate of the home and undermines the caregiving processes that support coping development. Alcohol and drug misuse reduce caregivers' emotional availability, consistency, and monitoring, creating unpredictable or coercive interaction patterns that weaken children's opportunities to learn adaptive regulation (Eiden et al., 2007; Kelley & Fals-Stewart, 2004). Substance-involved caregivers often struggle to provide co-regulation during distress, leaving children to manage intense emotions without reliable support and reinforcing disorganized, avoidant, or reactive coping strategies (Chassin et al., 1999; Hussong et al, 1998).

These disruptions impair the development of emotional understanding, distress tolerance, and behavioral control, which are core components of copability.

Within the Adverse Childhood Experiences (ACEs) framework, parental substance use is a central indicator of early adversity and frequently co-occurs with other forms of household instability, including violence, neglect, and caregiver mental health problems (Felitti et al., 1998; Merrick et al., 2017). Research on adversity shows that exposure to parental substance misuse alters stress response systems, heightens emotional reactivity, and increases reliance on maladaptive coping strategies such as avoidance, suppression, and aggression (Evans et al., 2013; McLaughlin et al., 2014; Sheridan & McLaughlin, 2014; Shonkoff et al., 2012). These disruptions weaken the regulatory skills required to pause, reappraise, and select adaptive strategies under strain, which reduces copability and increases vulnerability to emotional and behavioral dysregulation. In the empirical models, these disruptions are later reflected in children's externalizing behavior, which serves as a proxy for coping-relevant dysregulation rather than a direct measure of coping strategy.

Parental substance use functions as a persistent source of strain and negative stimuli because it exposes children to chronic conflict, caregiver impairment, and inconsistent or unpredictable responses to behavior (Colvin et al., 2002; Patterson, 1982). These conditions heighten anger, frustration, and emotional volatility, which increase reliance on maladaptive coping strategies. Substance involved households often feature coercive cycles in which escalation, withdrawal, or emotional suppression temporarily reduce conflict but reinforce short term, reactive coping (Dishion & Patterson, 2015; Sher, 1997; Zucker, 2008). These environments teach children that aggression, avoidance, or numbing are effective ways to manage emotional pressure, linking parental substance use to learned coping scripts that increase

risk for externalizing behavior and later delinquency. In the empirical models below, externalizing behavior is operationalized using the FFCWS Child Behavior Check List (CBCL) externalizing scale as an indicator of behavioral dysregulation rather than a direct coping construct.

Intergenerational research shows that parental substance misuse contributes to the transmission of maladaptive coping and risk behavior across generations. Children of alcohol or drug involved parents exhibit higher rates of externalizing problems, substance use, and delinquent behavior in adolescence, even after accounting for socioeconomic disadvantage and other family risks (Chassin et al., 1999; Hussong et al, 1998). These patterns indicate that parental substance use operates simultaneously as an adverse childhood experience (ACE), a source of strain, and a mechanism of coping socialization. Integrating parental substance use into the developmental framework clarifies how early caregiving environments shape copability, how disrupted regulation and maladaptive coping emerge in childhood, and why these tendencies increase vulnerability to delinquency in adolescence. In the empirical models, adolescent delinquency is operationalized using the FFCWS self-reported delinquency subscale as an indicator of coping collapse.

Incarceration. Parental incarceration reflects a similar pattern of problematic externalizing behavior and shapes children's development through the broader behavioral climate it creates. Households marked by repeated arrests, court involvement, or confinement often operate with flexible boundaries, inconsistent rule enforcement, and a general tolerance for antisocial behavior (Aaron & Dallaire, 2010; Arditti, 2018; Foster & Hagan, 2007; Murray & Farrington, 2005; Turney, 2014; Wildeman, 2010). This climate models externalizing responses to stress, including defiance, avoidance of authority, and disengagement from formal rules.

Children in these environments learn that rule violation is common, expected, or manageable rather than exceptional or unacceptable and internalize these norms through daily routines rather than direct observation of criminal acts. Family narratives may frame arrests or incarceration as routine setbacks, unfair treatment, or predictable outcomes of conflict. These explanations reduce the perceived seriousness of antisocial behavior and weaken the social meaning of legal boundaries (Hairston, 2007; Johnson & Easterling, 2012; Murray et al., 2012; Wildeman & Western, 2010). Over time, children adopt similar interpretations of rules and consequences, which increases the likelihood that they rely on externalizing strategies when managing strain or interpersonal conflict.

Parental incarceration also contributes to cumulative adversity. Each episode of system involvement adds instability and reinforces the family's orientation toward rule violation and conflict with authority. This accumulation strengthens externalizing scripts and makes it more difficult for children to develop regulated, prosocial coping strategies (Geller et al., 2009; Phillips et al., 2006; Turney, 2014; Wakefield & Wildeman, 2013; Wildeman & Western, 2010).

Together, parental substance use and parental incarceration function as problematic externalizing behaviors that shape children's coping development through emotional disruption and the modeling of antisocial norms. Each exposes children to environments where dysregulation, rule violation, and coercive responses are treated as ordinary, which reduces copability and increases vulnerability to delinquent behavior across development. In the empirical models, these early family risks are represented through the problematic parental conduct latent construct rather than through direct measures of coping.

Peers Socialization

As children gain autonomy and spend more time outside the home, peer groups become central contexts for learning how to manage stress and regulate emotion. Peer influence strengthens in late childhood, around ages nine to eleven, when sensitivity to peer approval increases, peer groups become more stable, and social comparison becomes more common (Corsaro, 2005; Harris, 1995; Rubin et al., 1998). During this period, children learn alternative models of emotion expression and stress responses (often shaped by peers' own family environments), and children begin adopting coping behaviors that are rewarded within their peer cultures (Bandura, 1977).

Peer influence intensifies further during early adolescence as autonomy increases and identity concerns grow. Adolescents become especially responsive to peer approval (Brown & Larson, 2009; Eccles & Roeser, 2011; Steinberg, 2008). During this period, the maturity gap emerges, which refers to the discrepancy between adolescents' biological maturity and their limited social and legal autonomy (Moffitt, 1993). The emergence of the maturity gap during this period increases conformity to peer modeled behaviors, as adolescents use peer groups to negotiate autonomy and social identity (Moffitt, 1993). This definition clarifies why adolescents often look to peers to display autonomy and adult like behavior, which strengthens the influence of peer modeled coping strategies. Growing autonomy and heightened sensitivity to peer evaluation create conditions that amplify peer driven coping patterns.

Friendships provide daily opportunities to observe, imitate, and refine coping strategies. High-quality friendships that include trust, shared problem solving, and co-regulation strengthen constructive coping (Hartup, 1996). Internalized caregiver bonds shape how children respond to peer norms: securely attached children enter peer groups with confidence and show less

conformity to maladaptive behaviors because these conflict with their internal expectations (Allen et al., 1996; Allen et al., 2003; Cassidy & Shaver, 2016; Schneider et al., 2001), whereas insecurely attached children more readily adopt risky or avoidant strategies modeled by peers (Allen et al., 2003; Schneider et al., 2001; Weinfield et al., 2008).

Broader peer-group norms and social comparisons further shape coping as adolescence progresses. Youth with coercive family histories often join rule-breaking peers who reinforce maladaptive responses such as substance use and aggression (Dishion & Patterson, 2015), while prosocial groups model constructive conflict resolution and emotional support. Sociometric status also matters: accepted adolescents show higher self-esteem and greater willingness to seek help, whereas rejected peers display more anxiety and rely on self-defeating strategies (Rubin et al., 1998). Adolescents become especially sensitive to peer appraisal because developmental changes in neural reward systems and social-cognitive processing heighten the emotional significance of peer evaluation. During early adolescence, brain regions involved in social monitoring and reward responsivity become more reactive to cues of acceptance or rejection, increasing the emotional weight of peer appraisal and strengthening conformity to peer-modeled coping strategies (Blakemore & Mills, 2014; Somerville, 2013). This heightened responsivity makes peer feedback a central regulator of emotion and behavior, shaping how adolescents interpret stress and which coping strategies feel socially viable. In the empirical models, peer delinquency functions as a contextual predictor of adolescent outcomes rather than a coping construct, aligning the lit review's discussion of peer influence with the operational variable used in the structural equation model. In the empirical models, peer influence is operationalized using the FFCWS Wave 6 peer delinquency scale as an indicator of exposure to maladaptive behavioral models.

Neighborhood Environments and Supportive Contexts

The coping patterns shaped within peer groups continue to evolve as adolescents interact with neighborhood environments that either reinforce or undermine regulatory skills.

Neighborhood conditions also shape how young people learn to manage stress. Communities with strong neighborhood support and cohesion create predictable environments where adults monitor public spaces, support local children, and respond to conflict in consistent ways (Sampson et al., 1997). Collective efficacy refers to the shared belief among neighbors that they can work together to maintain social order and support community well-being, combining mutual trust with a willingness to intervene for the common good (Sampson et al., 1997). These neighborhoods give youth access to safe routines, supportive adults, and shared expectations about behavior. Children in these settings practice constructive coping because they regularly see adults solve problems, offer guidance, and maintain social order.

Neighborhoods marked by disorder or violence expose youth to very different models of stress management. Frequent exposure to danger increases vigilance and teaches children to rely on strategies that protect them in the moment, such as avoidance, emotional suppression, or aggression (Sharkey, 2010). Limited access to stable institutions, after-school programs, or trusted adults reduces opportunities to develop problem-solving skills and other adaptive coping strategies. Community norms also influence coping. In neighborhoods with long histories of discrimination or aggressive policing, many families teach children to distrust formal institutions and rely on peers or self-reliance instead (Anderson, 1999). These neighborhood conditions shape the coping strategies that children carry into adolescence and link individual development to broader structural inequalities.

Beyond exposure to danger, neighborhood disadvantage further shapes coping development by limiting access to institutional resources that support regulation. Communities with concentrated poverty often lack high quality schools, youth programs, recreational spaces, and mental health supports that help children practice problem solving and emotional regulation (Brooks-Gunn et al., 1993; Leventhal & Brooks-Gunn, 2000). When these institutions are weak or absent, children have fewer opportunities to learn constructive strategies for managing stress and conflict, and the burden of coping shifts toward peers or self-protection.

Exposure to neighborhood violence intensifies these developmental pressures. Regular exposure to shootings, fights, or threats increases physiological arousal and encourages reliance on hypervigilance, emotional numbing, or aggressive responding as protective strategies (Fowler et al., 2009; Mrug & Windle, 2010). These patterns can generalize to school and peer settings, where youth may interpret ambiguous situations as threatening and respond with reactive aggression. Over time, these responses become habitual and reduce opportunities to practice regulated coping.

Neighborhood social organization also influences coping development. Communities with strong informal social control and shared expectations about behavior provide consistent behavioral cues that reinforce regulated coping (Browning et al., 2004). Adults in these neighborhoods intervene in youth conflict, offer guidance, and maintain predictable norms. In contrast, neighborhoods with fragmented social networks or low trust among residents provide fewer opportunities for adults to monitor behavior or support children. This lack of adult involvement increases reliance on peers who may model avoidance, retaliation, or other maladaptive strategies (Anderson, 1999).

Racialized neighborhood dynamics add another layer of influence. Structural racism, residential segregation, and chronic underinvestment create environments where families must navigate persistent stressors, including surveillance, discrimination, and limited access to supportive institutions (Massey & Denton, 2018; Sampson, 2012). These conditions increase emotional load and reduce opportunities to practice adaptive coping, reinforcing patterns of self-reliance, distrust, or defensive aggression.

The stability and density of neighborhood social ties also shape coping. Communities with strong intergenerational networks provide children with multiple adults who offer guidance, emotional support, and behavioral correction (Coleman, 1988; Small & Feldman, 2011). These ties create a broader safety net that reinforces regulated coping and reduces reliance on peers who may encourage maladaptive strategies. In neighborhoods where social ties are weak or transient, children have fewer adults who can provide consistent support, which increases the likelihood that they rely on self-protection or peer-based coping.

Across these conditions, neighborhoods function as an additional support network that can strengthen or weaken the coping skills youth develop in families and peer groups. High neighborhood support and cohesion, strong social organization, and access to supportive institutions reinforce constructive coping by providing consistent behavioral expectations and adult guidance. Neighborhood disadvantage, violence exposure, and institutional disinvestment undermine regulatory development and increase reliance on maladaptive strategies. These ecological forces shape the coping patterns that youth carry into adolescence and influence the likelihood of coping collapse when stressors intensify or supports diminish. In the empirical models, neighborhood conditions are operationalized using the FFCWS Wave 6 collective

efficacy scale as an indicator of neighborhood support, cohesion, and informal monitoring, functioning as a contextual support variable rather than a direct coping construct.

Criminological Perspectives

Neighborhood and socialization processes shape the emotional repertoires children carry into later developmental periods, but these interpersonal influences operate within broader structural and ecological contexts. Criminological perspectives help clarify how these larger environments generate strain, shape behavioral expectations, and influence the pressures youth must regulate. Such theories identify the structural, cultural, relational, and developmental conditions that create chronic demands on coping systems and contribute to behavioral risk. In the empirical models, these broader pressures are represented through contextual variables such as peer delinquency and neighborhood support and cohesion (measured using the FFCWS wave 6 neighborhood collective efficacy scale), which function as environmental predictors rather than direct coping constructs.

Criminological theories offer valuable insight into how strain can relate to maladaptive or delinquent behavior, yet they address only part of the developmental picture. Each framework highlights different external mechanisms or social pressures, but none fully account for the internal emotional and regulatory processes that shape how individuals cope with strain. Because this study examines how early caregiving shapes coping capacity and later behavioral outcomes, criminological perspectives are used here to clarify the sources, organization, and consequences of strain, while coping theory provides the internal mechanism that explains how individuals manage that strain. In the empirical models, delinquency is operationalized using the FFCWS adolescent delinquency scale as a downstream behavioral outcome rather than a coping construct.

Externalizing behavior increases the likelihood of delinquency during adolescence because reactive responses become improvised coping strategies under strain. Delinquency in adolescence often reflects coping collapse rather than simple rule breaking, particularly when youth face strain, coercive environments, or depleted regulatory resources (Agnew, 1992; Colvin et al., 2002). In this framework, criminological theories identify the pressures that make coping difficult, while coping theory explains why some youth maintain regulation and others escalate into maladaptive or delinquent behavior. In the empirical models, externalizing behavior is operationalized using the CBCL externalizing scale as an indicator of behavioral dysregulation rather than a direct coping measure. Understanding these pressures requires examining how emotional repertoires form in the first place, beginning with early socialization.

Socialization and the Development of Emotional Repertoires

Socialization perspectives explain how emotional repertoires develop long before acute strain occurs. Socialization processes teach individuals how to interpret emotions, which emotions are acceptable to express, and which coping strategies align with cultural expectations (Eisenberg et al., 1998; Thompson, 1994). Early lessons about emotion and coping form the foundation for how individuals evaluate stress and select responses when strain intensifies.

Emotional repertoires emerge through repeated interactions with caregivers and other adults who model how to respond to frustration, uncertainty, and interpersonal conflict. Children learn whether emotions should be expressed openly, managed through problem solving, or suppressed to avoid negative reactions. These early experiences shape the regulatory tone of emotional repertoires (Denham, 1998; Morris et al., 2007). Environments that provide consistent emotional coaching and guidance tend to cultivate repertoires that support regulated coping and constructive engagement with stress. In contrast, coercive or inconsistent environments often

produce repertoires organized around vigilance, avoidance, or reactive responding, which increase the likelihood that strain will be interpreted as threatening and managed through defensive strategies (Bourdieu, 1984; Lareau, 2011; Patterson, 1982).

Cultural meaning systems also shape emotional repertoires by teaching which emotional responses are legitimate, expected, or discouraged within specific social contexts. These patterned emotional repertoires guide how individuals appraise strain and select coping strategies, linking cultural norms to behavioral outcomes (Bourdieu, 1984; De Leersnyder et al., 2013; Lareau, 2011; Markus & Kitayama, 1991). Gendered expectations further organize emotional repertoires by signaling which emotions are encouraged and which coping strategies are viewed as legitimate for boys and girls, contributing to patterned differences in externalizing and internalizing responses to strain (Brody & Hall, 2008; Francis, 2014; Jang, 2007; Piquero et al., 2010).

Over time, these early emotional tendencies become habitual and shape how individuals respond when strain emerges. Emotional repertoires determine which emotions become salient, how individuals interpret those emotions, and which coping strategies appear legitimate or accessible within a given social context. Social control processes then shape how these early tendencies develop as individuals confront strain, reinforcing some emotional and coping patterns while constraining others (Sampson & Laub, 1993). The regulatory forces that shape these emerging tendencies are the focus of social control perspectives.

Social Control and the Regulation of Coping Responses

Social control perspectives explain how bonds and regulation influence coping responses when strain arises. Social control mechanisms influence the stability of coping responses and the likelihood that strain will escalate into maladaptive behavior. Attachments, commitments,

involvement, and belief regulate behavior by strengthening internalized norms and providing opportunities for emotional regulation (Hirschi, 1969/2010). Strong bonds provide co-regulation, frustration tolerance, and distress management, which buffer individuals from maladaptive coping. Instability in family structures, foster care placements, and institutional settings disrupts attachments and weakens coping development (Maguire et al., 2024; Miranda et al., 2019). These disruptions increase vulnerability to maladaptive responses because they remove consistent sources of emotional regulation and reduce opportunities for children to internalize stable norms, leaving them with fewer regulatory supports when strain intensifies.

Self-control develops through early socialization and shapes how individuals regulate impulses, delay gratification, and manage frustration (Gottfredson & Hirschi, 1990). Individuals with low self-control often react quickly, seek immediate relief, and struggle to inhibit maladaptive responses when strain intensifies. Containment processes influence coping by strengthening internal controls and embedding individuals within external supports that reinforce prosocial behavior (Reckless, 1961). Strong internal controls and supportive environments stabilize coping efforts, while weak containment increases vulnerability to impulsive or maladaptive responses under strain.

Social control theories explain how bonds, regulation, and containment influence the degree to which strain produces impulsive or restrained behavior. Weak bonds and regulatory deficits increase the likelihood that strain will be managed through impulsive or delinquent behavior rather than adaptive strategies. As regulatory processes weaken, relational environments play a central role in shaping how individuals interpret strain and regulate emotional responses. Once these regulatory foundations are established, structural perspectives clarify how broader social arrangements generate the strains individuals must manage.

Structural Pressure and Emotional Strain

Structural perspectives explain where strain originates and how it becomes embedded in daily life. Structural inequality and cultural expectations generate chronic pressures that shape emotional responses and coping strategies. Societies that elevate monetary success as a central measure of worth create pressure to achieve culturally valued goals even when legitimate opportunities remain unevenly distributed (Merton, 1938). Contemporary extensions of strain theory show that structural marginalization, blocked opportunities, and chronic disadvantage heighten frustration, anger, and shame, especially when individuals lack access to institutional supports that buffer stress (Agnew, 1992; Agnew, 2006). When coping resources are limited because structural conditions restrict access to stable employment, supportive institutions, and regulatory scaffolding, emotional pressures are more likely to spill into maladaptive forms of regulation, including avoidance, suppression, and reactive aggression (Broidy, 2001; Jang & Johnson, 2003; Piquero & Sealock, 2004).

Economic disadvantage intensifies these pressures. Structural marginalization limits access to education, employment, and institutional support, heightening emotional distress and encouraging coping strategies that conflict with legal norms (Currie, 2010). Research on strain and coping shows that individuals facing chronic disadvantage often rely on avoidant, aggressive, or self-protective strategies when institutional supports are weak or inaccessible (Jang & Johnson, 2003). Organizational environments can reinforce deviance when internal norms reward rule breaking as an effective route to success (Vaughan, 1996). These settings also shape the cultural meanings people attach to strain, making certain shortcuts appear acceptable or even necessary. As structural marginalization becomes chronic, informal controls weaken and coping systems are repeatedly taxed, increasing reliance on maladaptive strategies.

General Strain Theory (GST) clarifies how strain produces negative emotions that influence coping responses (Agnew, 1992). Strain arises from blocked goals, the removal of positive stimuli, or exposure to negative stimuli, each generating anger, frustration, or fear. High magnitude or chronic strains erode self-control, perceptions of injustice intensify negative affect, and weak social controls reduce constraints on behavior (Agnew, 2006). Strain also emerges from persistent stressors tied to gender, race, and institutional hierarchies (Agnew, 2013). Subsequent GST research has moved well beyond these foundational propositions by specifying how strain, negative emotions, and coping processes operate across different populations and types of outcomes. Studies show that strain related to maltreatment, family conflict, and other ACEs increases negative emotions and delinquency, supporting GST's application to family based and developmental strains (Hollist et al., 2009; Van Wyk, 2023). Gender focused tests indicate that boys and girls experience and cope with strain differently, with girls more likely to channel strain into internalizing responses and boys into externalizing or overt risk behaviors (Francis, 2014; Jang, 2007; Piquero et al., 2010). Cross national and contextual applications demonstrate that accumulated strain and negative emotions predict crime in diverse settings, underscoring the generality of GST mechanisms (Botchkovar & Broidy, 2013). Recent work also links strain to contemporary forms of aggression and self-harm, including cyberbullying and digital self-harm, through pathways involving victimization, negative affect, and maladaptive coping (Lee et al., 2022; Meldrum et al., 2022). GST based studies that explicitly incorporate coping and self-control show that coping resources and regulatory capacity condition whether strain leads to delinquency, aligning closely with this study's focus on copability and regulation (Agnew, 2017; Moon et al., 2011; Piquero & Sealock, 2004). These studies demonstrate that GST has been extensively tested in relation to ACEs, emotion regulation, and delinquency. They

also support using GST as a framework for understanding how early adversity and regulatory capacity shape later coping-related behavior. As these pressures accumulate without adequate coping resources, individuals become increasingly likely to rely on maladaptive strategies that may escalate into delinquent behavior.

Structural and cultural pressures shape the emotional landscape individuals inhabit by influencing how strain is interpreted and which coping strategies appear viable. Cultural meaning systems also shape how emotions become behavior by teaching which emotional responses are legitimate, expected, or discouraged within specific social contexts. These patterned emotional repertoires guide how individuals appraise strain and select coping strategies, linking cultural norms to behavioral outcomes (Bourdieu, 1984; De Leersnyder et al., 2013; Lareau, 2011). Structural strain does not determine behavior, but it creates conditions where coping resources become overextended and maladaptive strategies become more accessible. In this framework, delinquency emerges not from strain alone but from the coping strategies individuals adopt when strain overwhelms their capacity to regulate it. Learning perspectives extend this structural view by explaining how individuals acquire the behavioral scripts they rely on when strain intensifies.

Social Learning and the Formation of Behavioral Scripts

Learning perspectives explain what individuals actually do when they are under strain by focusing on the coping scripts they acquire. Strain generates emotional pressure, and social learning determines the strategies individuals have available to cope with that pressure. Individuals learn coping responses through observation, reinforcement, and repeated exposure to modeled behavior (Akers, 1998; Bandura, 1977). Criminal decisions often reflect an imbalance in learned coping strategies when individuals lack exposure to adaptive methods (Pratt et al.,

2010). Because learning provides the raw material for coping but does not determine behavior on its own, individuals must still interpret situations, evaluate options, and decide whether a learned script fits the demands of the moment. This interpretive step creates the bridge between social learning and human agency. Human agency involves the capacity to evaluate stressors, anticipate outcomes, regulate motivation, and judge one's own behavior (Sampson & Laub, 1993). Moral disengagement processes can deactivate internal sanctions and justify harmful conduct, including moral justification, euphemistic labeling, advantageous comparison, diffusion of responsibility, distortion of consequences, dehumanization, and attribution of blame (Bandura, 1999). When strain intensifies, these cognitive processes can facilitate the selection of maladaptive scripts by reframing harmful behavior as acceptable or necessary. In this way, learning and agency operate together: individuals acquire behavioral scripts through social experience, and agency determines how those scripts are activated, modified, or inhibited under strain.

Environments that favor or reinforce deviance often produce maladaptive coping patterns more frequently than adaptive ones. Differential association explains how individuals learn techniques for offending as well as the motives, rationalizations, and attitudes that support rule breaking (Sutherland, 1947). Operant conditioning clarifies how reinforcement patterns shape the likelihood of repeating these behaviors (Akers, 1998). Behaviors that receive social or material reinforcement increase in frequency, while punished behaviors decline. Reinforcement processes stabilize certain coping strategies when individuals repeatedly receive rewards for deviant responses during periods of strain (Matsueda, 1988; Warr, 2002). Over time, reinforced scripts function as familiar coping methods, making delinquent behavior a learned way of managing emotional pressure when adaptive strategies remain unavailable or underdeveloped.

Coping strategies therefore depend on the emotional repertoires individuals acquire through early socialization, because those repertoires shape how strain is interpreted and which responses feel available (De Leersnyder et al., 2013; Lareau, 2011). This integration of learning, reinforcement, and emotional development underscores why coping repertoires differ so widely across individuals: people do not simply learn behaviors, they learn patterned ways of interpreting strain, regulating emotion, and selecting responses that feel familiar, effective, or socially supported. Relational perspectives build on this learning foundation by showing how interpersonal climates amplify or constrain coping patterns.

Relational Regulation and Dysregulation

Relational perspectives explain how supportive or coercive climates shape coping under pressure. Relational climates influence how individuals regulate emotion, appraise strain, and stabilize coping strategies. Supportive environments provide expressive resources such as empathy, affirmation, and mentoring, along with instrumental resources such as material aid and access to services. These forms of support buffer stress, reduce perceived injustice, and strengthen internal regulation, which increases the likelihood of adaptive coping strategies (Kurtz & Zavala, 2017).

Coercive relational environments create the opposite pattern. Harsh discipline, chronic criticism, emotional abuse, and structurally coercive conditions weaken self-control, increase anger and mistrust, and narrow coping repertoires toward reactive, short-term strategies (Colvin et al., 2002). Repeated coercive interactions create social and psychological deficits such as heightened hostility, weakened bonds, and mental health problems. These deficits increase vulnerability to maladaptive coping and antisocial behavior. Communities with limited welfare

and mental health infrastructure expose residents to more coercion and fewer supportive buffers, which increases the risk of delinquency (Kurtz & Zavala, 2017).

Relational coercion also teaches coping strategies directly. Cultural norms influence whether individuals interpret relational practices as supportive, neutral, or coercive.

Socioeconomic and neighborhood conditions influence whether supportive alternatives exist (Christens et al., 2025; De Leersnyder et al., 2013). Individuals learn coping strategies by observing how power, threat, and control operate in their relationships (Bandura, 1977).

Coercive interactions teach that escalation ends conflict, withdrawal reduces exposure to harm, and emotional suppression prevents retaliation (Patterson, 1982). These patterns reinforce maladaptive coping and increase the likelihood of a delinquent response. Developmental perspectives extend this relational focus by identifying when individuals are most susceptible to maladaptive coping.

Developmental Timing and Vulnerability to Maladaptive Coping

Developmental and life course perspectives explain when individuals are most vulnerable to maladaptive coping. Developmental timing shapes how relational experiences influence later vulnerability to strain. Early interactions guide the formation of coping styles and shifts in social roles across the life course alter the strength of bonds and the resources available for managing stress. Life course theories explain how developmental timing shapes vulnerability to strain and influences coping trajectories. Social bonds evolve across the lifespan, and family relationships transmit behavioral definitions and shape agency across development (Giordano, 2020).

Transitions such as stable work, marriage, or parenthood strengthen informal controls and promote prosocial behavior (Sampson & Laub, 1990). Early antisocial behavior can limit later

opportunities and reinforce disadvantage, which creates developmental pathways where strain becomes more difficult to manage over time (Laub & Sampson, 1993).

Neuropsychological differences also influence vulnerability to maladaptive coping. Executive function impairments and temperament variations increase vulnerability to persistent antisocial behavior (Raine, 2008). Moffitt's (1993) developmental taxonomy explains how early neuropsychological deficits interact with coercive environments to produce life course persistent delinquent patterns marked by lower copability and limited capacity to regulate strain. Adolescence limited offenders often show stronger copability, greater responsiveness to social controls, and smoother transitions into adult roles such as work or stable relationships. These transitions support the development of more adaptive coping strategies (Moffitt, 1993). Developmental perspectives therefore explain how timing, neuropsychological differences, and life transitions influence the stability of coping strategies. Variation in copability and developmental timing helps explain why individuals respond differently to similar strains. Ecological conditions also shape exposure to strain and the resources available to manage it. Ecological perspectives extend this developmental view by identifying the contexts in which strain and coping demands occur.

Ecological Context and Opportunity Structures

Ecological perspectives explain where and how often strain and coping demands occur. Ecological conditions determine exposure to strain and access to coping resources. Neighborhood disadvantage weakens informal social controls and reduces collective capacity to regulate behavior, particularly in areas with concentrated poverty, residential instability, and ethnic heterogeneity (Shaw & McKay, 1942/2010). Environmental inequality and structural racism influence exposure to strain and limit access to coping resources. These conditions shape

how individuals interpret strain and evaluate the options available to manage emotional pressure (Bullard, 2018; Sampson & Winter, 2016). Neighborhood support and cohesion strengthens informal controls through shared expectations and mutual trust, which reduces opportunities for maladaptive coping (measured in this study using the FFCWS collective efficacy scale). Neighborhood conditions influence the availability of prosocial models and the visibility of criminal opportunities. These conditions shape how individuals learn, reinforce, and evaluate coping strategies and increase the likelihood that strain will be managed through crime rather than prosocial alternatives.

Synthesis

Criminological perspectives identify many of the external pressures that shape delinquency, including structural disadvantage, emotional strain, learned behavioral scripts, weakened bonds, coercive relationships, developmental vulnerabilities, and ecological constraints. These frameworks clarify where strain originates and how environments shape behavioral tendencies, but they offer limited insight into the internal regulatory processes that determine how individuals interpret stress and manage emotional pressure. Existing theories describe the conditions that generate strain but provide limited guidance on how coping develops, how it becomes disrupted, or why similar environments produce different behavioral outcomes. Recognizing this limitation clarifies why criminological theories alone cannot account for variation in delinquency and highlights the importance of coping as the mechanism that links external pressures to adaptive or maladaptive responses. In the empirical models, delinquency is operationalized using the FFCWS adolescent delinquency scale as a downstream behavioral outcome rather than a coping construct.

Integrating Criminological Perspectives With Coping Theory

Criminological theories explain how environments create strain, shape behavioral repertoires, and influence the regulatory capacities that guide behavior. These perspectives identify the structural pressures individuals encounter, the behavioral scripts they learn, the bonds they form, and the ecological and developmental contexts that shape exposure to strain. Each framework clarifies an important source of influence, and together they describe the external conditions that contribute to emotional pressure and behavioral risk. Contemporary criminological research also examines appraisal, negative emotions, and coping-related processes, including work on strain-related coping and emotional responses (Agnew, 1992, 2006; Botchkovar & Broidy, 2013; Francis, 2014; Hollist et al., 2009; Jang, 2007; Moon et al., 2011; Piquero & Sealock, 2004; Piquero et al., 2010), reinforcement-based behavioral choices (Akers, 1998), and emotion-linked decision processes across developmental transitions (Laub & Sampson, 1993; Sampson & Laub, 1990). The present framework builds on these contributions by emphasizing the developmental organization of coping processes and the regulatory capacities that shape responses to strain. In the empirical models, these regulatory capacities are represented through middle-childhood externalizing (CBCL) and adaptive social behavior (ASBI) as behavioral indicators of coping-relevant functioning.

Coping theory strengthens these insights by explaining the internal processes that determine how individuals interpret strain, regulate affect, and select coping strategies during moments of pressure. Criminological perspectives identify the forces that generate strain, and coping theory explains how individuals manage that strain. This combined approach clarifies why similar environments can produce different behavioral outcomes and why some individuals maintain regulation while others escalate into maladaptive or delinquent behavior.

Coping theory specifies the internal processes that link emotional strain to behavioral outcomes. Emotion regulation shapes how individuals interpret stress, adjust arousal, and maintain control during challenging situations. Coping capacity explains variation in responses to strain. Coping collapse explains why some individuals escalate into maladaptive or delinquent behavior when regulatory resources fail. These processes clarify how strain produces adaptation, maladaptation, or delinquency. In the empirical models, coping capacity is represented through adolescent social skills (SSRS), and coping collapse is represented through adolescent delinquency.

This integrated framework shows how criminological perspectives and coping theory work together. Criminological theories identify the pressures that challenge regulation, and coping theory explains the internal mechanisms that determine how individuals respond to those pressures. This combined perspective supports a developmental model in which early caregiving environments shape coping capacity, and coping capacity influences behavioral outcomes across childhood and adolescence. In the empirical models, these developmental pathways are operationalized using problematic parental conduct (from Wave 3 of FFCWS data collection), caregiver discipline (at Wave 4), child functioning (at Wave 5), and adolescent outcomes (at Wave 6). The integrated framework clarifies how early caregiving shapes coping capacity and later behavioral outcomes, yet it also exposes unresolved questions about how coping is actually socialized across childhood, questions that existing research has not fully addressed.

Gaps in the Literature

Coping socialization occurs through the interpersonal and structural processes that guide how children learn to interpret stress, regulate emotion, and select coping strategies. Existing work remains fragmented in explaining how coping strategies are transmitted and which

mechanisms link early socialization to later coping patterns. Developmental, relational, and structural forces clearly shape coping, but the processes through which they do so remain undertheorized.

Despite these insights, several gaps remain. Developmental research rarely examines how specific caregiving behaviors transmit coping strategies in concrete situations (Ainsworth et al., 1978; Cassidy & Shaver, 2016; Eisenberg et al., 2010). More recent developmental and ACEs research demonstrates that early adversity alters emotion regulation systems and increases reliance on maladaptive coping (Heleniak et al., 2016; McLaughlin et al., 2014), yet this work still does not specify how caregiving behaviors teach coping strategies in daily interactions. Socialization studies do not conceptualize discipline, modeling, and reinforcement as mechanisms of coping instruction (Anderson, 1999; Conger et al., 1994; Hartup, 1996; Shaw & McKay, 1942/2010). Emotion socialization research highlights parental modeling, coaching, and responses to children's emotions (Eisenberg et al., 2002; Morris et al., 2007), but these studies rarely examine coping strategy transmission in response to strain. Inequality research gives limited attention to how structural conditions influence the learning and reinforcement of coping routines (Bradley & Corwyn, 2002; Conger et al., 2010; Evans & English, 2002; Haushofer & Fehr, 2014). Recent ACEs scholarship links socioeconomic adversity to emotion regulation disruptions and coping vulnerabilities (Lambert et al., 2017; Merrick et al., 2018) but does not connect these patterns to specific caregiving practices. Neurobiological models do not connect adversity-related regulatory changes to the social processes that teach coping strategies (De Bellis & Zisk, 2014; Felitti et al., 1998; Gunnar & Quevedo, 2007; Hughes et al., 2017). Updated neurodevelopmental research shows that threat- and deprivation-based adversity shape regulatory circuitry (Sheridan & McLaughlin, 2014), yet these models do not address how

children learn coping strategies from caregivers. These gaps leave coping socialization underdeveloped as the mechanism that links early environments, emotional regulation, and behavioral trajectories.

Research using the FFCWS highlights the influence of maltreatment, parenting stress, and socioeconomic disadvantage on child behavior, yet these studies treat parenting behaviors as predictors of adjustment rather than as processes that transmit coping strategies. Prior work links neglect to stress-related pathways (Whitaker et al., 2007), identifies maternal depression, early spanking, and parenting stress as predictors of elevated behavior problems (Keyser et al., 2017), and shows that cumulative psychosocial risks shape internalizing and externalizing outcomes (Mullola et al., 2021). Other studies demonstrate that harsh discipline predicts psychopathology at specific developmental periods (Dunn et al., 2023), while Cooper et al. (2009) found that early family instability predicted elevated behavior problems, indicating that relational disruptions during sensitive developmental periods heighten emotional vulnerability. Research on early caregiving demonstrates its developmental importance, yet it does not assess whether conflict-based discipline teaches maladaptive coping or whether explanatory, non-aggressive tactics promote adaptive coping (Eisenberg et al., 2002; Grusec & Goodnow, 1994; Skinner & Zimmer-Gembeck, 2007). Although the FFCWS includes measures such as the Adaptive Social Behavior Inventory (ASBI) and Social Skills Rating System (SSRS), these scales remain underused for understanding how early socialization processes shape later emotional functioning.

A broader gap also remains in research connecting coping to delinquent mechanisms. Criminological theories identify the structural, cultural, and interpersonal pressures that generate emotional strain, and extensive GST research has examined how negative emotions and coping responses mediate the effects of strain on delinquency (Agnew, 1992, 2006, 2013; Botchkovar &

Broidy, 2013; Francis, 2014; Hollist et al., 2009; Jang, 2007; Lee et al., 2022; Leban & Delacruz, 2023; Meldrum et al., 2022; Piquero & Sealock, 2004; Piquero et al., 2010; Van Wyk, 2023).

These studies demonstrate that coping and emotional regulation are measurable mechanisms within GST, particularly in relation to negative affect, gendered coping, ACEs, maltreatment, and victimization. What remains underdeveloped, however, is an account of how individuals acquire these coping tendencies in the first place. GST research has focused on the effects of strain, and the coping strategies individuals employ, but it has not examined the developmental socialization processes through which caregiving behaviors teach, reinforce, or disrupt coping strategies across childhood. As a result, the developmental origins of coping, and the mechanisms through which early caregiving environments shape later coping patterns, remain insufficiently specified within criminological models.

These gaps indicate that caregiving behaviors must be examined as mechanisms of coping socialization rather than general predictors of child outcomes. A focus on coping socialization clarifies how children learn to interpret stress, regulate emotion, and select strategies that influence behavioral trajectories. This perspective also connects developmental science, inequality research, and criminological mechanisms by identifying coping as the process that links early environments to later adjustment. The absence of research that examines coping socialization within the FFCWS creates an opportunity to investigate how specific caregiving practices shape the development of adaptive and maladaptive coping strategies and how these strategies influence behavioral outcomes across childhood and adolescence.

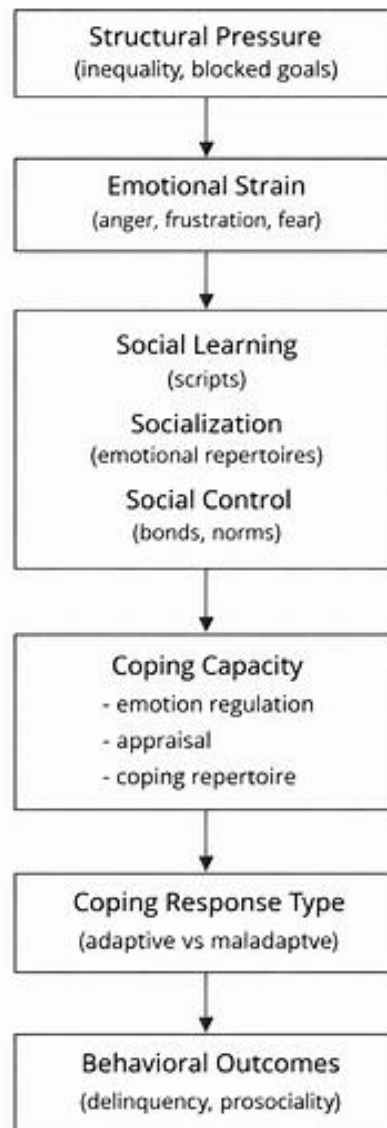
The identified gaps require an empirical test of how caregiving behaviors shape the development of coping-related skills and influence emotional and behavioral outcomes across childhood and adolescence. This study uses longitudinal data from the Future of Families and

Child Wellbeing Study (formerly Fragile Families and Child Wellbeing Study) to evaluate whether early caregiving practices predict coping-relevant behavior and later adolescent functioning. The approach centers on developmental pathways that link early caregiving environments to behavioral and emotional outcomes.

Conceptual Framework

The conceptual framework guiding this study organizes the core constructs examined throughout the dissertation into a single developmental model. The framework centers on how early caregiving behaviors shape children's emerging regulatory capacities, how these capacities support the development of copability, and how copability influences coping strategy selection and later behavioral outcomes. Figure 2.3 illustrates the relationships among these constructs and serves as the structural guide for the empirical analyses.

Figure 2.3: Integrated Criminological–Coping Conceptual Framework



Early caregiving provides the foundation for children’s regulatory development by shaping emotional understanding, arousal modulation, and the interpretation of stress. These early regulatory abilities support the emergence of copability, defined as the capacity to apply regulation skills under conditions of strain. Copability enables children to pause, evaluate demands, and select adaptive strategies rather than defaulting to reactive or maladaptive responses. Recent developmental and neurobiological research demonstrates that early adversity and caregiving quality shape the maturation of regulatory systems (Heleniak et al., 2016;

McLaughlin et al., 2015; Sheridan & McLaughlin, 2014), reinforcing the central role of early caregiving in the development of coping-related capacities.

Coping strategies develop through social learning processes in which children internalize behavioral scripts modeled and reinforced by caregivers, peers, and other socializing agents. These strategies are further shaped by the ecological contexts in which children develop, including family environments, peer groups, schools, and neighborhoods. Variation in these contexts influences exposure to stress, access to support, and opportunities to practice adaptive coping. Emotion-socialization research shows that parental modeling, coaching, and responses to children's emotions contribute to the development of coping tendencies (Eisenberg et al., 2015; Morris et al., 2007), supporting the framework's emphasis on caregiving as a mechanism of coping instruction.

The constructs operate within a unified developmental sequence in which early caregiving informs emotion regulation, emotion regulation supports copability, and copability shapes coping strategy selection, leading to distinct emotional and behavioral outcomes in adolescence. This framework delineates the pathways linking early environments to later functioning and anchors the analytic approach. This developmental sequence aligns with criminological applications of GST, which emphasize the role of emotional regulation and coping in shaping behavioral responses to strain (Botchkovar & Broidy, 2013; Jang, 2007; Piquero & Sealock, 2004). The conceptual framework clarifies the developmental pathways linking early caregiving, regulatory capacity, copability, and adolescent outcomes, and it defines the sequence examined in the empirical analyses.

Present Study

Research across developmental, criminological, and ecological perspectives shows that coping develops through a sequence of socialization processes that begin in early caregiving and expand across peer and neighborhood environments. Children learn how to interpret stress, regulate emotion, and select coping strategies through repeated exposure to the behavioral models, expectations, and structural conditions present in their daily lives. Although prior work identifies many of these influences, existing research has not fully explained how these environments collectively shape coping capacity or how coping capacity contributes to later behavioral outcomes. Criminological theories describe the pressures that generate emotional strain, and developmental research identifies how children acquire regulatory skills, but the mechanism linking early environments, coping development, and adolescent delinquency remains underdeveloped. Recent GST applications incorporating ACEs, maltreatment, and negative emotional states (Leban & Delacruz, 2023; Lee et al., 2022; Van Wyk, 2023) underscore the importance of integrating developmental and criminological perspectives when examining coping-related pathways.

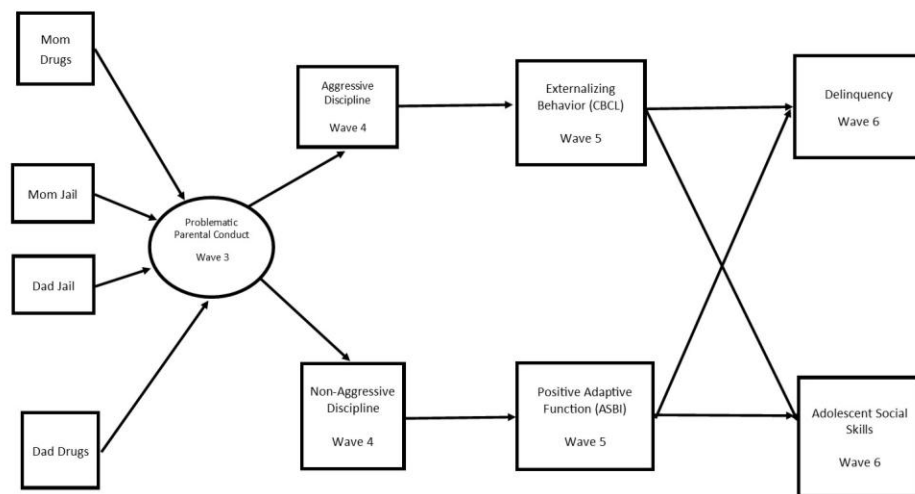
The present study addresses these gaps by testing a longitudinal developmental model that traces how early caregiving, middle childhood functioning, and adolescent ecological contexts contribute to coping related outcomes. The model follows a developmental sequence that begins with problematic parental conduct in early childhood (age 3), continues through caregiver discipline practices during early school age (age 5), and then examines how these practices predict children's coping relevant functioning in middle childhood (age 9). The final stage of the sequence evaluates how these middle childhood tendencies forecast adolescent delinquency and social skills at age fifteen. Because the FFCWS does not include direct coping

measures, the study uses theoretically aligned indicators. Externalizing behavior in middle childhood represents maladaptive, reactive coping, and adaptive social behavior represents prosocial, regulated coping. These indicators capture the behavioral expression of coping capacity as it develops across childhood and into adolescence. Middle childhood externalizing behavior and adaptive social behavior capture the behavioral expression of coping tendencies as they emerge in daily interactions and are operationalized using CBCL externalizing (maladaptive/reactive coping), ASBI adaptive social behavior (prosocial/regulatory coping), SSRS social skills (coping capacity), and adolescent delinquency (coping collapse), an approach consistent with developmental research linking early adversity to reactive coping and regulatory disruptions (Heleniak et al., 2016; McLaughlin et al., 2015).

The developmental sequence tested in this study reflects theoretical expectations about how early caregiving environments shape coping related development. Problematic parental conduct in early childhood represent sources of instability and dysregulation within the caregiving system. Caregiver discipline practices in early school age provide children with models of behavioral regulation and expectations for managing conflict. Finally, adolescent delinquency and social skills represent downstream outcomes that reflect the consolidation of coping-related functioning. Peer environments were included because peers serve as key socialization agents during adolescence, and exposure to delinquent peers is a well-established predictor of risk behavior and coping-related behavioral patterns. Neighborhood support and cohesion was included because cohesive, well-regulated neighborhoods provide adolescents with social monitoring, shared norms, and community-level regulatory support that shape coping development. These ecological influences align with criminological evidence showing that coping responses depend on both individual regulatory capacity and the supports available in the

surrounding environment (Meldrum et al., 2022; Piquero et al., 2010). This conceptual model is depicted in Figure 2.4, which presents a simplified version of the developmental sequence (without covariances or error terms).

Figure 2.4: Hypothesized structural equation model for the primary analysis.



This study is guided by the following research questions:

1. Do problematic parental conduct shape caregiver discipline practices during early childhood?
2. Do caregiver discipline practices predict children's coping-relevant functioning (externalizing behavior and adaptive social behavior) in middle childhood?
3. Do these middle-childhood indicators predict adolescent delinquency and social skills?
4. Do early caregiving environments exert direct effects on adolescent outcomes beyond the developmental cascade?
5. How do peers and neighborhood support and cohesion contribute additional explanatory power in adolescence?

Based on prior theory and empirical findings, the following hypotheses were tested:

- H1: Higher problematic parental conduct will predict more frequent aggressive discipline and less constructive, non-aggressive discipline.
- H2: Aggressive discipline will predict higher externalizing behavior (maladaptive/reactive coping) in middle childhood, whereas non-aggressive discipline will predict higher adaptive social behavior (prosocial/regulatory coping).
- H3: Externalizing behavior (reactive coping) in middle childhood will predict higher adolescent delinquency (coping collapse) and lower adolescent social skills (coping capacity); adaptive social behavior (prosocial coping) will predict higher adolescent social skills (coping capacity).
- H4: Early problematic parental conduct will exert both indirect effects (through the developmental cascade) and direct effects on adolescent delinquency.
- H5: Peer delinquency and neighborhood support and cohesion will contribute unique variance to adolescent outcomes without altering the core developmental sequence.

To evaluate these hypotheses, the study used structural equation modeling (SEM) with data from 4,897 families in the FFCWS. The primary model tested the developmental cascade from early problematic parental conduct (Wave 3) to caregiver discipline (Wave 4), to child functioning (Wave 5), to adolescent outcomes (Wave 6). Supplemental models incorporated peer delinquency and neighborhood support and cohesion as additional adolescent predictors to assess ecological influences on the developmental sequence. All models controlled for child sex, race/ethnicity, and early welfare assistance, and used full information maximum likelihood to address missing data.

By integrating developmental, criminological, and ecological perspectives into a single analytic framework, the present study provides a comprehensive test of how early caregiving,

middle childhood functioning, and adolescent ecological contexts shape coping related development. The analysis evaluates how early family risk, discipline practices, and coping relevant tendencies interact with peer and neighborhood conditions to influence adolescent delinquency and social skills. This integrated approach offers a coherent assessment of how coping relevant functioning emerges across childhood and adolescence and how these developmental processes contribute to behavioral outcomes.

Chapter 3 - Methods

Sample

This study used data from 4,897 families from the Future of Families and Child Wellbeing Study (FFCWS), a birth cohort conducted in 20 United States cities using a multistage sampling design with intentional oversampling of unmarried parents to increase representation of families facing socioeconomic risk. Sample participants were enrolled into the study between 1998 and 2000. Baseline interviews occurred shortly after the child's birth and follow-up interviews occurred when children reached ages 1, 3, 5, 9, and 15. Most primary caregivers were mothers, and the sample included both unmarried and married mothers in proportions consistent with the oversampling strategy. Fathers also took part in the study, and the research team attempted to interview both biological parents at each wave, although father participation varied because many fathers were harder to reach across time. Reichman et al. (2001) provide detailed information on study design and field procedures.

FFCWS shows typical longitudinal attrition, with participation gradually declining from early childhood to adolescence. Retention remains strong relative to comparable birth-cohort studies. Full information maximum likelihood (FIML) estimation incorporates all available observations despite missingness, making it well suited for SEM with longitudinal data. The oversampling of unmarried parents increases representation of families experiencing socioeconomic disadvantage, which aligns with the study's focus on early caregiving environments and developmental risk. Because of this, the sample represents births in large United States cities but does not represent the national population.

Measures

The measures used come from multiple waves of the FFCWS. The primary model draws on data from Wave 3 (problematic parental conduct), Wave 4 (caregiver discipline), Wave 5 (child functioning), and Wave 6 (adolescent outcomes). These waves provide a developmental sequence spanning early childhood through adolescence. The analytic plan then expands on these constructs in the supplemental models by incorporating demographic and contextual variables that influence or modify the developmental pathways.

Primary Model Measures

Caregiver Problematic Conduct (Wave 3) A latent construct captured problematic parental conduct during early childhood and included indicators of both substance use and incarceration. These four indicators were selected because they represent concrete, observable forms of externalizing behavior that directly model rule-breaking, dysregulated responses to strain. Illicit drug use reflects substance-based coping and behavioral instability, while incarceration reflects chronic conflict with legal authority and the social consequences of antisocial behavior. Including both mother and father indicators captures the broader behavioral climate children are exposed to, consistent with developmental and criminological theory showing that problematic parental conduct transmit maladaptive coping scripts through modeling, reinforcement, and environmental instability. Modeling these indicators as a latent construct provides a theoretically coherent and empirically stable representation of early family risk. Because some children have only one available parent at Wave 3, the CFA and structural models treat missing parent indicators as missing data rather than as lower levels of externalizing behavior. Latent variable estimation does not “count” the number of available indicators; instead, it uses whatever information is present to estimate the underlying construct.

Full-information maximum likelihood (FIML) ensures that children with one parent do not receive artificially lower latent scores, and the latent factor reflects the underlying externalizing climate rather than the number of parents available for reporting.

Parental Drug Involvement (Wave 3). Drug involvement was assessed using Wave 3 mother and father self-reports of past-year illicit drug use. These items originated from the drug use section of the Composite International Diagnostic Interview Short Form (CIDI-SF), which evaluates past-year use of substances such as sedatives, tranquilizers, amphetamines, analgesics, inhalants, marijuana, cocaine, hallucinogens, and heroin (American Psychiatric Association, 1987; Kessler et al., 1998). For the present study, responses were recoded into binary indicators reflecting whether the parent had used any illicit substance in the past year (1 = yes, 0 = no). Separate mother and father drug use variables were constructed.

Parental Incarceration (Wave 3). Parental incarceration was measured using Wave 3 reports of whether the mother or father had ever spent time in jail. The father incarceration indicator combined mother and father reports to increase accuracy and was coded 1 if the father had ever been incarcerated and 0 otherwise. The mother incarceration indicator was based on the mother's Wave 3 report using the same coding. These indicators served as observed measures of parental criminal justice involvement.

Measurement Model for Problematic Parental Conduct (Wave 3). A confirmatory factor analysis (CFA) was conducted to evaluate the measurement structure of the Wave 3 problematic parental conduct latent construct. The latent factor included four dichotomous indicators: mother drug use, father drug use, mother incarceration, and father incarceration. Because all indicators were binary, the CFA used a probit link and weighted least squares estimation appropriate for categorical indicators.

Model fit was assessed using CFI, TLI, RMSEA, and χ^2 . Factor loadings were examined to determine whether each indicator contributed meaningfully to the latent construct. Indicators with weak loadings were evaluated for potential removal or respecification. Results of the CFA informed the final specification of the Wave 3 latent factor used in the structural equation model.

Caregiver Discipline (Wave 4). Caregiver discipline at approximately age five came from nineteen Wave 4 items in the Parent–Child Conflict Tactics Scales (CTSPC) (Straus et al., 1998). These items were completed by the primary caregiver, who was the mother in most cases. The FFCWS adapted the CTSPC to assess a range of disciplinary behaviors that parents use in response to child misbehavior. The adapted scale included items that measured nonviolent discipline, psychological aggression, physical assault, and neglectful behaviors from the CTSPC Supplemental Neglect Scale. The FFCWS removed items that assessed severe physical maltreatment to reduce respondent burden and avoid items with low base rates in population-based samples.

The primary caregivers rated each disciplinary behavior using an eight-category frequency scale that ranged from “never happened” to “more than 20 times in the past year,” with an additional option indicating that the behavior occurred before the past year. The FFCWS recoded these categories into a 0 to 6 scale and converted responses to weighted midpoints to represent the approximate frequency of each behavior.

The nonaggressive discipline composite included four items that reflected nonviolent strategies such as explaining rules, redirecting behavior, using timeouts, and removing privileges. A mean score was computed for the nonaggressive items, with higher values indicating more frequent use of nonaggressive strategies. In the present sample, the

nonaggressive discipline composite demonstrated acceptable internal consistency (Cronbach's $\alpha = .78$). All nonaggressive discipline items are listed under Appendix B1.

The aggressive discipline composite included ten items that reflected psychological aggression and physical assault. Psychological aggression items assessed behaviors such as yelling, threatening, or calling the child names. Physical assault items assessed behaviors such as spanking, slapping, or hitting with an object, excluding severe physical maltreatment items that the FFCWS removed from the adapted CTSPC. A mean score was computed across the ten items, with higher values indicating more frequent use of aggressive disciplinary behaviors. In the present sample, the aggressive discipline composite demonstrated strong internal consistency (Cronbach's $\alpha = .85$). All aggressive discipline items are listed under Appendix B2.

Child Functioning (Age 9). Child functioning at approximately age nine included two constructs that captured behavioral and social adaptation: externalizing behavior from the Child Behavior Checklist (CBCL) and adaptive social behavior from the Adaptive Social Behavior Inventory (ASBI). These measures came from primary caregiver reports at Wave 5.

Child Behavior Checklist – Externalizing Behavior (Wave 5). Externalizing behavior came from the CBCL/6–18 (Achenbach, 2001), which assesses a broad range of behavioral and emotional problems in children. The FFCWS selected 111 items from the CBCL but removed several items from the “other problems” scale that did not align with developmental expectations for nine-year-old children. The selected items assessed constructs such as social withdrawal, somatic complaints, anxiety and depression, social problems, thought problems, attention problems, delinquent behavior, and aggressive behavior. Primary caregivers rated each item on a three-point scale ranging from 1 (not true) to 3 (very true or often true).

Consistent with scoring guidelines and prior research using this scale, the analysis focused on the externalizing subscale, which includes 35 items that capture aggressive behavior and rule-breaking tendencies. In the present study, externalizing behavior is treated as an indicator of maladaptive coping, reflecting dysregulated, reactive responses to stress. Per FFCWS recommendations, items were recoded so that 1 became 0, 2 became 1, and 3 became 2, and a mean score was calculated across valid items, with higher values indicating more frequent externalizing behavior. Sample items included “argues a lot” and “gets in many fights.” All externalizing CBCL items are listed under Appendix B3.

Adaptive Social Behavior Inventory (Wave 5). Adaptive social behavior came from the ASBI Express subscale, adapted for primary caregiver report in the FFCWS (Greenfield et al., 1997; Hogan et al., 1992; Scott et al., 1997). The ASBI assesses children’s prosocial and expressive social behaviors, including understanding others’ feelings, showing sympathy, and expressing needs directly. Caregivers rated each item on a three-point scale ranging from 1 (not true) to 3 (very true or often true). Items were recoded so that 1 became 0, 2 became 1, and 3 became 2. A mean score was computed across valid items, with higher values indicating stronger adaptive social behavior. The FFCWS used the ASBI Express subscale in Wave 5, which included 13 items. All wave 5 ASBI items are listed under Appendix B4.

Adolescent Delinquency (Wave 6). Delinquency came from a set of self-report items adapted from the National Longitudinal Study of Adolescent Health (Harris, 2019). Teens reported how often they engaged in behaviors such as stealing, fighting, vandalism, and property damage. Response options ranged from *never* to *five or more times* in the past year. Add Health originally coded these responses from 0 to 3, but the FFCWS recoded them from 1 to 4 and removed two items from the original Add Health battery (lying to parents and running away).

Following scoring guidelines, items were recoded so that higher values indicated more frequent delinquent behavior, and responses were summed to create a total delinquency score.

These items capture behaviors that vary in severity, ranging from minor delinquency (e.g., petty theft, vandalism) to more serious behaviors (e.g., violence, weapon use, major theft). Treating them as a composite provides a broad indicator of overall delinquent involvement, consistent with prior work using the FFCWS delinquency battery. The full set of items is listed in Appendix B5.

Adolescent Social Skills (Wave 6). Adolescent social skills came from nine items adapted from the Social Skills Rating System (SSRS) Assertion scale, with wording modified for teen self-report (Gresham & Elliott, 2007). These items assessed behaviors such as initiating conversations, expressing needs, and responding appropriately in social situations. Teens rated how true each statement was for them on a three-point scale ranging from 1 (not true) to 3 (often true). Items were recoded so that 1 became 0, 2 became 1, and 3 became 2. A mean score was computed across the nine SSRS-derived items, with higher values indicating stronger social skills.

Since the FFCWS does not include direct measures of coping, this social skills composite serves as a theoretically aligned proxy for coping-related competencies. Social skills reflect adolescents' ability to communicate needs, seek support, navigate conflict, and regulate behavior in interpersonal contexts, and these processes overlap with core components of coping. Youths who can assert themselves appropriately, initiate conversations, and respond adaptively in social situations are generally better equipped to manage stress and mobilize social resources. For these reasons, within this developmental framework, social skills function as an indirect indicator of coping capacity. All SSRS items are listed under Appendix B6.

Covariates

The analysis included several baseline and early childhood covariates to adjust for demographic and socioeconomic differences across families. Child sex was coded at baseline (1 = female, 0 = male). Race and ethnicity were also measured at baseline and represented with three dichotomous indicators: Black (1 = Black, 0 = otherwise), Hispanic (1 = Hispanic, 0 = otherwise), and Other race (1 = other race, 0 = otherwise), with White serving as the reference category. Early welfare assistance was measured at Wave 3 using a dichotomous indicator of whether the primary caregiver reported receiving welfare support (1 = yes, 0 = no). All covariates were treated as observed variables and were allowed to predict all endogenous constructs in the structural equation model.

Supplemental Model Measures

The supplemental model measures included demographic, socioeconomic, and contextual variables that capture variation in children's environments and developmental risk. The variables included peer influence, and neighborhood support and cohesion. Each variable was selected based on theoretical relevance to developmental risk processes and was operationalized using established constructed measures from FFCWS.

Peer Influence. Peer influence was assessed from the Wave 6 (approximately age 15) peer-delinquency items from the FFCWS delinquency scale, adapted from the National Longitudinal Study of Adolescent Health (Harris, 2019). Teens reported how often their close friends engaged in 11 behaviors related to substance use and delinquency, including smoking, drinking, marijuana use, other drug use, vandalism, stealing, weapon carrying, and selling drugs. Response options ranged from “never” to “often.”

Items were recoded so that higher values reflected greater involvement of peers in risky or delinquent activities. A mean score was calculated across valid items, with higher values indicating greater exposure to peers who engage in substance use or delinquent behavior. All peer delinquent items are listed under Appendix B7.

Neighborhood Influence. Neighborhood characteristics can further influence coping patterns by shaping the regulatory support, shared norms, and social monitoring available to adolescents within their immediate environment. Neighborhood support and cohesion was assessed at Wave 6 (approximately age 15) using eight adolescent-report items from the FFCWS collective efficacy scale. These items capture perceptions of neighborhood cohesion, shared values, and informal social control, consistent with the collective efficacy framework developed by Sampson and colleagues (1997). Cohesion items asked adolescents to rate statements such as “people around here are willing to help their neighbors” and “this is a close-knit neighborhood.” Informal social control items asked how likely it was that neighbors would intervene if children skipped school, spray-painted buildings, showed disrespect to adults, or if a fight broke out in front of a house.

Response options were provided on a four-point scale ranging from strongly disagree (=1) to strongly agree (=4). FFCWS documentation recommends reverse-coding only the two negatively worded cohesion items to align with their original scoring structure; however, this approach results in lower scores representing higher support and cohesion. To maintain interpretive clarity, the six positively worded items were reverse-coded, and the two negatively worded items (“people in this neighborhood generally don’t get along with each other” and “people in this neighborhood do not share the same values”) were retained in their original direction. Responses were aggregated to form a continuous scale, with higher scores indicating

stronger perceptions of neighborhood support and cohesion. All neighborhood collective efficacy items are listed under Appendix B8.

Data Cleaning

Data cleaning procedures were conducted prior to analysis to ensure that all variables were accurately coded and aligned with the analytic plan. All variables were inspected for valid ranges, out-of-range values, and coding inconsistencies using frequency distributions and descriptive statistics. Constructed variables provided by the FFCWS were reviewed to confirm that their coding matched documentation guidelines. Values indicating “not in wave,” “don’t know,” or “refused” were recoded to missing prior to analysis.

Categorical variables used as grouping variables in the supplemental models (e.g., gender, race and ethnicity, poverty status) were checked for sparse categories and recoded only when necessary to align with the analytic strategy. When sparse categories were identified, adjacent categories were combined to ensure adequate cell sizes for analysis (e.g., collapsing smaller racial/ethnic groups into an “Other” category when counts were insufficient for stable estimation). Continuous predictors and mediators were evaluated for distributional properties, and no transformations were required. Overall, the data cleaning process ensured that all variables were consistently coded, aligned with documentation standards, and suitable for use in the structural equation modeling framework.

Data Analysis Plan

Structural equation modeling (SEM) in Stata Version 18 (StataCorp, 2023) was used to test a longitudinal developmental model linking early caregiving behaviors to coping-relevant functioning in middle childhood and, in turn, to adolescent behavioral outcomes. SEM is well-suited for this study because it allows simultaneous estimation of multiple developmental

pathways and accommodates latent constructs, correlated predictors, and missing data through full information maximum likelihood.

Analyses proceeded in a sequence of models. The primary structural model was estimated using the full sample. Two supplemental ecological models were then estimated, each extending the primary model by adding neighborhood support and cohesion or peer influence as predictors of adolescent outcomes. This progression moved from the core developmental model to analyses incorporating adolescents' ecological contexts.

Missing Data

The analytic plan relied on the full cohort without imposing additional inclusion or exclusion criteria beyond the requirement that families contribute valid data on at least one focal construct, which created a consistent foundation for the models that follow. Of the 4,897 families in the analytic sample, 4,458 contributed data at Wave 3 (approximately age 3). Families missing Wave 3 data ($n = 439$) remained in the analytic sample if they contributed data at later waves, allowing the models to incorporate all available information.

Wave-level missingness was examined to characterize patterns of participation across the study period. At Wave 3, 62.3% of families contributed valid data on at least one focal construct, with 37.7% missing all Wave 3 indicators. At Wave 4, 57.4% of families provided valid data and 42.6% were missing all Wave 4 discipline indicators. At Wave 5, 68.1% of families contributed valid data on child functioning, with 31.9% missing all Wave 5 indicators. At Wave 6, 70.0% of families provided valid adolescent outcome data, and 30.0% were missing all Wave 6 indicators. These patterns reflect typical longitudinal attrition in large cohort studies and support the use of FIML to incorporate all available observations.

Missing data were handled using FIML, which incorporates all available information under the assumption that data are missing at random. FIML uses the observed portions of each case to estimate model parameters without imputing values, making it well suited for structural equation modeling with longitudinal survey data. Item-level missingness across Waves 3 to 6 ranged from low to moderate, consistent with patterns observed in large cohort studies. Because FIML retains cases with partial data, the full analytic sample ($n = 4,897$) contributed to model estimation, avoiding the loss of statistical power and potential bias associated with listwise deletion. The completion of the missing data procedures created a stable foundation for the analytic models that followed.

Primary SEM Model

The structural equation model specified for the primary analysis follows the conceptual model presented in Figure 2.3 and incorporated all available observations ($N = 4,897$). All endogenous variables were estimated controlling for Wave 3 demographic covariates, including child sex (0 = female, 1 = male), race and ethnicity (Black, Hispanic, Other, with White as the reference category), and welfare assistance (1 = received help from a welfare or job placement office since the child's first birthday, 0 = no), as well as a latent factor of problematic parental conduct at Wave 3. These covariates were included to account for demographic differences that may influence developmental pathways and to ensure that the structural relations reflect substantive processes rather than background characteristics.

The model begins with a latent factor of problematic parental conduct at Wave 3, indicated by mother drug use, father drug use, mother incarceration, and father incarceration. This latent factor was included as a predictor of all subsequent endogenous constructs. From this latent factor, directional paths extend to the two Wave 4 caregiver discipline composites,

aggressive discipline and nonaggressive discipline, which represent distinct behavioral strategies parents use in response to child misbehavior. These discipline practices, together with the latent factor of problematic parental conduct, then predict Wave 5 child functioning, represented by externalizing behavior (CBCL) and adaptive social behavior (ASBI). Together, these constructs capture coping relevant tendencies in middle childhood, with externalizing behavior reflecting dysregulated, reactive responding and adaptive social behavior reflecting prosocial, regulated responding. Finally, both Wave 5 indicators predict the two Wave 6 adolescent outcomes, delinquency and adolescent social skills, with all paths estimated controlling for the latent factor of problematic parental conduct.

To account for shared variance not explained by the structural paths, the model included residual covariances among indicators with overlapping conceptual content, including the two discipline composites, the two Wave 5 child functioning indicators, and the Wave 6 delinquency outcome. These covariances improved model fit without altering the developmental sequence.

Supplemental Models

The supplemental models examined how different social and demographic contexts shape adolescents' coping related outcomes by introducing one ecological factor at a time in separate model specifications. Each model kept the primary developmental paths in place and replaced the added factor across models to test whether coping relevant outcomes varied across contexts such as peer influence or neighborhood conditions. This structure made it possible to compare outcomes across environments without altering the core developmental model.

The first supplemental model added adolescent peer influence as an additional Wave 6 predictor. Peer influence was included as a direct predictor of adolescent delinquency and adolescent social skills, alongside the Wave 5 mediators. This model evaluated whether peer

environments contributed unique variance to adolescent functioning beyond earlier caregiving and child behavior.

The second supplemental model removed peer influence and instead added neighborhood support and cohesion as the Wave 6 ecological factor. Neighborhood support and cohesion was included as a direct predictor of adolescent delinquency and adolescent social skills, again alongside the Wave 5 mediators. This model assessed whether adolescents' perceptions of neighborhood social organization contributed unique variance to adolescent functioning beyond earlier caregiving and child behavior.

All supplemental models were estimated using FIML with robust standard errors. The same control variables and residual covariances specified in the primary model were retained across all supplemental models. For multi-group analyses, model fit and cross-group differences were evaluated using standard SEM comparison procedures, including examination of fit indices and differences in structural paths.

Model Fit

Model fit relied on the Comparative Fit Index (CFI), Tucker–Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual. This specification produced a parsimonious and interpretable primary model consistent with prior FFCWS research that uses composite indicators and limited covariate adjustment. Consistent with contemporary SEM guidelines, model fit was evaluated using criteria in which CFI and TLI values $\geq .95$ and RMSEA and SRMR values $\leq .05$ indicate good fit (Kline, 2023).

Sensitivity Checks

The analysis included several sensitivity checks to evaluate the stability of the developmental pathways identified in the primary structural equation model. These checks

examined whether the associations among problematic parental conduct, caregiver discipline, child functioning, and adolescent outcomes remained consistent across alternative specifications and subgroup comparisons. Each sensitivity check used the same estimation procedures as the primary model and retained the same structural paths to ensure comparability across models. The sensitivity checks also considered potential sources of bias related to missing data and extreme values to ensure that the developmental pathways did not reflect artifacts of data limitations. The sensitivity checks created a clear transition from model estimation to evaluation of model stability.

Extreme values were examined to ensure that outliers did not distort model estimates. These values fell within plausible ranges for a high-risk cohort and did not require removal. No observations were excluded on the basis of extreme values. Patterns of missing data across Waves 3 through 6 were also reviewed to confirm that the use of full information maximum likelihood did not introduce systematic bias. Re-estimating the primary model using only cases with complete data on all focal constructs produced substantively similar results, supporting the stability of the developmental pathways. Across all sensitivity checks, the developmental pathways showed consistent patterns. The stability of these associations supported the robustness of the primary model findings and the reliability of the developmental sequence.

A combined model that included both peer delinquency and neighborhood collective efficacy was estimated to evaluate whether the two adolescent social-context predictors could be included simultaneously. Model fit was excellent ($RMSEA = 0.02$; $CFI = 0.97$; $TLI = 0.94$), and the developmental cascade remained stable. Peer delinquency continued to show a strong positive association with adolescent delinquency ($b = 0.27, p < .001$) and a nonsignificant association with social skills. Neighborhood collective efficacy continued to predict higher

adolescent social skills ($b = 0.11, p < .001$) and lower delinquency ($b = -0.01, p = .009$).

Importantly, both predictors remained significant when included together, and their covariance was small ($cov = -0.02$), indicating that peer and neighborhood processes contributed unique variance to adolescent functioning. The inclusion of both predictors did not alter the pathways linking early parental problematic conduct to discipline, child functioning, or adolescent outcomes. The combined model confirmed that peer and neighborhood influences operate independently and do not introduce multicollinearity or suppress each other's effects.

Chapter 4 - Results

Descriptive Statistics

Sample Characteristics

Table 4.1 summarizes demographic characteristics of the analytic sample.

Approximately 52% of children were male and 48% were female. The sample was racially and ethnically diverse, with 21% identifying as White, 48% as Black, 27% as Hispanic, and 4% as another race. About 28% of families received public assistance or job placement services since the child's first birthday. The demographic profile offers basic context for interpreting the results that follow.

Table 4.1: Demographic characteristics

Demographic characteristic	n	%
Sex		
Male	2556	52.20
Female	2341	47.80
Race		
White	1030	21.27
Black	2326	47.61
Hispanic	1336	27.34
Other race	194	3.97
Missing	11	0.22
Public Assistance (Wave 3)		
Received assistance	1035	28.28
Did not receive assistance	2,625	53.60

Note. N = 4,897

Bivariate Analyses

Bivariate correlations (Table 4.2) demonstrated associations among problematic parental conduct indicators, caregiver discipline practices, and child and adolescent behavioral outcomes. Parental problematic conduct was positively correlated with both forms of early school-age (age 5) discipline, and early school-age discipline showed associations with middle childhood (age 9) functioning. These early associations help organize the developmental sequence

examined in the structural models. Externalizing behavior at middle childhood (age 9) was positively correlated with adolescent (age 15) delinquency and negatively correlated with adolescent social skills, whereas adaptive social behavior at middle childhood (age 9) showed the opposite pattern. The overall pattern reflects expected differences between externalizing and prosocial tendencies during adolescence.

Table 4.2: Pairwise correlation matrix for study variables

Variables	Non-Aggressive Discipline	Aggressive Discipline	CBCL	ASBI	Delinquency	SSRS
Non-Aggressive Discipline (Wave 4)	1.00					
Aggressive Discipline (Wave 4)	0.56*** (0.00)	1.00				
CBCL (Wave 5)	0.19*** (0.00)	0.15*** (0.00)	1.00			
ASBI (Wave 5)	0.10*** (0.00)	0.01 (0.72)	-0.17*** (0.00)	1.00		
Delinquency (Wave 6)	0.08*** (0.00)	0.07*** (0.00)	0.17*** (0.00)	-0.04** (0.03)	1.00	
SSRS (Wave 6)	0.06*** (0.00)	0.02 (0.39)	-0.07*** (0.00)	0.13*** (0.00)	-0.06*** (0.00)	1.00

*Note: Values in parentheses are p-values. $p < .05$, $p < .01$, $p < .001$ **.*

Primary Model Results

Measurement Model Results for Problematic Parental Conduct (Wave 3).

A confirmatory factor analysis (CFA) was conducted to evaluate the Wave 3 problematic parental conduct latent construct prior to estimating the structural models. The latent factor included four dichotomous indicators: mother drug use, father drug use, mother incarceration, and father incarceration. All four indicators loaded strongly on the latent factor, with unstandardized logit loadings ranging from 0.85 to 1.33, indicating that each indicator contributed meaningfully to the underlying construct. Because the CFA was estimated using a

generalized structural equation model with binary indicators, traditional fit indices (CFI, TLI, RMSEA) were not available. Model information criteria indicated acceptable fit (AIC = 11813.6; BIC = 11864.82). Based on the strong loadings and acceptable model fit, all four indicators were retained in the final latent construct used in subsequent structural models.

Primary Model Fit

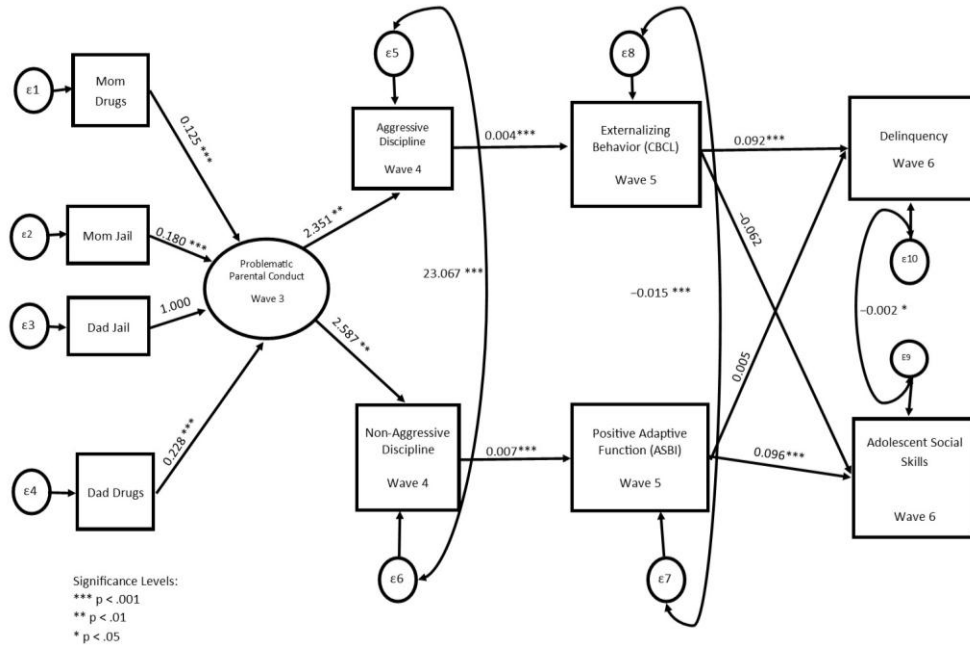
Model fit statistics indicated good fit to the data (Table 4.3). The RMSEA was 0.02, and both the CFI (0.97) and TLI (0.93) indicated strong comparative fit. The likelihood ratio test showed that the model differed from the saturated model, $\chi^2(41) = 126.48, p < .001$. Figure 4.1 illustrates the primary structural equation model, including all estimated paths among problematic parental conduct, early school-age (age 5) discipline practices, middle childhood (age 9) child functioning, and adolescent (age 15) outcomes. The fit indices support the use of this model to examine the developmental sequence across the three ages.

Table 4.3: Model fit indices for the primary structural equation model

Fit index	Value
χ^2 (41)	126.48
p-value	< .001
CFI	0.97
TLI	0.93
RMSEA (90% CI)	0.021 (90% CI: 0.017–0.025)

Note. Model estimated using full-information maximum likelihood with missing values (MLMV).

Figure 4.1: Primary structural equation model with unstandardized path coefficients



Note: All structural paths were estimated controlling for Wave 3 Problematic parental conduct, child sex, race/ethnicity (Black, Hispanic, Other), and Wave 3 welfare assistance. Control-variable coefficients are omitted from the diagram for clarity.

Primary Model Structural Paths.

Problematic Parental Conduct → Caregiver Discipline. Problematic parental conduct (age 3) significantly predicted both forms of caregiver discipline at early school-age (age 5). Higher problematic parental conduct was associated with more frequent nonaggressive discipline ($b = 2.59, p = .002$) and aggressive discipline ($b = 2.35, p = .001$).

Caregiver Discipline → Child Behavioral Functioning. Caregiver discipline at early school-age (age 5) predicted children's behavioral functioning at middle childhood (age 9). More frequent nonaggressive discipline predicted higher ASBI social behavior ($b = 0.01, p < .001$), whereas more frequent aggressive discipline predicted higher externalizing problems ($b = 0.00, p < .001$).

Child Behavioral Functioning → Adolescent Outcomes. Child behavior at middle childhood (age 9) predicted adolescent outcomes at adolescence (age 15). Higher ASBI

prosocial behavior predicted higher adolescent social skills ($b = 0.10, p < .001$). Higher externalizing problems marginally predicted lower adolescent social skills ($b = -0.06, p = .055$) and significantly predicted higher adolescent delinquency ($b = 0.09, p < .001$). ASBI prosocial behavior did not predict adolescent delinquency ($b = 0.01, p = .518$).

Direct Effects of Early Externalizing Behavior. Because the model included direct paths from problematic parental conduct to adolescent outcomes, problematic parental conduct functioned as a control variable in this model rather than as a focal predictor. Problematic parental conduct did not show a significant direct association with adolescent social skills ($p = .280$). However, problematic parental conduct demonstrated a significant direct association with adolescent delinquency ($b = 0.10, p < .001$), indicating that early problematic parental conduct contributed to later behavioral problems both through and independent of the developmental cascade.

Primary Model Residual Covariances

The model included several residual covariances among indicators that shared measurement content. Non-aggressive and aggressive discipline residuals covaried significantly ($\text{cov} = 23.07, p < .001$). ASBI prosocial behavior and externalizing problems at middle childhood (age 9) showed a significant negative covariance ($\text{cov} = -0.02, p < .001$). Adolescent social skills and delinquency residuals also covaried negatively ($\text{cov} = -0.00, p = .018$).

Supplemental Model 1 Results: Delinquent Peer Influence

Peer Influence Model Fit

With regards to the supplemental model in which delinquent peer influences were added to the primary model, model fit statistics indicated excellent fit (Table 4.4). The RMSEA was 0.02 (90% CI: 0.02–0.03). The CFI was 0.97, and the TLI was 0.94. The likelihood ratio test

indicated that the model differed from the saturated model ($\chi^2(48) = 158.82, p < .001$).

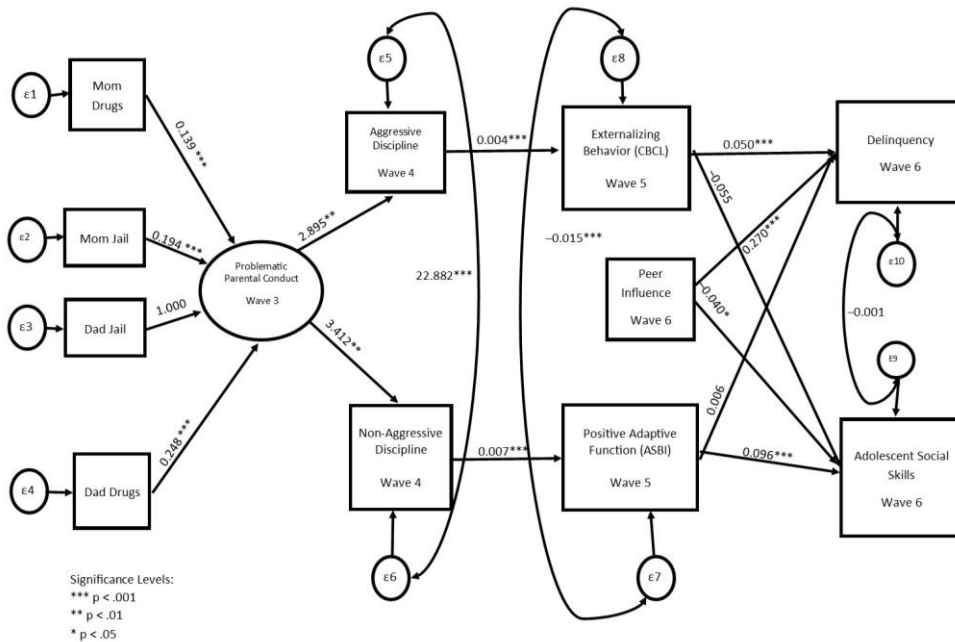
Figure 4.2 illustrates the peer-supplemental structural equation model, including all estimated paths among problematic parental conduct (age 3), early school-age (age 5) discipline practices, middle childhood (age 9) child functioning, adolescent (age 15) outcomes, and delinquent peer behavior.

Table 4.4: Model fit indices for the peer influence structural equation model

Fit index	Value
$\chi^2 (48)$	158.82
p-value	< .001
CFI	0.97
TLI	0.94
RMSEA (90% CI)	0.022 (90% CI: 0.018–0.026)

Note. Model estimated using full-information maximum likelihood with missing values (MLMV).

Figure 4.2: Peer delinquency supplemental structural equation model



Note: All structural paths were estimated controlling for Wave 3 Problematic parental conduct, child sex, race/ethnicity (Black, Hispanic, Other), and Wave 3 welfare assistance. Control-variable coefficients are omitted from the diagram for clarity.

Delinquent Peer Structural Paths

All primary model pathways from early problematic parental conduct to early childhood (age 5) discipline practices remained significant and unchanged in direction and magnitude when peer influences were added. Higher problematic parental conduct continued to predict more frequent non-aggressive discipline ($b = 3.41, p = .001$) and more frequent aggressive discipline ($b = 2.90, p = .001$).

Early school-age (age 5) discipline continued to predict middle childhood (age 9) functioning in the same pattern observed in the primary model. More frequent non-aggressive discipline predicted higher ASBI prosocial behavior ($b = 0.01, p < .001$), and more frequent aggressive discipline predicted higher externalizing problems ($b = 0.00, p < .001$).

Middle childhood (age 9) functioning continued to predict adolescent outcomes at adolescence (age 15). Higher ASBI prosocial behavior predicted higher adolescent social skills ($b = 0.10, p < .001$). Externalizing problems predicted higher adolescent delinquency ($b = 0.05, p < .001$). ASBI prosocial behavior did not significantly predict adolescent delinquency, and externalizing problems did not significantly predict adolescent social skills.

Peer Effects in Adolescence. Delinquent peer behavior showed a clear and meaningful association with adolescent outcomes at adolescence (age 15). Higher levels of peer delinquency showed a borderline association with lower adolescent social skills ($b = -0.04, p = .050$). Peer delinquency also strongly predicted higher adolescent delinquency ($b = 0.27, p < .001$).

Direct Effects of Early Externalizing Behavior. Because the peer-supplemental model included direct paths from problematic parental conduct to adolescent (age 15) outcomes, problematic parental conduct remained a covariate rather than a focal predictor. Problematic parental conduct did not predict adolescent social skills once early school-age (age 5) and middle

childhood (age 9) processes were included. Problematic parental conduct did predict adolescent delinquency ($b = 0.08, p < .001$), indicating that early family externalizing behavior continued to contribute to later delinquency even after accounting for discipline practices, child functioning, and peer influences.

Delinquent Peer Residual Covariances

The peer-supplemental model included several residual covariances among indicators that shared measurement content. Non-aggressive and aggressive discipline residuals covaried significantly ($cov = 22.88, p < .001$). ASBI prosocial behavior and externalizing problems at middle childhood (age 9) showed a significant negative covariance ($cov = -0.02, p < .001$). Adolescent social skills and delinquency residuals did not show a significant covariance ($cov = -0.00, p = .120$).

Supplemental Model 2 Results: Neighborhood Support and Cohesion

Neighborhood Model Fit

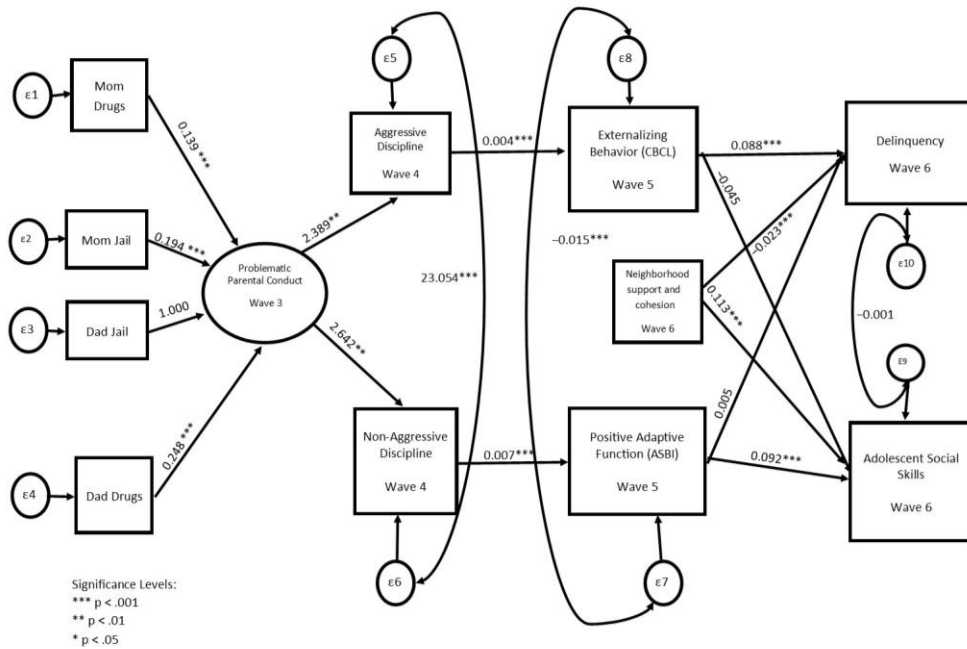
With regards to supplemental model 2 in which neighborhood support and cohesion was added to the primary model, model fit statistics indicated excellent fit (Table 4.5). The RMSEA was 0.02 (90% CI: 0.02–0.02). The CFI was 0.97, and the TLI was 0.93. The likelihood ratio test indicated that the model differed from the saturated model ($\chi^2(48) = 143.43, p < .001$). Figure 4.3 illustrates the neighborhood-supplemental structural equation model, including all estimated paths among problematic parental conduct, early school-age (age 5) discipline practices, middle childhood (age 9) child functioning, adolescent (age 15) outcomes, and neighborhood support and cohesion.

Table 4.5: Model fit indices for the neighborhood support and cohesion structural equation model

Fit index	Value
χ^2 (48)	143.43
p-value	< .001
CFI	0.97
TLI	0.93
RMSEA (90% CI)	0.020 (90% CI: 0.016–0.024)

Note. Model estimated using full-information maximum likelihood with missing values (MLMV).

Figure 4.3: Neighborhood support and cohesion supplemental structural equation model



Note: All structural paths were estimated controlling for Wave 3 Problematic parental conduct, child sex, race/ethnicity (Black, Hispanic, Other), and Wave 3 welfare assistance. Control-variable coefficients are omitted from the diagram for clarity.

Neighborhood Structural Paths

All primary model pathways from early problematic parental conduct to early school-age (age 5) discipline practices remained significant and unchanged in direction and magnitude when neighborhood support and cohesion was added. Higher problematic parental conduct continued

to predict more frequent non-aggressive discipline ($b = 2.64, p = .002$) and more frequent aggressive discipline ($b = 2.39, p = .001$).

Early childhood (age 5) discipline continued to predict middle childhood (age 9) child functioning in the same pattern observed in the primary model. More frequent non-aggressive discipline predicted higher ASBI prosocial behavior ($b = 0.01, p < .001$), and more frequent aggressive discipline predicted higher externalizing problems ($b = 0.00, p < .001$).

Middle childhood (age 9) functioning continued to predict adolescent outcomes at adolescence (age 15). Higher ASBI prosocial behavior predicted higher adolescent social skills ($b = 0.09, p < .001$). Externalizing problems predicted higher adolescent delinquency ($b = 0.09, p < .001$). ASBI prosocial behavior did not significantly predict adolescent delinquency, and externalizing problems did not significantly predict adolescent social skills.

Neighborhood Effects in Adolescence. Neighborhood support and cohesion significantly predicted both adolescent outcomes at adolescence (age 15). Higher perceived support and cohesion was associated with higher adolescent social skills ($b = 0.11, p < .001$) and lower adolescent delinquency ($b = -0.02, p < .001$).

Direct Effects of Early Externalizing Behavior. Because the neighborhood-supplemental model included direct paths from problematic parental conduct to adolescent (age 15) outcomes, problematic parental conduct remained a covariate rather than a focal predictor. Problematic parental conduct did not predict adolescent social skills once early school-age (age 5) and middle childhood (age 9) processes were included. Problematic parental conduct did predict adolescent delinquency ($b = 0.10, p < .001$), indicating that early family externalizing behavior continued to contribute to later delinquency even after accounting for discipline practices, child functioning, and neighborhood support and cohesion.

Neighborhood Residual Covariances

The neighborhood-supplemental model included several residual covariances among indicators that shared measurement content. Non-aggressive and aggressive discipline residuals covaried significantly ($\text{cov} = 23.05, p < .001$). ASBI prosocial behavior and externalizing problems at middle childhood (age 9) showed a significant negative covariance ($\text{cov} = -0.02, p < .001$). Adolescent social skills and delinquency residuals did not show a significant covariance ($\text{cov} = -0.00, p = .175$). Sensitivity analyses indicated that all developmental pathways remained stable across alternative model specifications.

Chapter 5 - Discussion

Summary of Findings

This study examined how early caregiving, child functioning, and ecological conditions shaped adolescent behavior across three developmental periods. The findings revealed a consistent sequence beginning with early problematic parental conduct and moving from early-childhood parental discipline practices (age 5) to middle-childhood functioning (age 9) and adolescent outcomes (age 15). Each research question addressed a specific part of this sequence, and the results clarified how these processes operated across the primary and supplemental models. The summary below presents the findings for each research question and hypothesis in the order they were posed.

Research Question 1 asked how problematic parental conduct shaped caregiver discipline practices during early childhood (roughly age 3) and early school age (about age 5). The findings supported Hypothesis 1. Higher problematic parental conduct predicted more frequent aggressive discipline and more frequent non-aggressive discipline at age 5. These associations appeared consistently across the primary model and both supplemental models. The results confirmed that early parental behavior shaped the disciplinary environment children experienced during early school age (age 5).

Research Question 2 examined whether caregiver discipline practices predicted children's coping-relevant functioning in middle childhood (about age 9). The findings supported Hypothesis 2. Non-aggressive discipline predicted higher prosocial behavior at age 9, and aggressive discipline predicted higher externalizing behavior at age 9. These pathways remained stable across all models. The results confirmed that early discipline practices shaped children's behavioral tendencies in middle childhood (age 9).

Research Question 3 asked whether middle childhood indicators predicted adolescent delinquency and social skills. The findings supported Hypothesis 3. Prosocial behavior at age 9 predicted higher adolescent social skills at age 15, and externalizing behavior at age 9 predicted higher adolescent delinquency at age 15 and modestly lower social skills. These pathways appeared consistently across the primary, peer, and neighborhood models. The results confirmed that middle childhood (age 9) functioning served as a key predictor of adolescent (age 15) behavior.

Research Question 4 examined whether early caregiving environments exerted direct effects on adolescent outcomes beyond the developmental cascade. The findings supported Hypothesis 4. Early problematic parental conduct around age 3 predicted adolescent delinquency at age 15 in all models, and this effect occurred both through the developmental cascade and through a direct pathway. Early problematic parental conduct did not predict adolescent social skills, which aligned with the developmental structure of the model because social skills developed through the prosocial pathway rather than through early externalizing behavior. The results confirmed that early family risk contributed directly to delinquency and did not influence positive social development.

Research Question 5 asked how peers and neighborhood support and cohesion contributed additional explanatory power in adolescence. The findings supported Hypothesis 5. Peer delinquency at age 15 strongly predicted adolescent delinquency at age 15 and showed a borderline association with lower social skills. Neighborhood support and cohesion at age 15 predicted higher adolescent social skills and lower delinquency. These effects did not alter the developmental pathways that linked early caregiving to later outcomes.

Across all models, the developmental sequence remained stable. Early problematic parental conduct at age 3 predicted discipline practices at age 5, discipline predicted middle childhood functioning at age 9, and middle childhood functioning predicted adolescent social skills and delinquency at age 15. Peer delinquency and neighborhood support and cohesion added unique variance without altering the core developmental pathways. The developmental pattern observed across the models provides the context for interpreting how early experiences shaped later behavior. The Wave 3 parental problematic conduct latent construct demonstrated strong measurement properties, supporting its use in the structural models and reinforcing confidence in the developmental pathways identified in this study.

Interpretation of Findings

Primary Developmental Model

The parental problematic conduct construct was modeled as a latent factor because illicit drug use and incarceration represent the specific forms of caregiver externalizing behavior that model rule-violating, dysregulated responses to strain. Drug use signals substance-based coping and instability, while incarceration reflects chronic conflict with authority and the social consequences of antisocial behavior. Including both mother and father indicators captures the full behavioral climate children observe, aligning with developmental and criminological theory that conceptualizes externalizing behavior as a patterned family environment rather than isolated acts. Early caregiving patterns create the starting point for the developmental sequence that follows. The results showed that early parental behavior during early childhood (age 3) shaped the disciplinary environment children experienced at early school age (age 5). Constructive discipline supported prosocial development, and harsh discipline contributed to externalizing tendencies. Externalizing behavior in middle childhood (age 9) predicted delinquency in

adolescence (age 15), and prosocial behavior supported later social skills. These patterns show that early family risk influenced adolescent delinquency through both direct and indirect pathways.

The primary model revealed a clear developmental cascade that linked early caregiving conditions to adolescent functioning. Problematic parental conduct during early childhood (age 3) predicted both non-aggressive and aggressive discipline practices during early school-age (age 5). The patterns aligned with coercive family process theory, which describes how caregiver dysregulation increases reliance on harsh or reactive strategies (Patterson, 1982). Discipline practices during early school-age (age 5) shaped children's behavioral functioning during middle childhood (age 9). More frequent non-aggressive discipline predicted higher adaptive social behavior, and more frequent aggressive discipline predicted higher externalizing problems. The pattern aligned with social learning and coping frameworks. These frameworks describe how children adopt behavioral strategies that caregivers model and reinforce during daily interactions (Bandura, 1977; Compas et al., 2001).

As development progresses, early behavioral tendencies begin to separate into distinct pathways. Children's behavioral functioning during middle childhood (age 9) diverged in its implications for adolescence. Externalizing problems predicted higher delinquency and modestly lower social skills during adolescence, and adaptive social behavior predicted stronger adolescent social skills without relating to delinquency during adolescence. The split reflected two developmental routes documented in prior research: a maladaptive pathway in which coercive or inconsistent caregiving fosters externalizing behavior that increases risk for delinquency (Moffitt, 1993; Widom, 1989), and an adaptive pathway in which supportive discipline promotes prosocial behavior that strengthens later social competence (Eisenberg et al.,

1998). This finding is in line with general strain theory which suggests that early instability and caregiver dysregulation create emotional pressure that undermines children's regulatory capacity and increases reliance on reactive responses (Agnew, 1992).

Adolescent outcomes reflected both the indirect effects of earlier development and a direct influence of early family risk. Problematic parental conduct during early childhood (age 3) also showed a direct association with delinquency during adolescence, which indicated that early family risk influences adolescent behavior both through and independent of children's behavioral responses. Recent work on parental incarceration shows similar patterns, with children in these contexts displaying higher externalizing behavior and greater emotional dysregulation across development (Eddy & Poehlmann-Tynan, 2019; Herreros-Fraile et al., 2023; Poehlmann-Tynan & Turney, 2021). In the primary model, externalizing behavior during middle childhood (age 9) emerged as the central mechanism that linked early caregiving to adolescent delinquency, and adaptive social behavior formed a separate pathway to adolescent social skills. The findings highlighted children's behavioral functioning as a primary mechanism through which early family conditions shape later outcomes, consistent with developmental cascade models that show how early behavioral tendencies accumulate and redirect trajectories across childhood and adolescence (Sameroff, 2010).

Delinquent Peer Influence Supplemental Model

Peer delinquency emerged as a strong concurrent predictor of adolescent outcomes. The peer-supplemental model showed that peer delinquency had the largest association with adolescent delinquency while the developmental pathways from early caregiving through middle childhood remained stable. Problematic parental conduct continued to show a small direct effect

on adolescent delinquency even after accounting for peer influence, and the covariances strengthened model fit by accounting for shared variance not captured by the structural paths.

The delinquent peer supplemental model showed that peer delinquency contributed additional variance to adolescent outcomes without altering the developmental cascade. The developmental cascade from early childhood (age 3) through early school-age (age 5) and middle childhood (age 9) remained intact, and peer delinquency added independent effects on adolescent social skills and delinquency. Exposure to delinquent peers increases risk by modeling antisocial behavior, reinforcing rule-breaking, and creating opportunities for deviant activities. The patterns aligned with research on peer contagion and deviancy training, which shows that adolescents adopt behavioral strategies rewarded within their peer groups (Dishion & Tipsord, 2011). Affiliation with less delinquent peers supports social skill development by providing prosocial norms and opportunities to practice constructive interaction. The findings identified peers as a key ecological layer that heightens or buffers developmental risk during adolescence, consistent with social learning perspectives that emphasize the power of peer modeling and reinforcement (Bandura, 1977).

Neighborhood Support and Cohesion Supplemental Model

Beyond peer influences, neighborhood conditions introduce another ecological layer that shapes adolescent behavior. The results showed that neighborhood support and cohesion predicted higher social skills and lower delinquency in adolescence, controlling for early caregiving and middle-childhood functioning. Neighborhood conditions contributed additional explanatory power without altering the core developmental sequence. Problematic parental conduct continued to show a small direct effect on delinquency after accounting for

neighborhood conditions, and the covariances improved model fit by capturing shared variance not represented in the structural paths.

The neighborhood supplemental model showed that adolescents' perceptions of neighborhood support and cohesion shape behavioral development during adolescence. Higher support and cohesion predicted better social skills and lower delinquency, independent of the developmental pathways established earlier in childhood. Adolescents in neighborhoods with lower cohesion, weaker shared norms, and reduced informal social control faced elevated risk for delinquent behavior. The findings aligned with ecological and social-organizational theories that show how neighborhood cohesion and collective monitoring protect against antisocial behavior by shaping opportunities, expectations, and supervision available to youth (Sampson et al., 1997). The results demonstrated that neighborhood conditions predicted adolescent behavior while the developmental pathways from early caregiving through middle childhood remained stable.

Overall Synthesis

Across all models, the results showed a consistent developmental pattern. Early problematic parental conduct at age 3 predicted both non-aggressive and aggressive discipline at age 5. Discipline practices predicted prosocial and externalizing behavior at age 9, and middle childhood behavior predicted adolescent social skills and delinquency at age 15. The direction of effects remained stable across all supplemental models. Peer delinquency and neighborhood cohesion added unique variance in adolescent functioning without altering the pathways that linked early caregiving to later outcomes.

Taken together, the supplemental models show how early caregiving establishes regulatory tendencies that later ecological contexts modify across development. Children's

behavioral functioning reflects their coping capacity, and coping capacity channels early family risk into adolescent outcomes. Aggressive discipline and early problematic parental conduct shape maladaptive coping responses that appear as externalizing behavior and increase delinquency across demographic groups. Non-aggressive discipline strengthens adaptive coping reflected in prosocial behavior, which supports stronger social skills. Because the dataset does not include direct coping measures, prosocial behavior and externalizing behavior serve as theoretically aligned indicators of coping capacity. Ecological layers such as peer and neighborhood contexts contributed additional variance to adolescent outcomes without altering the core developmental pathways. The patterns aligned with ecological and social learning perspectives, which show how children reproduce coping strategies modeled and reinforced in early caregiving environments. Ultimately, the supplemental models demonstrated that early caregiving establishes regulatory tendencies that later ecological contexts shape in additive ways across development.

Macro-Level and Ecological Interpretation

The developmental pattern observed across the models extends naturally into broader ecological systems, where early-formed regulatory tendencies shape how adolescents engage with peer and neighborhood contexts. Coping develops through continuous interaction with environmental demands and supports, and developmental research shows that regulation grows through modeling, reinforcement, and environmental feedback across childhood and adolescence (Skinner & Zimmer-Gembeck, 2007). Ecological contexts do not introduce new developmental mechanisms; they shape the expression of coping strategies established in early caregiving, consistent with ecological systems theory and social learning research (Bandura, 1977; Bronfenbrenner, 1979). Early caregiving patterns establish children's regulatory tendencies, and

early appraisal and regulation habits continue to guide behavior as children move into broader ecological settings (Cassidy & Shaver, 2016; Compas et al., 2001)

Within this broader ecological view, the primary model represents the micro-level foundation on which the supplemental models build, and the primary model captures the processes that link early caregiving to adolescent behavior. The supplemental models show how peer and neighborhood contexts add predictors of adolescent functioning while the core developmental pathways remain stable.

As children move across settings, early regulatory tendencies interact with new demands, supports, and constraints. Children carry early-formed regulatory tendencies into neighborhood and peer relationships, where reinforcement, constraint, or redirection occurs. Developmental cascade research shows that movement across settings exposes children to new behavioral models, new stressors, and new opportunities for reinforcement, which gradually stabilizes or reshapes coping strategies learned during early childhood (Moffitt, 1993; Sameroff, 2010).

Each ecological layer influences the same core regulatory processes through distinct mechanisms. Peer delinquency reinforces externalizing tendencies and increases opportunities for rule breaking, consistent with deviancy-training findings that link antisocial peer groups to growth in problem behavior (Dishion & Tipsord, 2011). Prosocial peer contexts strengthen adaptive coping and support social skill development, reflecting social learning principles (Bandura, 1977). Neighborhood support and cohesion create a regulatory climate that constrains or facilitates behavioral expression, supported by research showing lower youth violence in cohesive neighborhoods with strong informal control (Sampson et al., 1997). Collectively, these peer, neighborhood, and community conditions shape the opportunities and constraints that guide coping development and influence how behavioral tendencies unfold across adolescence.

Across all ecological layers, appraisal and regulation remain the central processes that connect early caregiving to adolescent outcomes. Ecological contexts modify appraisal and regulation by altering the cues children receive, the stressors they encounter, the behavioral models available to them, and the opportunities for expression. Coping capacity develops as a system-level characteristic that reflects the combined influence of family processes, peer dynamics, and neighborhood conditions. Strain theory highlights exposure to adverse conditions and negative emotion (Agnew, 1992), coercion theory highlights harsh and inconsistent family interactions (Patterson, 1982), and social learning theory highlights modeling and reinforcement (Bandura, 1977). Early caregiving shapes appraisal and regulation, and ecological contexts later strengthen or redirect those tendencies, providing a developmental bridge into criminological theories that explain how stress, coercive environments, and learned behavior contribute to delinquency.

Integration With Criminological Theory

The criminological interpretation builds directly on the ecological patterns by showing how early coping tendencies map onto major theoretical frameworks. Coping socialization provides a unifying framework that connects the core elements of strain, coercion, and learning theories. Early caregiving environments shape children's appraisal and regulation processes, and appraisal and regulation form the foundation for later coping responses. Early coping tendencies influence how adolescents interpret strain, respond to coercive interactions, and engage with peer groups. The developmental patterns in the models match criminological work that links stress, coercive environments, and learned behavior to delinquency. However, the findings from this study indicate that these criminological processes operate through developmental pathways established in early caregiving, rather than functioning as independent mechanisms.

Social learning perspectives find support in the models. Parents model and reinforce coping strategies through their own behavioral patterns, emotional responses, and disciplinary practices, providing early scripts for interpreting strain and regulating emotion (Akers, 1998; Bandura, 1977). Early interactions provide children with templates for interpreting stress, regulating emotion, and responding to conflict, and these learned scripts shape how strain is appraised and which responses feel available (De Leersnyder et al., 2013; Lareau, 2011). Peer and neighborhood contexts later reinforce, challenge, or redirect those tendencies. Peer delinquency normalizes externalizing behavior and increases opportunities for rule breaking, while prosocial peer contexts strengthen adaptive coping and support social skill development. Neighborhood support and cohesion shape which behaviors receive reinforcement, which aligns with Bandura's (1977) emphasis on modeling and with Sampson, Raudenbush, and Earls' (1997) findings on community regulation. Reinforcement, modeling, and opportunity structures operate across family, peer, and community environments and guide the development and expression of coping tendencies, and maladaptive scripts become more likely when deviant responses are repeatedly reinforced or when adaptive strategies remain underdeveloped (Matsueda, 1988; Pratt et al., 2010; Warr, 2002). Because individuals must evaluate situations, anticipate outcomes, and regulate motivation, agency determines how learned scripts are activated, modified, or inhibited under strain (Bandura, 1999; Sampson & Laub, 1993).

General Strain Theory (GST; Agnew, 1992) also provides a developmental framework for understanding how adverse experiences create negative emotions that increase the likelihood of delinquency. The findings support GST because exposure to problematic parental conduct at age 3 and aggressive discipline at age 5 represents early sources of strain that shape the appraisal and regulation tendencies reflected in children's behavior by age 9. The pattern aligns with

research linking parental incarceration to higher delinquency during adolescence, and these family-based strains heighten negative emotion by undermining regulatory capacity and increasing reliance on maladaptive coping (Agnew, 2006; Compas et al., 2017; Murray & Farrington, 2008). Yet the current results show that strain responses are shaped first by early appraisal and regulation tendencies, consistent with developmental models emphasizing emotion regulation and coping (Compas et al., 2001). Strains involving victimization, family conflict, and other ACEs heighten negative affect and delinquency through dysregulated coping (Hollist et al., 2009; Van Wyk, 2023). Because early caregiving shapes appraisal and regulation long before adolescents encounter many of these strains, these developmental tendencies provide the foundation through which later strain responses unfold.

Coercion theory offers a complementary developmental explanation for the patterns observed in the models. Coercive family processes influence the development of externalizing behavior, and early patterns continue to shape adolescent outcomes. Aggressive discipline during early school age (age 5) strengthens coercive cycles that increase externalizing tendencies during middle childhood (age 9), which reflects Patterson's (1982) argument that harsh and inconsistent discipline fosters behavioral styles that increase delinquency. Nonaggressive discipline supports prosocial behavior, which fits evidence that constructive parenting interrupts coercive cycles. These patterns parallel relational perspectives showing that coercive climates weaken regulation, narrow coping repertoires, and reinforce maladaptive strategies (Colvin et al., 2002; Patterson, 1982), whereas supportive environments strengthen regulation, buffer strain, and promote adaptive coping (Kurtz & Zavala, 2017). Overall, the findings reinforce that coercion operates as a developmental process rooted in early caregiver–child interactions and in the socialization of discipline and coping.

Coping socialization clarifies why some adolescents respond to strain with delinquency and others do not. Early caregiving shapes appraisal and regulation tendencies that form the foundation of coping capacity, consistent with developmental models emphasizing emotion regulation and coping (Compas et al., 2001). Coercive discipline undermines these regulatory processes and strengthens externalizing behavior, aligning with coercion theory and evidence that harsh relational climates weaken coping repertoires (Colvin et al., 2002; Patterson, 1982). Supportive caregiving, by contrast, provides expressive and instrumental resources that buffer strain and promote adaptive coping (Kurtz & Zavala, 2017). Ecological conditions further influence coping development by either reinforcing maladaptive patterns or expanding access to supportive alternatives, which shapes how adolescents interpret and respond to stressors (Christens et al., 2025; De Leersnyder et al., 2013). Peer influence also operates through coping capacity, as adolescents with stronger adaptive repertoires respond differently to deviant opportunities and social pressure than those with weaker regulatory skills (Warr, 2002). The developmental and ecological patterns identified in the models point to a single emotional-cognitive process that organizes how strain is interpreted and managed across childhood and adolescence, creating the need for an integrated model that links strain, arousal, appraisal, coping, and behavioral action into one developmental sequence.

Proposed Integrated Model

The findings support an integrated developmental model in which emotion functions as the central hinge that connects early caregiving, ecological context, and adolescent behavior. The model organizes the developmental sequence into a single emotional-cognitive process that explains how strain is interpreted and managed across childhood and adolescence. It extends the coping socialization framework by showing how early caregiving establishes appraisal and

regulation tendencies that shape emotional arousal, interpretation, and behavioral response across development (Compas et al., 2001; Gross, 1998).

The integrated model follows a sequence that begins with strain and ends with behavioral action. Strain refers to the stressful or adverse conditions that children encounter in their environments, including problematic parental conduct, aggressive discipline, peer delinquency, and neighborhood disorder (Murray & Farrington, 2008; Patterson, 1982; Warr, 2002). Strain increases emotional arousal, which creates the need for regulation and interpretation. Early caregiving environments regulate children's emotional arousal systems and shape the ways children interpret and respond to stress, providing the initial structure for how strain is experienced and managed (Colvin et al., 2002; Patterson, 1982). This sequence links strain, arousal, appraisal, coping, and behavioral action into a coherent developmental process. It explains how early caregiving creates enduring appraisal tendencies that guide coping responses and ultimately shape behavioral outcomes across development (Compas et al., 2001; Gross, 1998). Arousal is the first step in this sequence and provides the basis for how children begin to interpret strain.

Arousal shapes how children appraise situations. Children who experience frequent strain often interpret situations as threatening or hostile, which strengthens externalizing tendencies (Colvin et al., 2002; Patterson, 1982). Children who experience supportive caregiving and prosocial environments develop calmer arousal patterns and interpret situations in more constructive ways (Compas et al., 2001; Gross, 1998). Early caregiving environments establish children's default appraisal tendencies, which later influence how children interpret strain. This sequence, in which arousal shapes appraisal and appraisal guides coping, is well

supported in developmental models of emotion regulation and coping (Compas et al., 2001; Gross, 1998).

Appraisal guides the coping strategies children ultimately select, and those strategies lead directly to behavioral action. While coping may appear in adaptive or maladaptive forms, maladaptive coping increases the likelihood of delinquency, and adaptive coping supports the development of social skills (Warr, 2002). Maladaptive coping includes aggression, defiance, and disengagement, and adaptive coping includes cooperation, communication, and problem solving. Coping patterns therefore clarify how appraisal contributes to behavioral outcomes across development (Christens et al., 2025; De Leersnyder et al., 2013). This connection between appraisal, coping, and behavioral action highlights the emotional processes that shape behavioral development.

Emotion links the micro level processes identified in the primary model with the broader ecological influences observed in the supplemental models. Peer environments and neighborhood conditions shape the emotional cues children encounter and influence the strategies they use to manage arousal (Christens et al., 2025; Warr, 2002). These ecological contexts strengthen or weaken emotional and behavioral tendencies established in early childhood by shaping the stressors children encounter and the meanings they assign to those experiences (De Leersnyder et al., 2013). Emotion therefore connects early tendencies with the ecological conditions that shape behavioral outcomes across development.

Contribution to the Field

Criminology has long emphasized strain, coercion, and learning but has not fully explained how children develop the regulating strategies that shape their responses to those conditions. The study fills that gap by showing how early caregiving environments influence

emotional arousal, appraisal patterns, and behavioral regulation. Developmental research supports findings that link problematic parental conduct and harsh discipline to later delinquency, including work on parental incarceration and child outcomes (Murray & Farrington, 2008). Early processes form the foundation for later coping responses and guide how adolescents interpret and respond to strain, coercive interactions, and peer behavior. This developmental perspective clarifies how coping styles emerge and why they differ across individuals and environments.

The study also advances criminological research by identifying coping socialization as a central mechanism that links early caregiving, ecological context, and adolescent behavior. The findings show that early emotional and behavioral tendencies shape how adolescents interpret strain, respond to coercive environments, and engage with peer groups. The developmental sequence clarifies how risk accumulates across childhood and adolescence and supports criminological work that links early adversity to later delinquency. The study strengthens the connection between developmental science and criminology by demonstrating how early caregiving environments influence the processes that criminological theories describe.

Coping socialization strengthens criminological theory by providing a single mechanism that connects strain, coercion, and learning perspectives. It clarifies why strain leads to delinquency for some adolescents and not for others, why coercive discipline produces stronger effects in certain contexts, and why peer influence varies across ecological settings. It also highlights policy priorities that emphasize emotional regulation, constructive caregiving, and prosocial peer environments as protective factors. Policies that reduce socioeconomic stress and strengthen neighborhood cohesion can also support the development of adaptive coping. By identifying coping socialization as a central developmental process, the study highlights a

mechanism that can guide prevention and intervention efforts across multiple ecological levels. The developmental and ecological patterns in the findings point directly to practices and policies that can strengthen adaptive coping and reduce delinquency.

Implications

Coping Supports for Individuals

Adaptive coping develops through coordinated strategies that combine personal skill building, family reinforcement, and community support (Bandura, 1977; Compas et al., 2017; Lazarus & Folkman, 1984). The developmental cascade identified in this study shows that early problematic conduct increases the likelihood of adolescent delinquency, and adaptive social behavior supports later social skills. Intervention planning should therefore prioritize supports that reduce early externalizing tendencies and strengthen prosocial behavior, because these pathways were the most consistent predictors of adolescent outcomes.

Individual and Family-Level Interventions. Because early caregiving practices predicted children's externalizing and prosocial behavior by age nine, interventions that target caregivers and early family routines represent a primary prevention opportunity. Caregivers and mentors can teach emotion labeling, guided reappraisal, and problem solving through one-on-one coaching that builds coping self-efficacy (Chesney et al., 2006; Kato, 2012; Morris et al., 2007). Coaching that emphasizes emotional awareness and cognitive reframing reduces impulsive reactions, limits aggressive responses, and strengthens prosocial behavior that protects against delinquency (Eisenberg et al., 2002). These individualized supports help children replace reactive tendencies with adaptive strategies and reinforce the coping patterns that were associated with better outcomes in the model.

Family-based approaches extend these gains into daily routines. Consistent, non-coercive discipline and caregiver-modeled problem-solving help children internalize behavioral scripts that support prosocial behavior rather than externalizing reactions (Baumrind, 1991; Conger et al., 1992; Morris et al., 2007). Structured family sessions and role-playing routines during early childhood help embed these patterns when appraisal habits are forming. In families where coercive or reactive strategies dominate, accountability practices create space for youth to acknowledge harm, plan reparative steps, and see peers recognized for adaptive responses (Bazemore & Umbreit, 1995; Braithwaite, 1989). These routines strengthen early emotion regulation skills and reinforce prosocial responses that stabilize across development. Early childhood centers and pediatric settings complement these family practices by teaching emotion recognition, impulse control, and empathy through developmentally appropriate activities (Greenberg et al., 2017). Screening for caregiver stress and connecting families to wraparound supports further stabilizes early caregiving environments and reduces the likelihood that externalizing tendencies intensify (Horton et al., 2024). Together, these early supports create the regulatory foundation that school-based programs later expand.

School-Based Social and Emotional Learning. Middle-childhood functioning played a central role in the developmental cascade, with externalizing behavior predicting adolescent delinquency and prosocial behavior predicting social skills. School-based social and emotional learning (SEL) programs directly target core regulatory mechanisms by giving students structured practice with emotion regulation, perspective taking, and conflict resolution (Collaborative for Academic, Social, and Emotional Learning, 2020; Mahoney et al., 2018; Tenenbaum et al., 2020). Repeated practice with these skills reduces externalizing behavior and strengthens prosocial behavior, mirroring the pathways observed in the model (Compas et al.,

2017). Classroom norms that reward cooperation and constructive responses reinforce these gains and promote support and cohesion.

As children grow, families and community settings shape how early coping skills apply to new situations. Family-engaged SEL workshops and community coping clinics interrupt negative peer influences and offer alternatives to justice involvement. Evaluations of these programs show that they programs reduce later justice involvement and strengthen adaptive behavior (Council of State Governments Justice Center, n.d.; National Reentry Resource Center, 2024). SEL programs also improve academic performance, reduce emotional distress, and lower disruptive behavior and substance use (Durlak & DuPre, 2008; Mahoney et al., 2018).

Alignment Across Settings. The stability of the developmental cascade across all supplemental models suggests that the most durable effects occur when coping supports are reinforced across settings. When caregivers, schools, and community organizations promote the same coping strategies, children receive consistent messages about how to manage stress and resolve conflict (Eisenberg et al., 2002; Morris et al., 2007). This alignment interrupts the pathway from early externalizing behavior to adolescent delinquency and strengthens the prosocial behaviors that support healthy adjustment (Compas et al., 2017). Coordinated caregiver training, classroom rehearsal, community recognition, and programmatic supports create repeated opportunities for practice, feedback, and reinforcement. When individual skill gains receive consistent social support and institutional backing, adaptive responses persist and collective well-being improves (Mahoney et al., 2018). Coherence across environments helps stabilize coping patterns and supports long-term adjustment (Lazarus & Folkman, 1984). Extending this alignment beyond families and schools requires broader systems to reinforce the same coping expectations across community settings.

Ecological Implications

Community level implications center on strengthening neighborhood support and cohesion, which emerged as a significant ecological influence in the supplemental models. Neighborhood support and cohesion reflects a neighborhood's shared belief in its capacity to maintain order and solve problems through collective action, supported by social cohesion, mutual trust, and informal social control (McMillan & Chavis, 1986; Sampson et al., 1997). When neighbors know one another, share expectations for acceptable behavior, and intervene in response to visible problems, they create environments that reduce opportunities for externalizing behavior and limit conditions that contribute to delinquency. Community groups such as block clubs, tenant associations, and faith organizations make these norms visible by organizing projects like graffiti removal, safety walks, and mutual aid efforts that communicate shared responsibility for safety and wellbeing (Putnam, 2000; Sampson et al., 1997). Aligning cultural messaging with concrete investments in early childhood programs, mental health services, and violence prevention strengthens trust and clarifies institutional commitments (Bonilla & Rosa, 2015; Greenberg et al., 2017). Norm-shifting strategies that use respected community members, target both descriptive and injunctive norms, and are sustained over time increase the likelihood that prosocial behavior becomes the default response to conflict (Gelfand et al., 2024; Social Norms and Agency Learning Collaborative, 2017). By reinforcing prosocial norms across settings and ensuring that local expectations match visible practices, communities enhance neighborhood support and cohesion in ways that support adaptive coping, reduce exposure to aggressive models, and protect children and adolescents from developmental pathways that lead to delinquency.

How Systems Can Reinforce Adaptive Coping

Systems and communities play an essential role in reinforcing the coping patterns that develop within families and schools. Because the supplemental models showed that peer delinquency and neighborhood support and cohesion each contributed unique variance to adolescent outcomes, broader ecological supports are important for sustaining adaptive coping across development. Community settings amplify individual gains by turning personal coping skills into shared expectations (Meyers et al., 2011; Roozen et al., 2004). Classroom discussions, conflict-resolution circles, community forums, and service projects operate as learning laboratories where children practice emotion regulation and observe peers repair harm, strengthening vicarious learning and reinforcing prosocial norms (Bandura, 1977; Schunk, 1987; Tenenbaum et al., 2020). Culturally grounded SEL approaches ensure that coping supports align with community strengths and extend across diverse groups, strengthening support and cohesion and reducing pathways toward delinquency (Castro Olivo, 2014; Jagers et al., 2018; Sampson et al., 1997).

Consistent reinforcement across institutions further strengthens these developmental pathways (Sampson & Laub, 1993; Sampson et al., 1997). Children benefit most when schools, justice agencies, workplaces, and public health systems coordinate around shared expectations for emotional regulation and behavioral accountability. Cross-system coordination improves continuity of services and reduces exposure to inconsistent discipline, which helps interrupt pathways from early externalizing behavior to adolescent delinquency (Casey Family Programs, 2025; United States Department of Health and Human Services, 2023). Aligned institutional practices, such as equity-focused discipline codes, restorative responses, and de-escalation training, create climates where constructive coping is modeled and reinforced across daily

interactions (Darling-Hammond, 2023; Huguley et al., 2022). Public health programs for new parents reinforce early emotion-coaching and stress-management skills (SamaMiller et al., 2024), while workplaces shape supervisory norms and communication practices that model constructive coping.

Justice settings also influence coping by shaping emotional regulation, behavioral accountability, and interpersonal skills. SEL-informed routines, trauma-informed care, and restorative practices inside facilities help individuals develop emotional awareness, reduce reactive behavior, and strengthen decision making (Collaborative for Academic, Social, and Emotional Learning, 2020; Durlak & DuPre, 2008). Reentry outcomes improve when community environments mirror these expectations, reinforcing coping skills practiced inside facilities. Mentoring, employment pathways, and prosocial peer networks reduce the likelihood of returning to externalizing patterns that contribute to delinquency. Wraparound teams and coordinated reentry approaches address complex cases by strengthening self-awareness, emotional regulation, and relational trust (Byrne, 2020; Circles of Support and Accountability, 2021; UNC Criminal Justice Innovation Lab, 2022). Reparative practices, including community service and mediated dialogue, reinforce norms of responsibility and cooperation (Bazemore & Umbreit, 1995; Latimer et al., 2005; Sherman & Strang, 2007). Visible acts of restitution strengthen support and cohesion and clarify community expectations, supporting developmental pathways that reduce delinquency (Musick & Wilson, 2007; Putnam, 2000; Sampson et al., 1997).

Together, these system-level supports create environments that reinforce adaptive coping, reduce exposure to coercive or inconsistent responses, and strengthen the prosocial behaviors that protect against delinquency. When communities, institutions, and justice systems align

around consistent expectations for emotional regulation and constructive behavior, they help stabilize coping patterns and support healthier developmental trajectories.

Limitations

Dataset Constraints

Several constraints in the dataset shape interpretation of the findings. Behavioral indicators during middle childhood (age 9) and adolescence serve as proxies for coping relevant tendencies rather than direct assessments of coping processes, and that structure narrows interpretation of the developmental sequence. Caregiver reports during adolescence may reflect reporting biases, and adolescents may underreport delinquent behavior. The middle childhood (age 9) assessments rely on a single informant, and that structure increases the likelihood that caregiver perceptions of discipline and child behavior share method variance. Long intervals between early childhood (age 3), early school age (age 5), middle childhood (age 9), and adolescence allow unmeasured experiences to accumulate, and unmeasured experiences may alter developmental pathways in ways the models cannot capture. Adolescent delinquency relies on self-report, which may under-report involvement in antisocial behavior. The dataset does not include repeated, multi-informant assessments of emotion regulation, appraisal patterns, or coping strategies, and that gap limits the ability to evaluate how coping develops across time or how specific regulatory processes mediate pathways identified in the models.

Measurement Issues

Measurement constraints also influence interpretation, although the instruments used in this study are well-validated and widely applied in developmental research. The ASBI and SSRS scales capture specific aspects of social behavior rather than broad regulatory functioning, and their established validity supports confidence in the constructs they measure. Even so,

differences in item count and score range influence the magnitude of coefficients linking childhood behavior to adolescent outcomes, and these structural differences may contribute to modest effect sizes for social outcomes. The discipline composites combine heterogeneous caregiver behaviors that may operate differently across families, which limits precision when comparing discipline processes across constructs. These issues do not undermine the validity of the measures themselves but highlight the importance of interpreting effect sizes and construct relationships within the boundaries of what each instrument is designed to assess.

Generalizability

The generalizability of the findings is shaped by characteristics of the Future of Families and Child Wellbeing Study (FFCWS) sample. The cohort reflects births in large United States cities and intentionally oversamples unmarried parents, which produces a population with elevated socioeconomic and contextual risk. Many unmarried mothers in the sample face greater financial strain and fewer income buffers than married parents, and families affected by incarceration experience additional economic instability. Socioeconomic differences influence caregiving, stress exposure, and developmental pathways in ways that differ from more economically advantaged or dual income households. Small subgroup sizes, particularly within the “other race” category, limit the ability to examine racial or ethnic variation in those processes. Sample characteristics constrain the extent to which the findings generalize beyond urban, higher risk family contexts.

The developmental cascade that links early caregiving, child behavior, and adolescent outcomes may operate differently in contexts not represented in the dataset. Structural conditions that include chronic poverty, unstable housing, or community violence may alter the strength or direction of pathways. Contextual differences outside the sampled environments

limit generalizability of the findings to populations that experience more severe or chronic problematic parental conduct. Even with these constraints, the overall developmental pattern remains clear.

Conclusion

Appraisal processes and family socialization shape whether coping relies on immediate relief or develops into durable and adaptive repertoires. Conflict based parenting and emotionally supportive caregiving act as immediate, observable influences on children's behavioral and emotional development through modeling and reinforcement (Bandura, 1977; Lazarus & Folkman, 1984). The findings support that framework by showing that aggressive discipline socializes maladaptive coping responses that appear as externalizing behavior, and nonaggressive discipline socializes adaptive coping responses reflected in prosocial and regulated behavior.

Interventions that reduce parenting strain and teach practical emotion coaching skills offer a direct way to prevent maladaptive coping. When caregivers label emotions, practice problem solving with children, and guide flexible responses, caregivers strengthen coping self-efficacy and expand children's adaptive repertoires (Benight & Bandura, 2004). Brief programs delivered in routine care settings increase accessibility and create opportunities to evaluate effects on children's social and emotional development. Future research can extend these developmental patterns by examining how coping processes evolve across diverse ecological and institutional contexts.

Future Directions

Although the FFCWS already provides a rich longitudinal framework, causal claims would be sharpened through randomized controlled trials that test whether specific parenting or

coping interventions produce measurable changes in children's regulatory skills and behavioral outcomes. Intensive longitudinal methods, such as ecological momentary assessment and brief repeated surveys, can capture real time fluctuations in emotion, appraisal, and caregiver-child interactions, which offers a more precise view of how daily experiences accumulate into broader coping patterns (Folkman et al., 1986; Pearlin et al., 1981). Evidence from randomized trials and intensive longitudinal designs would guide more targeted interventions that reduce parenting strain, build caregiver skill, and strengthen child resilience.

Future research should clarify how adaptive coping develops across diverse caregiving, community, and institutional contexts. Current models emphasize appraisal processes, social learning, and reinforcement, and several pathways remain insufficiently understood. One critical gap concerns differences in coping transmission between biological families and foster placements. Foster environments involve disrupted attachments, variable caregiver training, and inconsistent exposure to adaptive coping. Those conditions may alter appraisal patterns and regulation skills in ways that differ from biological caregiving. This gap is especially important because foster youth experience disproportionately high rates of justice involvement, with national estimates showing that they are significantly more likely to be arrested, detained, or incarcerated than non-foster peers (National Foster Youth Institute, 2017; Ryan & Testa, 2005). Systematic comparison of those pathways would clarify how institutional contexts shape emotional learning and identify where targeted supports are most needed.

Similarly, institutional caregiving environments also require attention. Group homes, residential treatment centers, and juvenile facilities shape coping development through structured routines, staff practices, and organizational norms. Institutional settings often combine high stress, inconsistent staffing, and limited emotional support, and these conditions are linked to

elevated trauma exposure, higher rates of emotional and behavioral disorders, and increased justice involvement compared to family-based care (Griffin et al., 2012; Ijzendoorn et al., 2020; Simão et al., 2026). Studies that compare institutional caregiving with family-based care can clarify how institutional routines shape coping trajectories.

Future research should also examine how coping patterns evolve across generations and how emotional scripts transmit within family lines. Prior research demonstrates that trauma, attachment patterns, and maltreatment can transmit across generations, shaping regulatory skills and behavioral outcomes in ways that persist over decades (Kaufman & Zigler, 1987; Van Ijzendoorn, 1995; Widom, 1989; Yehuda et al., 2005). The FFCWS includes limited information on grandparents, which restricts tri-generational analyses. Even with limited information, the dataset can clarify how appraisal habits, regulation skills, and coping repertoires persist, shift, or fracture across biological generations. Tri-generational work remains essential for understanding how adaptive strategies and maladaptive patterns linked to trauma, disrupted attachment, or sexual abuse become embedded and reproduced across time. Mapping long-arc transmission pathways would strengthen theoretical models of coping acquisition and show how early relational experiences shape later behavioral outcomes.

Mental health processes represent another critical domain for understanding coping development. Anxiety, depression, and trauma symptoms influence appraisal patterns, emotional arousal, and behavioral responses, and these processes interact with caregiving, peer dynamics, and neighborhood conditions in ways that shape coping development (Compas et al., 2017; Eisenberg et al., 2010). Multimethod assessments of mental health would clarify how internalizing and externalizing coping styles emerge, diverge, and interact across ecological contexts. While the current study focused on externalizing behaviors, the FFCWS includes

validated scales for anxiety and depression that capture internalizing symptoms, and the CBCL provides parallel internalizing and externalizing subscales that could be leveraged to examine how different symptom profiles correspond to distinct coping patterns (Achenbach & Rescorla, 2001). Incorporating both domains would allow future work to identify whether internalizing symptoms promote avoidant or emotion-focused coping, while externalizing symptoms correspond to impulsive or aggressive responses.

Structural and cultural contexts also play a central role in shaping coping development. Structural inequalities influence exposure to strain, access to supportive caregiving, neighborhood safety, and opportunities for prosocial engagement, and these conditions may create distinct coping repertoires across groups (Evans & Kim, 2013; Leventhal & Brooks-Gunn, 2000). Socioeconomic status, race, and gender shape cultural norms surrounding emotional expression, regulation, and help seeking, and these norms may alter appraisal patterns and the likelihood of adopting adaptive or maladaptive strategies (Gaylord-Harden & Cunningham, 2009; Tamres et al., 2002). Understanding how structural inequality and cultural context shape coping socialization would clarify why coping pathways diverge across populations and identify where targeted supports are most needed.

Longitudinal work remains essential for understanding how coping capacity unfolds from early childhood into adolescence and eventually adulthood. Although the FFCWS provides repeated assessments across childhood and adolescence, future research should extend these developmental windows to capture how early coping tendencies relate to later transitions into work, relationships, and adult responsibilities. Repeated assessments of appraisal, regulation, and coping flexibility across longer spans of the life course would clarify when coping patterns consolidate, when they shift, and how they contribute to long-term behavioral trajectories. This

type of work would strengthen age-graded life-course models by showing how early coping skills relate to later desistance or persistence in antisocial behavior, consistent with theories that distinguish short-term and long-term delinquency pathways (Moffitt, 1993; Sampson & Laub, 1993).

The current study shows how caregiving practices shape appraisal habits, regulation skills, and coping repertoires that guide children's social and emotional development. The findings clarify how early relational experiences support or undermine adaptive coping and how those patterns influence behavior across family, community, and institutional settings. By linking developmental theory with evidence from diverse caregiving environments, the study strengthens current models of coping acquisition and highlights where targeted supports can shift trajectories. Continued work across generations, contexts, and developmental periods can deepen understanding of how early experiences shape long term adjustment and can guide interventions that promote resilience across the lifespan.

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Appendix A - Other Tables

Appendix Table A 1: Descriptive statistics for study variables

	Mean	SD
Father Jail (Wave 3)	.44	.50
Mother Jail (Wave 3)	.06	.24
Mother Drug Use (Wave 3)	.07	.260
Father Drug Use (Wave 3)	.12	.32
Non-Aggressive Discipline (Wave 4)	14.83	7.14
Aggressive Discipline (Wave 4)	9.63	6.20
CBCL (Wave 5)	.21	.22
ASBI (Wave 5)	1.46	.44
Delinquency (Wave 6)	.10	.17
SSRS (Wave 6)	1.36	.36

Note. Means and standard deviations are reported for all observed variables.

Appendix Table A 2: Full SEM model coefficients

Predictor	Non-Aggressive Parenting <i>b</i> (se)	Aggressive Parenting <i>b</i> (se)	ASBI <i>b</i> (se)	CBCL <i>b</i> (se)	SSRS <i>b</i> (se)	Delinquency <i>b</i> (se)
Female	-1.67*** (.25)	-1.00*** (.23)	0.07*** (.02)	-0.03*** (.01)	-0.05*** (.01)	-0.04*** (.01)
Black	-3.81*** (.35)	-1.17*** (.31)	-0.05* (.02)	-0.04** (.01)	-0.06** (.02)	0.03** (.01)
Hispanic	-4.13*** (.38)	-2.10*** (.34)	-0.12*** (.02)	-0.04** (.01)	-0.06** (.02)	0.02 (.01)
Other race	-0.96 (.80)	-0.34 (.73)	-0.07 (.05)	0.01 (.02)	-0.03 (.03)	0.03* (.02)
On welfare	0.18 (.38)	0.45 (.34)	-0.05* (.02)	0.03** (.01)	-0.03 (.02)	0.01 (.01)
Problematic parental conduct	2.59** (.83)	2.35** (.71)	-0.10* (.04)	0.14*** (.03)	-0.04 (.04)	0.10*** (.02)
Non-Aggressive Parenting	—	—	0.01*** (.00)	—	—	—
Aggressive Parenting	—	—	—	0.00*** (.00)	—	—
ASBI	—	—	—	—	0.10*** (.02)	0.01 (.01)
CBCL	—	—	—	—	-0.06 (.03)	0.09*** (.02)

Note. Values represent unstandardized coefficients from the structural equation model. Standard errors are shown in parentheses. Significance is indicated by * $p < .05$, ** $p < .01$, and *** $p < .001$.

Appendix B - Variable descriptions

Appendix Table B 1: Wave 4 Non-Aggressive Discipline Subscale

	Variable	Item Wording
1	P4G1	Explained to child why something the child did was wrong
2	P4G5	Gave child something else to do instead
3	P4G12	Took away privileges from child
4	P4G2	Put child in time out or sent child to room

Appendix Table B 2: Wave 4 Aggressive Discipline Composite Subscale

	Variable	Item Wording
1	P4G6	Shouted, yelled, or screamed at child
2	P4G10	Threatened to spank or hit child but did not
3	P4G8	Swore or cursed at child
4	P4G14	Called child dumb, lazy, or similar name
5	P4G9	Said would send child away or kick child out of house
6	P4G7	Spanked child on bottom with bare hand
7	P4G4	Hit child on bottom with belt or hard object
8	P4G11	Slapped child on the hand, arm, or leg
9	P4G13	Pinched child
10	P4G3	Shook child

Appendix Table B 3: Wave 5 Externalizing CBCL Scale

	Variable	Item Wording
1	P5Q3C	Argues a lot
2	P5Q3N	Cruel to animals
3	P5Q3O	Cruel, bullies, or shows meanness to others
4	P5Q3S	Destroys own things
5	P5Q3T	Destroys things belonging to family or others
6	P5Q3U	Disobedient at home
7	P5Q3V	Disobedient at school
8	P5Q3W	Doesn't get along with other kids
9	P5Q3X	Doesn't feel guilty after misbehaving
10	P5Q3Y	Easily jealous
11	P5Q3AJ	Gets in many fights
12	P5Q3AN	Impulsive or acts without thinking
13	P5Q3BN	Screams a lot
14	P5Q3CF	Stubborn, sullen, or irritable
15	P5Q3CG	Sudden changes in mood or feelings
16	P5Q3CH	Sulks a lot
17	P5Q3CJ	Swears or uses obscene language
18	P5Q3CM	Talks too much
19	P5Q3CN	Teases a lot
20	P5Q3CO	Temper tantrums or hot temper
21	P5Q3CQ	Threatens people
22	P5Q3CW	Unusually loud
23	P5Q3CZ	Whines
24	P5Q3AA	Breaks rules at home, school, or elsewhere
25	P5Q3B	Drinks alcohol without parents' approval
26	P5Q3AL	Hangs around with others who get in trouble
27	P5Q3AP	Lies or cheats
28	P5Q3BM	Runs away from home
29	P5Q3BR	Sets fires
30	P5Q3BZ	Steals at home
31	P5Q3CA	Steals outside the home
32	P5Q3CT	Truant, skips school
33	P5Q3CX	Uses alcohol or drugs for nonmedical purposes
34	P5Q3CY	Vandalizes
35	P5Q3BO	Secretive, keeps things to self
36	P5Q3DA	Withdrawn, doesn't get involved with others

	Variable	Item Wording
37	P5Q3P	Day-dreams or gets lost in thoughts

Appendix Table B 4: Wave 5 ASBI Scale

	Variable	Item Wording
1	P5Q3DC	Understands others' feelings
2	P5Q3DD	Sympathetic toward other children's distress
3	P5Q3DE	Open and direct about wants
4	P5Q3DF	Joins group activities without being told
5	P5Q3DG	Makes friends easily
6	P5Q3DH	Self-confident in social situations
7	P5Q3DI	Easily changes from one activity to another
8	P5Q3DJ	Shows interest in a variety of things
9	P5Q3DK	Starts conversations rather than waiting
10	P5Q3DL	Liked by others
11	P5Q3DM	Accepts friends' ideas for playing
12	P5Q3DN	Invites others to home
13	P5Q3DO	Reports accidents to appropriate persons

Appendix Table B 5: Wave 6 Delinquency Subscale

	Variable	Item Wording
1	K6D61A	Painted graffiti or signs on property
2	K6D61B	Deliberately damaged property
3	K6D61C	Took something from a store without paying
4	K6D61D	Got into a serious physical fight
5	K6D61E	Hurt someone badly enough to need medical care
6	K6D61F	Drove a car without owner's permission
7	K6D61G	Stole something worth more than \$50
8	K6D61H	Went into a house/building to steal
9	K6D61I	Used or threatened to use a weapon to get something
10	K6D61J	Sold marijuana or other drugs
11	K6D61K	Stole something worth less than \$50
12	K6D61L	Took part in a group fight
13	K6D61M	Was loud, rowdy, or unruly in a public place

Appendix Table B 6: Wave 6 SSRS Scale

	Variable	Item Wording
1	K6D1D	I join group activities without being told to
2	K6D1E	I make friends easily
3	K6D1F	I am self-confident in social situations
4	K6D1G	I easily change from one activity to another
5	K6D1H	I show interest in a variety of things
6	K6D1I	I start conversations rather than waiting for others to talk first
7	K6D1J	I am liked by others
8	K6D1K	I invite others to my home
9	K6D1L	I report accidents to appropriate persons

Appendix Table B 7: Wave 6 Delinquent Peer Influence Subscale

	Variable	Item Wording
1	K6D62A	Friends smoked an entire cigarette
2	K6D62B	Friends drank alcohol more than two times without their parents
3	K6D62C	Friends tried marijuana
4	K6D62D	Friends tried other drugs to get high
5	K6D62E	Friends asked to go drinking with them
6	K6D62F	Friends given or sold marijuana to you
7	K6D62G	Friends deliberately damaged property that did not belong to them
8	K6D62H	Friends stole something worth more than \$50
9	K6D62I	Friends used or threatened to use a weapon to get something
10	K6D62J	Friends sold marijuana or other drugs
11	K6D62K	Friends stole something worth less than \$50

Appendix Table B 8: Wave 6 Neighborhood Collective Efficacy Scale

	Variable	Item Wording
1	K6E2A	People around here are willing to help their neighbors
2	K6E2B	This is a close-knit neighborhood
3	K6E2C	People in this neighborhood generally don't get along with each other
4	K6E2D	People in this neighborhood do not share the same values
5	K6E3A	Neighbors would get involved if children skip school
6	K6E3B	Neighbors would get involved if children spray paint buildings
7	K6E3C	Neighbors would get involved if children show disrespect to adults
8	K6E3D	Neighbors would get involved if a fight broke out in front of the house