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# Examining Social-Emotional Development in Black Children: Role of Intrapersonal and Contextual Factors

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ABSTRACT OF THE DISSERTATION

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by

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Several socio-ecological factors play a critical role in influencing child development in general and social-emotional development in particular. While various studies have shed light on the influence of intrapersonal and external factors on children's social-emotional skills, fewer have comprehensively examined these factors, particularly within the context of middle childhood and specifically among Black children. Furthermore, only a limited number of studies have specifically investigated these associations within racial groups rather than between them. The current study aimed to fill this gap by investigating how child characteristics, peer rejection experiences, and family dynamics shape social-emotional development in Black children. Using a nationally representative database of fifth-grade students, the Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011), the current study

partially tested the integrative conceptual model of adaptive racial/ethnic and emotion socialization by Dunbar and colleagues (2017). Weighted hierarchical regression analysis was used to examine four of the five main components included in the model. Results indicated both intrapersonal and contextual factors can influence the social-emotional developmental outcomes of Black children. Specifically, these outcomes are determined by Black children's emotion regulation levels, their parents' involvement in school activities, parents' mental well-being, and the quality of the home environment in which the children live and grow. Findings from the proposed study can provide useful information for educators, mental health professionals, and caregivers related to the multiple complex elements in Black children's lives that may stimulate or inhibit their social-emotional functioning levels. This information can further guide the development and use of culturally relevant intervention strategies and treatment procedures for this population.

*Keywords*: Social-emotional development, Black children

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## Chapter One: Introduction

Social-emotional development (SED) is a core component of child development and growth as it plays an indispensable role in shaping children's academic achievement, mental health and well-being, and ultimately their future success (Ashdown & Bernard, 2012; Jackson, 2021). The comprehensive nature of SED encompasses a rich tapestry of children's social and emotional functioning constructs including emotional and social competence, behavioral regulation, self-regulation, social information processing, and emotional understanding (Halle & Darling-Churchill, 2016; Madigan et al., 2018). As children progress through their educational journey, there is a pressing need for them to develop key social-emotional competencies, including fostering self-confidence, engaging in social interactions, honing effective communication skills, mastering the art of active listening, and becoming adept problem-solvers (Ashdown & Bernard, 2012). These proficiencies are essential tools that enable children to form and nurture meaningful relationships with their peers, efficiently manage their emotions, and develop robust conflict resolution and coping mechanisms (Denham et al., 2009; Zins et al., 2007).

Given the significance of SED, the consequences of a lack of these skills are far-reaching and profound. Such challenges have substantial implications for the success and wellness of school-aged children and can negatively impact their formal schooling experiences by manifesting in heightened levels of peer aggression, interpersonal conflicts, and even physical and verbal aggression directed towards adults (Durlak et al., 2011). What causes additional concern is the glaring disparity between cognitive and

social-emotional readiness as children embark on their educational journeys. It is estimated that 60% of children enter school equipped with the cognitive skills needed to be successful in kindergarten, but only 40% possess the social-emotional skills needed to succeed at that grade level (Ashdown & Bernard, 2012). This imbalance is concerning given that prior research has highlighted the predictive power of early social-emotional skill levels and shown these skills to act as future determinants of an individual's susceptibility to psychopathology and risk factors across the various stages of life (Malti & Noam, 2016). As a result, it is paramount to delve deeper into and comprehend the intricate web of early determinants that makeup the foundations of SED. Doing so is a critical step in developing holistic preventive and curative strategies aimed at curbing the incidence of mental health issues during adolescence and adulthood (Madigan et al., 2018).

In a global context, it is crucial to recognize the pressing nature of this issue. Over 10% of the global adult population has been diagnosed with a spectrum of mental health conditions encompassing depression, anxiety, and attention and impulsivity problems, making it imperative for researchers and practitioners to gather more information about factors that can potentially support or hinder an individual's preliminary developmental outcomes and predict later well-being (Malti & Noam, 2016).

**The Socio-Ecology of Social-Emotional Development**

While there are several driving forces detrimental to an individual's social-emotional growth and development, the significance of the intricate interplay between the individual, their environment, and development is a well-established concept that holds

true for all children in general, including Black children in particular (Bobbitt & Gershoff, 2016; Hill, 2006). Beginning at birth, a child's ability to express and understand emotions, recognize themselves and others, interpret facial expressions, and establish social relationships is nurtured within their social environment (Ayoub et al., 2014). Among the various components shaping this environment, families are considered to play the most important role (Zarra-Nezhaad et al., 2020). Early socialization theorists and social psychologists posit that families, more specifically parents and caregivers, are the primary channels through which young children learn the attitudes, beliefs, and behaviors of the larger society, profoundly influencing their SED (Grusec, 2011).

The influence of parents begins very early in life, dating back to infancy, as new mothers begin to bond with their newborns and learn to perceive and respond to the child's emotional needs (Worthman et al., 2016). A child's early social interactions, including eye contact and physical contact in the form of touching, holding, and cuddling with parents, have been associated with enhanced SED (Case-Smith, 2013). Parents are considered the most significant role models for their children, imparting essential skills such as emotional management, the formation of affectionate and secure attachments, and the navigation of social interactions with peers and other social beings (Grusec, 2011). Given the critical nature of this caregiver/care-receiver relationship, numerous interventions have been developed for promoting SED in young children by concentrating on improving the quality of parent-child interactions (Case-Smith, 2013).

Indeed, parents are the most influential and powerful socializing agents in a child's life, overseeing and providing resources, managing the child's immediate

surroundings, determining the nature of social influences, and ensuring overall care (Grusec, 2011). Consequently, it comes as no surprise that parents can serve as protective factors in fostering psychosocial competence and facilitating the socialization process (Ayoub et al., 2014). In fact, many experts in the field concur that parents and caregivers exert a more significant role in influencing the development of social-emotional skills in children compared to siblings, peers, and other significant adults (Grusec, 2011). However, while ecological and systems theorists focus on the importance of parents in development, it is crucial to recognize the other, larger social contextual factors that also play a valuable role in shaping family dynamics, parenting practices and overall development (Malkin & McKinney, 2018).

One such factor that has been linked to children's developmental outcomes is the microsystemic construct of family socioeconomic status (SES). Although, evidence regarding the association between SES and SED is less consistent compared to cognitive or school-related outcomes (Ashiabi & O'Neal, 2015), a general trend is observed that children from higher socioeconomic backgrounds often benefit from receiving better quality services, access to goods, nurturing from parents, and the advantage of forming social connections more easily; in contrast to their peers from lower SES backgrounds who don't have access to similar resources and support, thereby increasing the possibility of these children experiencing developmental challenges (Bradley & Corwyn, 2002).

A child's access to nutrition, education, healthcare, as well as their experiences interacting with caregivers and peers, are strongly impacted by their social class (Hoffman, 2003). In lower-income communities, social and cultural resources are often

very rich, while material resources in these neighborhoods are often scarce (Ashiabi & O'Neal, 2015). Parents of children from low SES backgrounds struggle with poverty, economic hardships, and associated stressors, which can hinder their ability to effectively engage in parenting practices and limit their ability to fulfill their responsibilities towards their children to the fullest (Mohamed & Toran, 2018). These factors contribute to further inequities in health, education, and cognitive and psychosocial development (Roubinov & Boyce, 2017). Accordingly, children from low-income socioeconomic backgrounds are at an elevated risk for delays in cognitive and social-emotional developmental outcomes (Ashiabi & O'Neal, 2015). Predictably, recent data illustrates that one in five children in the United States from low SES communities are at risk of encountering social-emotional problems due to challenges in social-emotional skills development (Mohamed & Toran, 2018).

Another critical factor that can profoundly impact children's developmental context and hinder their overall development is children's early experiences of discrimination and rejection (Anderson et al., 2015). These experiences can manifest as either interpersonal (e.g. rejection from significant individuals in their environment) or systemic (e.g. institutional racism) and can be direct (experienced first-hand by the individual) or vicarious (through parents' experiences of discrimination; Priest et al., 2013; Savell et al., 2018). Across types, these discriminatory experiences communicate derogatory and malicious messages that can lead to damaged self-perceptions, low self-esteem (Behneke et al., 2011) and subsequently impact a child's social-emotional functioning, including the development of internalizing and externalizing behaviors

(Anderson et al., 2015). The aftermath of discriminatory events can be visible immediately or over a period of time and can yield adverse health and developmental outcomes in children (Kelly et al., 2013).

Another crucial element to consider when examining child SED from an ecological perspective is the role of the child themselves. It is essential to challenge the assumption that the relationship between the environment and child development is unidirectional. More recent research suggests that children actively contribute to their development by influencing their environment as well as determining how their environment, in turn, influences them (Pettit & Arsiwalla, 2008). Not all children raised in a particular environment demonstrate the same attitudes and behaviors, as children vary in the extent to which external conditions affect them (Davidov et al., 2015).

**Race and Social-Emotional Development**

Racialized differences in children's social-emotional outcomes have been extensively studied and well documented within the realm of developmental literature (Zilanawala et al., 2015). While some research suggests minimal differences between racial groups (Washbrook et al., 2012), previous studies have often loosely conceptualized race, culture, and ethnicity, primarily relying on the basis of different physical characteristics such as skin color, hair type, and other bodily features, without clearly examining variations observed between racial and ethnic groups (Duggan et al., 2020; Garcia et al., 2015). This approach has sometimes led to misconceptions about the association between race and human behavior (Betancourt & Lopez, 1993; Zuckerman, 1990). It is important to acknowledge that causes of differences in developmental

outcomes cannot be reduced to racial identity or membership of a particular racial group. Instead, they must be understood within the broader context of social-ecological agencies that are constantly interacting with one another. This is because of the increasing recognition that observed racial-ethnic disparities are likely the result of complex social-ecological hierarchies rather than the physiological characteristics tied to socially constructed races or ethnicities (Hill, 2006).

As such, research, including biological and genetic studies, consistently shows greater variance within racial groups compared to variance between groups (Clayton et al., 2001). Focusing solely on between-group differences, while neglecting the critical nature and profound impact of socio-cultural experiences, including discriminatory experiences and racist social structures unique to specific communities, (Betancourt & Lopez, 1993; Kelly et al., 2013; Priest et al., 2013) can provide an incomplete picture of the role of race and culture in child development.

While most prior studies on SED in the humanities and social sciences have primarily focused on capturing distinctions between multiple ethnic groups, very few have closely inspected the intricacies of SED within racial and ethnic groups, particularly when it comes to historically and currently marginalized communities (Perez-Brena et al., 2018). There is a notable dearth of information regarding socioemotional outcomes in children from historically marginalized communities, particularly Black children, despite the pivotal role of SED in shaping overall life outcomes and the pressing need to identify determinants that can enhance these outcomes (Aratani et al., 2011); this is a particularly critical gap, as Black students are more vulnerable to experiencing a plethora of risk

factors including economic hardships and exposure to neighborhood violence (Barbarin, 1993; Fraser et al., 2004). Moreover, Black children also face higher levels of segregation compared to any other racial group (Jackson, 1999).

With these challenges in mind, it is essential to recognize the heterogeneity within this group; not all Black children respond to experiences of discrimination and rejection in the same manner (Leath et al., 2019). It is evident from the available literature that Black children's social-emotional outcomes are not fixed in the face of adverse conditions (Goldstein et al., 2021) and that personal, social, and environmental factors significantly contribute to the developmental challenges experienced by this population (Fraser et al., 2004). Therefore, it is imperative to assess these demographic and environmental elements that could potentially impact Black children's social-emotional developmental outcomes (Flores, 2011; Washington et al., 2019).

**Purpose of the Current Study**

In summary, the current body of research tells us that there are numerous socializing agents and factors within a child's ecological environment that determine children's developmental outcomes. A comprehensive understanding of child development, including SED, necessitates a thorough examination of these elements to make more informed decisions related to children's health and well-being. The purpose of the current study was to examine intra-group differences in Black children's social-emotional developmental trajectories, taking into account the larger socio-ecological factors influencing potential outcomes. The current study aimed to examine Black children's SED through the lens of the children themselves, incorporating factors such as

experiences of peer rejection, sex, temperament, and emotion regulation abilities. Additionally, the study considered the broader context of parental and family characteristics including parents' level of involvement, mental health and wellbeing, warmth and discipline at home, home environment, and family SES that together constitute the larger ecological environment in which Black children's development unfolds.

Utilizing data from the fifth-grade sample of the Early Childhood Longitudinal Study- Kindergarten Class of 2010-2011 (ECLS-K 2011), the current study attempted to partially test the integrative conceptual model of adaptive racial/ethnic and emotional socialization proposed by Dunbar and colleagues (2017) at the University of Maryland, United States. While the ECLS-K:2011 dataset uses the term "Black" and "African American" in tandem, the current study used the term "Black" to denote the diversity of the Black population in the United States.

Given the nature of the variables included in the ECLS-K:2011 study, the present study deviated from the theoretical framework proposed by Dunbar and colleagues (2017), not testing all components of the model. Specifically, the study did not take into account Black children's adaptive racial and ethnic socialization, as well as broader neighborhood factors including neighborhood SES and risk. Furthermore, when considering children's experiences of discrimination, only interpersonal discrimination experiences were examined in the form of peer rejection and were measured in terms of peer victimization and loneliness at school. Additionally, the regression analysis did not explore certain pathways within the Dunbar and colleagues (2017) model, including B1,

B3, and C (see Figure 1). These limitations will be acknowledged in the later sections, and recommendations for future research will be provided.

The primary aim of the present study was to investigate SED within a larger environmental context while analyzing the unique within-group differences in Black children's developmental outcomes. Although previous research has focused on examining between-group differences in development, limited research leveraging large nationally representative samples has been dedicated to a careful investigation of developmental variations within a single racial/ethnic group. Additionally, Black children are seriously underrepresented in both educational and developmental research (Syed et al., 2018; Ursache et al., 2020). The current study, therefore, sought to address this gap by examining SED through the perspective of Black children's encounters with peer rejection, their emotion regulation skills, and broader influential factors impacting their daily lives. These factors included children's sex and temperament, as well as various family-level variables such as parents' involvement, warmth and discipline, mental health, home environment, and family SES.

Understanding the early determinants of children's socioemotional outcomes and the complex interplay among these determinants can aid researchers and practitioners in the field in developing and implementing culturally relevant interventions to support the development and mental health of Black children (Madigan et al., 2018). The findings from this study may offer preliminary insights to educators, mental health professionals, and caregivers, helping them better comprehend the multifaceted role of various components in the lives of Black children and how these components work together in a

way that either stimulates or inhibits these children's levels of social-emotional functioning. This understanding may help further guide the development and application of culturally responsive treatment procedures, particularly for children from such historically and currently marginalized communities.

## Chapter Two: Review of Literature

This section will include information on the theoretical framework and literature evidence guiding the proposed research and establish the relevance of these theories for the current study. Specifically, there are four theoretical approaches central to the current study: (a) ecological systems theory, (b) the family stress model, (c) the integrative theory for the study of minority children, and (d) the integrative conceptual model of adaptive racial/ethnic and emotional socialization.

### Ecological Systems Theory

Ecological systems theory was first proposed by Urie Bronfenbrenner (1974), positing that there are multiple, complex layers comprising a child's environment that can have a strong influence on their development. This framework analyzes child development within different ecological systems and emphasizes the importance of interactions between children and their immediate environment. Beginning with the innermost level, these ecological systems include microsystem (relationships between the child and significant others such as parents, caregivers, teachers, and peers); mesosystem (interactions between microsystems); exosystem (linkages between different microsystems which indirectly influence the child); macrosystem (larger cultural and community influence); and chronosystem (environmental changes occurring over one's life course; Bronfenbrenner, 1974)

Bronfenbrenner defined the ecology of human development as "the scientific study of the progressive, mutual accommodation, throughout the lifespan, between a growing human organism and the changing immediate environments in which it lives"

(Bronfenbrenner, 1974, p. 21). Subsequently, Bronfenbrenner added that human development is most heavily affected by people's relationships within and between different systems, which he defined as "place[s] where people can readily engage in face-to-face interaction—home, daycare center[s], playground[s], and so on" (Bronfenbrenner, 1974, p. 25). Bronfenbrenner referred to these intimate interactions as proximal processes (Bronfenbrenner & Ceci, 1994), which are innately relational events characterized by patterns of mutual, complex interactions between children and the significant others in their environment which then contribute to the child's healthy development (Pleck, 2007). Essentially, the ecological model focuses on the idea that the lives of parents and children are not separate but rather interconnected, and examining factors influencing parents and parenting is crucial for understanding the developmental experiences and outcomes of children (Baker, 2017).

Applying the ecological systems framework to the current study allowed for the examination of the micro- and meso-systemic effects on young Black children's SED. Specifically, the study examined the association between children's SED and several ecological factors including experiences of rejection by peers at school, quality of parent-child relationships, home environment and climate, and family socio-economic conditions. Other conceptual models will also be discussed in subsequent sections that focus on understanding contextual factors and social positions in studying developmental outcomes for children from historically marginalized groups.

**Family Stress Model**

The association between parents' SES and child development is further explained by the family stress model. The family stress model addresses a critical gap in Bronfenbrenner's (1974) ecological model, in that it provides clarity on how economic conditions might impact the quality of parenting and child-rearing, thus influencing the quality of parent-child relationships (Kiernan & Huerta, 2008). According to the family stress model, adverse economic conditions can cause parents and families to experience intense economic pressures and daily strains, which could affect parental resources such as parents' mental health and well-being (Eamon, 2001). The psychological stressors experienced by economically disadvantaged parent groups further influence their parenting practices, attitudes, and parent-child interactions, which in turn can impact child outcomes (Barnett, 2008; Kiernan & Huerta, 2008).

Essentially, the family stress perspective proposes that experiencing extreme distress and financial difficulties over time can interfere with family functioning by obstructing access to funds and resources (Schluterman, 2007). When parents experience stressful adverse events, they are more likely to redirect the available resources towards dealing with the issue, which makes those assets unavailable for parenting. As economic stressors deplete parental resources that could otherwise serve as protective factors, children are put at the risk of experiencing developmental challenges, including impaired socio-emotional skill outcomes (Harris & Santos Jr., 2020).

The literature from the family stress model was utilized to inform the development of the current study and to understand how different family- and parent-level factors including SES determine parenting experiences and the quality of parent-

child relationships, and in turn influence children's social-emotional functioning. Findings from the current study will be explained in light of the family stress theory.

**Integrative Theory for the Study of Minority Children**

While ecological and developmental theories have laid the foundation for understanding young children's health and development, these models often fail to consider factors that can harmfully impact historically-minoritized communities. In an attempt to enable researchers, practitioners, educators, and policymakers to understand the developmental experiences, risks, and outcomes of youth belonging to marginalized communities, Garcia-Coll and colleagues (1996) proposed the integrative theory for the study of minority children (Garcia-Coll et al., 1996). This model views race and culture as proximal factors that affect developmental outcomes in young populations, both directly and indirectly, by impacting family processes and dynamics (Marks & Garcia-Coll, 2018). A central tenet of the model is that people's social positionalities including their racial and ethnic identities, social class, and gender can stratify individuals into a social hierarchy in a way that enhances or restricts the critical role of other contextual factors (Garcia Coll et al., 1996). An individual's social identity has the power to impair typical developmental patterns, create alternative pathways, and even produce negative long-term outcomes (Perez-Brena et al., 2018). However, these social identities do not act in isolation, but rather must be viewed in light of multiple environmental factors and practices, as these external forces can either stimulate or inhibit the impact of social position factors on children (Marks & Garcia-Coll, 2018). Thus, the model adopts and applies an ecological framework to study the effect of micro-and macro-systemic

elements on the health and development of marginalized groups (Marks & Garcia-Coll, 2018).

According to the pioneers of the integrative theory, systemic factors including parents, schools, and neighborhoods, along with the individual's adaptive culture and other social markers including racism, prejudice, discrimination, and oppression interact with children's biological, constitutional and psychosocial characteristics (Garcia Coll et al., 1996). These interactions can be especially detrimental for children belonging to historically-minoritized communities as they do not share many of these experiences with their white counterparts (Perez-Brena et al., 2018). While the integrative model was specifically designed to address the developmental needs of historically-minoritized children, the framework promotes the importance of examining race- and ethnicity-based experiences for all individuals, as parenting and child development are closely influenced by cultural experiences, beliefs, and practices (Hill, 2006).

A more nuanced approach to the ecological systems theory (Bronfenbrenner, 1974), the integrative theory for the study of minority children guided the development of the current study. Specifically, the current study was structured on the idea that there are multiple elements in a child's environment that interact to produce certain developmental outcomes. The current study built on the theoretical rationale guiding the integrative approach, in that, there is a greater emphasis on understanding the inter-relating factors that influence SED in children from a historically marginalized community, rather than an overriding emphasis on their racial identities.

**Integrative Conceptual Model of Adaptive Racial/Ethnic and Emotion Socialization**

In contrast to other developmental models that often overlook the nuanced factors that can individually and collectively impact children's developmental outcomes, the Integrative Conceptual Model of Adaptive Racial/Ethnic and Emotional Socialization by Dunbar and colleagues (2017) emerges as a pioneering approach. This model places a strong emphasis on unraveling how parents' racial/ethnic and emotional socialization profoundly influence the degree of negative repercussions that discriminatory experiences have on children's development. With a specific emphasis on the experiences of African American families, this model posits that African American parents engage in adaptive racial-ethnic and emotional socialization by supporting and suppressing their children's positive and negative emotional experiences, respectively, to protect children from harmful biases that they may encounter in the community (Dunbar et al., 2017).

Within this model, parental racial/ethnic socialization within African American families entails the messages and insights that parents impart to their children regarding their racial and ethnic identities, along with the biases and challenges they may encounter. Simultaneously, emotional socialization encompasses the strategies and techniques that African American parents teach their children, equipping them with the tools to comprehend and regulate their emotions effectively (Dunbar et al., 2017). The model assesses the degree of association between parents' socialization practices and their children's development in the context of broader influential factors including children's attributes, family characteristics, and other demographic factors. According to the model, it is the interrelationship between parents' socialization practices; children's emotion regulation abilities; characteristics such as temperament, gender, and age; their

experiences of societal discrimination; and other familial and neighborhood particularities that ultimately predict developmental outcomes in African American children.

The core tenet of this model revolves around the concept of adaptive racial/ethnic and emotional socialization employed by African American parents. This approach involves a delicate balancing act, as parents aim to provide unwavering support for their children's positive emotional experiences, while concurrently helping them navigate and suppress negative emotions. This duality of support and suppression serves as a protective shield, safeguarding children from the harmful biases they may encounter within their communities (Dunbar et al., 2017).

## Socio-Ecological Factors and Child Development

This section serves as a comprehensive review of previous literature concerning the different micro- and macro-systemic factors that impact child development in general and SED in particular, with a focus on the specific variables that were incorporated into the current study.

### *Parent Involvement*

The term “parent involvement” refers to the encompassing attitudes, values, and behaviors exhibited by parents in both home and school settings, representing a measure of caregivers’ active engagement in their child’s life. It serves as a mesosystem, bridging the crucial relationship between two microsystems within an individual’s ecological framework: the home and school environments. An abundance of studies has documented

the pivotal role of parent involvement in children's development, particularly with regard to their social-emotional and behavioral well-being.

Using data from the National Institute of Child Health and Development (NICHD) Study of Early Child Care and Youth Development, Nokali and colleagues (2010) examined the academic and social development trajectories of elementary school children. Hierarchical linear regression analyses unveiled a positive relationship between parent involvement both at home and school and improved social functioning, along with a reduction in behavioral problems (Nokali et al., 2010). A comprehensive literature review by Rollè and colleagues (2019) explored the connection between father involvement and cognitive skill development during early and middle childhood. Synthesizing findings from prior qualitative, quantitative, and mixed methods research, the study substantiated a statistically significant relationship between parental involvement and cognitive development (Rollè et al., 2019).

Powell and colleagues (2010) examined whether parental involvement within home and school environments could predict children's academic achievement, social-emotional skills, and behavioral tendencies. While the study did not find any consequential evidence for the impact of home-based involvement, it did reveal a noteworthy relationship between heightened parent involvement at school and enhanced social functioning, coupled with fewer concerns related to behavior (Van-Voorhis et al., 2013). In a study focused on preschoolers, Jones-Harden and colleagues (2012) scrutinized the effects of involved and supportive parenting on behavioral problems and SED. Results showed that although parental involvement and practices are not static,

early positive parent-child interactions have the potential to improve social-emotional outcomes for children (Jones-Harden et al., 2012).

Other studies have also endorsed the positive influence of parental involvement on improving academic achievement, social skills, and emotional regulation in adolescents, and even long-term mental health outcomes (Wang & Sheikh-Khalil, 2013). Prior research has probed into variations in parental involvement levels and their impact on student outcomes across diverse racial and ethnic backgrounds (Wang & Sheikh-Khalil, 2014). However, it is noteworthy that previous research has predominantly focused on student achievement and educational outcomes, with minimal emphasis on developmental outcomes.

### *Parent Warmth and Discipline*

Developmental research has consistently highlighted the essential role of parental warmth and discipline in shaping a child's development. In an effort to test a conceptual model predicting social competence in a sample of kindergarten students, Eiden and colleagues (2009) found a compelling association. Lower levels of parental warmth and sensitivity, as exhibited by both parents during early childhood, were linked with lower self-regulation and social competence, along with higher externalizing behavior problems in later stages of life (Eiden et al., 2009). A meta-analysis conducted by Kahleque (2013) provided further insights into the significance of parental warmth in children's psychological development. Results indicated that parental warmth was significantly associated with various outcomes in children including reduced hostile and aggressive behaviors, enhanced feelings of self-esteem and adequacy, elevated emotional stability,

and greater responsiveness. These associations were consistent across ethnic groups, gender identities, and geographical locations (Kahleque, 2013).

Utilizing a nationally representative longitudinal dataset, Wang and colleagues (2015) explored the relationship between parental warmth, disciplinary practices, and teenagers' depressive symptoms. Findings derived from growth mixture modeling highlighted that harsh parenting practices contributed to increased likelihood of depressive symptoms (Wang et al., 2015). Additionally, a study investigating the association between socioeconomic status and children's emotional and behavioral regulation skills found evidence supporting the mediating role of parental warmth and discipline (Xing et al., 2019). These study findings suggested the critical influence of parenting practices and behaviors in determining children's developmental patterns (Xing et al., 2019). Other research has continued to provide supportive evidence for the linkages between children's socio-demographic characteristics, experiences of parental warmth and discipline, and their overall psychosocial well-being (Chen & Liu, 2012).

### *Parent Psychological Health and Well-being*

There exists a well-established consensus among developmental theorists and researchers concerning the profound indirect influence that parental mental health and well-being can exert on children's development. When examining the intricate relationship between found and paternal mental health and child development, Kiernan and Mensah (2009) unearthed compelling evidence for diminished levels of cognitive, social, and emotional development in children whose parents experienced extreme psychological distress. Notably, these effects were further mediated by family

socioeconomic status, aligning with the predictions derived from the family stress model (Kiernan & Huerta, 2008).

Smith (2004) contributed to this understanding by finding evidence for a fundamental link between parental mental health problems, particularly maternal depression, and negative developmental outcomes for children. The study revealed that mothers diagnosed with depression reported greater difficulties related to their children's academic and social-emotional functioning (Smith, 2004). Expanding on this theme by using data from a sample of 178 African American mothers and their children, Jackson and Scheines (2005) delved into the impact of low-wage employment, maternal self-efficacy, depressive symptoms, and their repercussions on cognitive and social functioning in the early elementary school years. The results highlighted how parents' levels of depression significantly influenced their child's subsequent development and functioning, primarily by affecting the quality of parenting (Jackson & Scheines, 2005). Insights from early childhood studies have emphasized that parental well-being plays a key role in determining children's overall developmental trajectories, with the influence becoming apparent as early as three years of age (Lung et al., 2009). In a longitudinal study involving 354 parents, researchers discovered that maternal mental health diagnoses were associated with poor cognitive and social-emotional outcomes in their offspring, whereas paternal mental health disorders predominantly impacted cognitive functioning (Laucht et al., 1994). These findings have spurred further investigations into the intermediary role of ecological factors in delineating the impact of parental well-being on children's development (Lung et al., 2009).

### *Home Environment*

The early home environment, particularly the quality of stimulation and support provided, plays a crucial role in predicting children's cognitive and social-emotional development (Orri et al., 2019). A stable and structured home environment can positively impact child mental health and has found to even successfully mitigate the harmful effects of the COVID-19 pandemic on children's emotional development (Glynn et al., 2021). Creating a positive environment at home, one in which children engage in different psychosocial activities with their caregivers and have access to educational resources, can develop strong social-emotional competence in children and in turn strengthen their interpersonal relationships (Li et al., 2023).

In contrast, children raised in homes lacking parental responsiveness, acceptance, and educational stimulation often exhibit problematic and low prosocial behaviors (Watamura et al., 2011). In fact, interventions aimed at improving home environments have been successfully linked to enhanced social skills and fewer behavioral problems during early childhood (Finch et al., 2016). Moreover, children raised in environments characterized by disorganization, unpredictability, and instability tend to show less optimal cognitive and social-emotional development (Berry et al., 2016). A study involving 443 children from 14 kindergartens in western China explored the relationship between the home environment and children's social-emotional competence. The researchers concluded that the home environment is a dynamic and complex system that significantly influences children's social-emotional abilities, and this relationship was found to be moderated by gender (Li et al., 2023). Additionally, another study

highlighted the importance of a positive and nurturing home environment in child development, finding that such an environment can diminish the negative impact of stunting on development (Nguyen et al., 2018). Similarly, a study involving 7,326 rural Bangladeshi children aged 3 to 4 years found that factors such as parental participation in children's activities are crucial for early childhood development (Rahman et al., 2023).

### *Socioeconomic Status (SES)*

Family socioeconomic status (SES) is considered a crucial predictor of long-term growth and development in children (Hosokawa & Katsura, 2018). Studies have consistently demonstrated the detrimental effects of low SES on children and adolescents, including externalizing and internalizing behaviors, cognitive development, and language development (Letourneau et al., 2013). In a longitudinal study involving 100 Brazilian children aged 3 to 5 from two different socioeconomic groups, it was found that children from a lower social class had lower levels of emotion understanding and more difficulty recognizing positive and neutral emotions than those from a higher social class (Kårstad, 2016). Similarly, another study with 3,218 Japanese children aged 5–6 years examined the impact of SES on the children's emotional and behavioral difficulties and their social competence. The results identified parental education and family income as predictors of emotional and behavioral problems, as well as social skills (Hosokawa & Katsura, 2018). However, previous literature also indicates that the relationship between SES and child development does not occur in isolation; rather, it is moderated by other systemic factors including child characteristics such as personality or disposition, family characteristics

like the home environment, and the availability of external resources (Bradley & Corwyn, 2002).

***Race***

Prior research has also shed light on significant racial and cultural disparities in parenting practices and the ramifications of parent-child interactions on SED. While early research attributed these differences solely to race and ethnicity, contemporary studies have refrained from subscribing to such a social-deficit perspective of race. Instead, they have raised the critical issue of parenting and developmental disparities as a consequence of racialized experiences. Contemporary research recommends examining differences in children's SED through the lens of potential markers of social advantage and disadvantage, rather than solely relying on membership in historically marginalized groups. For instance, Zilanawala and colleagues (2015), in their study investigating ethnic variations in children's social-emotional difficulties, arrived at the conclusion that experiences of racism, socioeconomic conditions, maternal psychological distress, and family environment collectively accounted for variations in children's social-emotional difficulty levels when comparing historically marginalized and white communities. These markers of disadvantage tend to vary significantly across different racial groups (Kelly et al., 2013).

Research has indicated that racial disparities in children's health and well-being are the result of diverse forms of social disadvantages, extending beyond the scope of race/ethnicity alone (Bauman, 2006). Furthermore, numerous studies have underscored the multifaceted role of environmental factors that extend beyond the child's race/ethnicity. These factors include family type, parenting practices, the quality of

parent-child interactions, children's interethnic identities, and their perception of racism (Maynard et al., 2017; Priest et al., 2013; Zilanawala et al., 2015).

### *The Role of Children in their Own Development*

Children actively participate in shaping their own environments, developing unique perceptions and opinions as they interact with the world around them (Broström, 2006). Socialization is seen as a bidirectional process where children not only influence but are also influenced by their social environments, contributing significantly to their developmental outcomes (Davidov et al., 2015). As children learn to navigate their social contexts, their daily interactions and experiences, particularly those involving discrimination and race-based discrimination, begin to impact their developmental processes and overall well-being (Priest et al., 2013).

Prior research has documented the association between interpersonal discrimination experiences and psychosocial outcomes in children and youth of color, including those identifying as Black or African American. For instance, a study by Prelow et al. (2004) examining the role of ecological risk factors and perceived discrimination on mental health found that discrimination experiences predicted poorer psychological adjustment and wellbeing in African American youth. Similarly, Wong and colleagues (2003), in a study involving approximately 650 African American adolescents and their families, discovered that racial and ethnic discrimination significantly compromised the adolescents' development across various domains, including their social-emotional functioning. Discrimination by teachers and peers was found to increase psychological distress, such as anger and depression, and to promote problematic

behaviors among African American adolescents (Wong et al., 2003). Moreover, a more recent study by Walker et al. (2022), which included 73 African American children aged 7-12 years, underscored the significant impact of racialized experiences in childhood. The findings concluded that perceived personal discrimination was a strong predictor of increased anxiety symptoms in these children (Walker et al., 2022).

Limited prior research has found evidence supporting the association between children's developmental outcomes and their emotion regulation abilities and temperament. This research underscores the critical role of children's emotion regulation competencies in influencing their emotional health and wellbeing, as well as their academic success (Djambazova-Popordanoska, 2016). For instance, Qashmer (2023) investigated the association between emotion regulation and peer relationships among 300 Jordanian children in kindergarten and first grade. The study revealed that children with more developed emotion regulation skills were better able to form calm, integrated, and prosocial relationships with peers (Qashmer, 2023). In a systematic review, Matchett and colleagues (2020) explored the relationship between emotion regulation and social participation among children and adolescents aged 0-21 years. The researchers concluded that emotion regulation abilities are a strong predictor of social competence and advocated for incorporating emotion regulation skill development in interventions targeting social engagement difficulties (Matchett et al., 2020). Additionally, research over the years has emphasized the significance of temperament in developing skills related to social competence, social awareness, and social communication. It has also noted how individual differences in social development can result from variability in

reactivity and self-regulation (Salley et al., 2013). Sanson et al. (2011) observed that children's peer relations, social competence, prosocial behavior, and even maladaptive behaviors can all be influenced by their temperament characteristics. In the Uppsala Longitudinal Study (ULS) that tracked individuals from infancy to young adulthood, Bohlin and Hagekull (2009) reported that temperament successfully predicted social adjustment during childhood, including sociability and externalizing and internalizing behaviors.

## Chapter Three: Statement of the Problem

The principal objective of the current study was to delve into the diverse array of socio-ecological factors within the lives of Black children, and to explore their collective impact on SED outcomes. For this purpose, the current study utilized the integrative conceptual model of adaptive racial/ethnic and emotion socialization by Dunbar and colleagues (2017) to examine SED in middle school Black children. Specifically, this research examined a range of facets within Black children's lives, encompassing experiences of peer rejection, emotion regulation skills, and individual child characteristics such as temperament and sex. However, this study was not confined solely to the individual sphere; rather it encompassed a broader ecological perspective by scrutinizing parenting and familial characteristics including parent involvement, parental warmth and disciplinary approaches, parent mental health and well-being, home environment, and family SES.

It should be noted that the term "parent" in the study refers to both biological and adoptive parents, as well as any individuals acting as primary caregivers for the child. Additionally, given the nature of variables included in the ECLS-K:2011 dataset, the current study could only partially test the Dunbar and colleagues (2017) model. For instance, of the three types of child discrimination experiences listed in the model, only interpersonal discrimination, particularly peer rejection, was included in the current study. This variable of peer rejection was assessed using two variables in the ECLS-K:2011 dataset, peer victimization and loneliness. This decision was based on prior theoretical literature suggesting a conceptual overlap between peer rejection and

victimization, and between peer rejection and loneliness (Hanish & Guerra, 2002; Parker & Asher, 1993).

While an array of theoretical frameworks has, over the years, foregrounded the relationship between ecological factors and their ramifications for child development, a critical gap remains in research that comprehensively examines the association between these variables and their collective impact on SED, especially outside of the early childhood or adolescence period and within a specific racial/ethnic group. The current study attempted to bridge this gap by making novel contributions to the emerging literature in several impactful ways. First, the current study endeavored to examine a variety of child, peer, and family/parent-related factors that may serve as predictors of SED, delving into how these factors either promote or impede healthy social-emotional outcomes in middle childhood-aged children. Second, this study adopted an integrated perspective to assess SED, one that seeks to capture individual, familial, and social determinants of SED, purposefully diverging away from the conventional practice of examining the impact of race on development in isolation. Thus, it applied an ecological framework to address racial disparities in developmental outcomes.

Third, it centered its focus on Black children and families, examining SED within this specific demographic group and analyzing differences within the group itself, rather than exclusively making comparisons between ethnic groups. This research addresses a critical gap in developmental literature that has neglected historically marginalized communities, particularly Black children, often relying on developmental norms derived from studies focused on European-American populations. Moreover, it aligns with the

growing consensus from developmental researchers that emphasize the need for examining variations within racial or ethnic groups rather than solely focusing on inter-group differences (Zuckerman, 1990; Betancourt & Lopez, 1993). Finally, it is hoped that the results of the current study can be used to make valuable insights that can be generalized based on the utilization of a substantial and nationally representative sample. Few previous studies have harnessed such a large and diverse sample to investigate these critical questions, potentially yielding findings of broader applicability and significance.

The following research questions were addressed in this study to test the Dunbar and colleagues (2017) model:

*Research Question 1:* To what extent do Black children's experiences of peer rejection impact their social-emotional development?

*Research Question 2:* After controlling for experiences of peer rejection, does children's emotion regulation and understanding explain a unique amount of variance in Black children's social-emotional development?

*Research Question 3:* After controlling for experiences of peer rejection and children's emotion regulation and understanding, do broader influential factors explain a significant amount of variance in Black children's social-emotional development?

# Chapter Four: Method

## Data Collection and Sample

The current study used data from the Early Childhood Longitudinal Study, Kindergarten Class of 2010-11 (ECLS-K:2011). Funded by the National Center for Education Statistics (NCES), this nationally representative dataset includes a sample of U.S children from kindergarten through fifth grade. A novel feature of the 2010–2011 cohort of the ECLS-K:2011 is that it is the first nationally representative longitudinal study designed specifically to assess children's executive function skills directly (Tourangeau et al., 2019).

To ensure the representativeness of the sample, the ECLS-K:2011 implemented a meticulous multistage sampling methodology to sample a cohort of approximately 18,000 children in three major steps. This involved dividing the United States into 90 Primary Sampling Units (PSUs) as the initial step. Subsequently, over 13,000 public and private schools were identified within each PSU. The final sampling stage involved the selection of children enrolled in kindergarten programs within these schools. Sampling weights were applied to account for differential probabilities of selection at each sampling stratum and mitigate the impact of nonresponse on parameter estimates (Tourangeau et al., 2019).

The ECLS-K:2011 dataset draws its strength from aggregating information from various stakeholders, particularly from five primary sources, providing a comprehensive perspective on child development. These sources include the children themselves, their parents or guardians, teachers, schools, and before-and after-school care providers. During the data collection phase, highly trained field staff were responsible for a

multitude of tasks involving conducting child assessments (e.g., cognitive assessments, height, and weight measurements) and parent interviews (e.g., parent involvement questionnaires). For children whose primary/home language was not English, a language screener was administered before the assessment in order to determine assessment components and ensure fairness. The parent interviews were thoroughly translated into Spanish prior to data collection, and bilingual interviews were available if parents preferred to converse in Spanish (Tourangeau et al., 2019). Additionally, school staff, including teachers, administrators, and other care providers, were requested to complete and submit self-administered questionnaires, thus enriching the dataset with diverse perspectives and insights. More details about the data collection process are provided by Tourangeau and colleagues (2019).

Data collection for the ECLS-K:2011 commenced in the fall of 2010 and spanned six years, culminating in the spring of 2016. For the purposes of this study, the fifth-grade year (i.e., Spring 2016) has been chosen as the focal point. This particular grade level was selected because it was the only grade level in the dataset that includes additional variables related to children's in-school rejection experiences and the quality of parent-child relationships that were not incorporated in the previous years of data collection. Given the scope of the current study, including these variables would strengthen the theoretical model being tested. Importantly, previous research suggests that by the fifth-grade level, children's experiences and interactions with peers, along with their own emerging characteristics and behaviors, become equally influential in shaping their development as the influence of their parents. (Michael et al., 2014). Considering that this

research study endeavored to explore the intricate interplay between these multifaceted environmental elements and its impact on children's social-emotional development (SED), the fifth-grade sample was considered most apt for this investigation. In alignment with the study's objectives, the sample utilized for the current study specifically comprised children who were identified as Black by their parents ($n$ = 2840). While the ECLS-K:2011 dataset includes specific questions about both parents and children's racial group identities, only children's race or ethnicity was the principal criterion for inclusion in the study. Parental race was not a determining factor. Moreover, it is pertinent to note that participants with multiple racial backgrounds were excluded from this study.

## Instrumentation

### *Dependent Variable*

**Social-Emotional Development (SED).** The social-emotional developmental measure included in the ECLS-K:2011 study focused on facets of social competence, particularly social skills (e.g., self-control, ability to engage in peer interactions, conflict resolution skills, and ability to engage in group tasks) and challenging behaviors (e.g., internalizing and externalizing behaviors). The current study utilized the child-level teacher questionnaire to assess SED in the fifth-grade sample. The survey had a weighted response rate of 75.5 percent for Black children included in the sample (Tourangeau et al., 2019). The items included in this questionnaire were adapted from the Social Skills Rating System (SSRS) by Gresham and Elliott (1990). Sample items included, "Easily adapts to changes in routine", "Is sensitive to others' feelings", "Follows classroom

rules", and "Respects others' property". Items were scored on a range of 1 = *never* to 4 = *very often*. Higher scores indicated that the child frequently exhibited the behavior represented by the scale. All four measures of SED demonstrated good reliability statistics for the ECLS-K:2011 sample (self-control = .80; interpersonal skills = .86; externalizing problem behavior = .88, internalizing problem behavior = .79; Tourangeau et al., 2019).

### *Independent Variables*

**Peer Rejection Experiences.** The integrative conceptual model of adaptive racial/ethnic and emotion socialization by Dunbar and colleagues (2017) conceptualized child discrimination experiences as interpersonal, institutional, and conceptual discrimination (Dunbar et al., 2017). Due to the scope of the ECLS-K:2011 dataset, the current study focused exclusively on interpersonal discrimination, specifically examining experiences at the peer level. One way of measuring interpersonal discrimination recommended in the model was through experiences of peer rejection (Dunbar et al., 2017). Accordingly, the current study assessed children's experiences of peer rejection by measuring instances of peer victimization and school loneliness. This was done using items from the child-level questionnaire that asked about children's experiences with their peers at school. These questions were focused on experiences related to bullying, rejection and loneliness. Items in the ECLS-K:2011 study were adapted from Espelage and Holt (2001) bullying and peer victimization scale, and Parker and Asher (1993) friendship and friendship quality scale. Examination of the bullying and peer victimization (Espelage and Holt, 2001) scale reflected high internal consistency scores

for the items included on the scale (.81; Najarian et al., 2019). Similarly, internal consistency reliability was examined for items on the friendship and friendship quality scale (Parker and Asher, 1993), and results found an internal consistency of .89 in the fifth-grade sample (Najarian et al., 2019). The current study utilized four items from the Espelage and Holt (2001) scale and three items from the Parker and Asher (1993) scale to specifically enquire about any experiences of victimization and loneliness; a total of seven items were included. Examples of these items include, "During this school year, how often have other students teased you, made fun of you, or called you names?"; "During this school year, how often have other students pushed, shoved, slapped, hit, or kicked you?"; "I feel lonely at school"; "I feel left out at school"; "I feel alone at school". Item responses ranged from 1= *never* to 4 = *very often*, and higher scores were reflective of greater victimization, loneliness, and rejection.

The current study utilized item-level variables of peer victimization and school loneliness to measure peer rejection considering the existing literature that suggests a conceptual overlap and high correlations between peer rejection and peer victimization, as well as between peer rejection and school loneliness (Hanish & Guerra, 2002; Parker & Asher, 1993). According to this prior research, peer rejection increases children's vulnerability to victimization, as rejected children often lack peers who are willing to support and protect them, either through direct intervention during instances of victimization or by socially disapproving of such acts (Hanish & Guerra, 2002). Similarly, research using sociometric ratings has found that school loneliness is strongly correlated with low group acceptance and social rejection (Parker & Asher, 1993).

**Child Emotion Regulation and Understanding.** Children's emotion regulation and understanding skills were assessed using three measures of executive functioning including the Numbers Reversed subtest of the Woodcock-Johnson III (WJ III) Tests of Cognitive Abilities (Blackwell, 2001), the Dimensional Change Card Sort (DCCS; Zelazo 2006; Zelazo et al. 2013), and the NIH Toolbox Flanker Inhibitory Control and Attention Task (Zelazo et al. 2013). The DCCS assessed children's cognitive flexibility and calculated a combined score involving accuracy of responses and reaction time. Previous literature has found excellent inter-rater reliability evidence for variables included on this measure (Doebel & Zelazo, 2015). The Numbers Reversed task measured participants' working memory and asked students to hold a range of numbers in memory, while simultaneously performing a mental operation of reversing the sequence of those numbers. Reliability statistics calculated for the WJ-III reflected a test-retest reliability coefficient of .87 for the Numbers Reversed subtest (Schrank, 2011). The Flanker task was a computer-based task designed to assess neurological and behavioral functioning in children aged 3-85 years (Tourangeau et al., 2019). Research on the task's psychometric properties indicated high test-retest reliability for the designated population (Zelazo et al. 2013).

An increasing amount of research has found evidence for the linkages between executive functioning (EF) and emotion regulation (ER) skills (Blankson et al., 2013; Predescu et al., 2020). Researchers have started to recognize not only the similarities between EF and ER skills but also the critical role of one skill in the development of the other (Ferrier et al., 2014); the rationale being that several higher-order executive

functioning skills including self-management, ability to identify and understand emotions, impulse control, and adaptive thinking skills determine children's ability to regulate and understand their emotions and support overall emotional development (Rueda et al., 2012). Similarly, studies have shown that the development of emotion regulation skills at an early age significantly contributes to the development of later executive functioning abilities (Blankson et al., 2013). In fact, prior literature has suggested that EF and ER are both part of broader self-regulation skills and can be used correlatively (Gyurak et al., 2009; Ursache, 2012).

**Broader Influential Factors.** The Dunbar and colleagues (2017) model examined broader influential factors at the child level (e.g. sex, temperament), the family level (e.g. home climate, SES), and the neighborhood level (e.g. SES, racial composition, risk). Considering the limitations of the ECLS-K:2011 dataset, the current study focused only on child and family factors. These factors were assessed as described in the subsequent paragraphs. It is important to note that the model proposed by Dunbar and colleagues (2017) provided recommendations regarding which child and family level variables could be included in research studies and encouraged researchers to explore other potential variables beyond the examples outlined in their theoretical framework. Consequently, the current study incorporated parent involvement, parent psychological health and wellbeing, parent warmth and discipline, in addition to home environment and family SES, as measures of family-level broader influential factors. No additional variables were included at the child level, beyond those mentioned in the Dunbar and

colleagues (2017) model. Since the study examined SED only at the fifth-grade level, age was not included as a child-level variable.

***Child characteristics.*** Sociodemographic details including participant sex were obtained using information from the child-level parent questionnaire. Consistent with prior research, the variable of "sex" was coded with boys as 0 and girls as 1 (Morales et al., 2018). Additionally, information about child temperament was collected using the Temperament in Middle Childhood Questionnaire (TMCQ) (Simonds & Rothbart, 2004). The TMCQ assessed children's attentional focus and inhibitory control, as reported by the teacher. This questionnaire was administered to teachers who were asked to rate the student's temperament using a 5-point scale ranging from "*almost always untrue*" to "*almost always true*". The TMCQ is a caregiver questionnaire comprising 157 items, of which 13 items were included in the ECLS-K:2011 study. Sample items included, "Gets distracted when trying to pay attention in class", "Is good at following directions", "Has a hard time waiting his/her turn to talk when excited". Negative items were reverse coded and higher scores indicated stronger attentional focus and inhibitory control. Preliminary examination of the psychometric properties of the questionnaire with ethnically diverse samples found internal consistency scores ranging from alpha values of .63 to .90 (Simonds, 2006).

***Parent Involvement.*** Parent involvement was measured using responses to the child-level parent questionnaire for fifth grade. The measure of parent involvement was essentially focused on school-based involvement, and parent involvement levels were determined based on parent reports of participation and engagement in school-based

parent activities. Higher scores indicated higher parental involvement in their child's life. Typical items on the scale included whether (0 = *no*, 1 = *yes*) parents attended events at their child's school including an open house/back-to-school night, a PTA/PTO/Parent-Teacher Organization meeting, a parent-teacher conference/meeting, a school/class event, and volunteering in their child's school/classroom.

***Parent Warmth and Discipline.*** Parent warmth and discipline was measured using the discipline warmth and emotional supportiveness scale, which was a part of the child-level parent questionnaire. Items reflected the degree to which parents extend emotional warmth and supportiveness to their children and engage in disciplinary practices. Responses ranged from 1= *completely true* to 4 = *not at all true;* 1= *never true* to 4= *very often true*; and 1= *never* to 4= *always*. A total of 18 items were included in the current study to measure parental warmth and discipline levels. Some examples of these items included, "Even if I am really busy, I make time to listen to the child", "I encourage the child to express his/her opinions", "You threaten to punish the child and then do not actually punish him/her", "How often do you argue with the child?". Negative items were reverse coded and higher scores indicated more warmth and emotional supportiveness, and more positive disciplinary practices.

***Parent Psychological Health and Well-being.*** Parent mental health was assessed using the parent psychological health and well-being instrument included in the child-level parent questionnaire for fifth grade. This instrument was comprised of questions about the different emotions and feelings that parents might have experienced in the recent past and required parents to rate the frequency of their experiences, ranging from 1

= *never* to 4 = *most of the time*. Sample items on the scale included, “How often during the past week have you felt that you were bothered by things that don't usually bother you?”, “How often during the past week have you felt that you did not feel like eating, that your appetite was poor?”, “How often during the past week have you felt depressed?”, “How often during the past week have you felt that your sleep was restless?”. The current study utilized 14 items from the parent psychological well-being and health scale. Higher scores were suggestive of greater psychological and emotional distress in parents.

***Home Environment.*** Home environment was assessed using the child-level parent questionnaire and measured in terms of home-based involvement. Home-based involvement measure involved a combination of individual item scores that suggested how often parents helped their child with homework (1 = *never* to 4 = *five or more times a week*), read to their child (1 = *not at all* to 4 = *every day*), and let their child read to others (1 = *never* to 4 = *every day*). Higher scores reflected a more positive and growth-oriented environment at home.

***Family Socioeconomic Status (SES).*** Family SES was assessed using the composite SES variable that was computed at the household level. The SES variable indicated the family’s socioeconomic conditions at the time of data collection and comprised parents' family income and assets. (Tourangeau et al., 2019).

## Chapter Five: Data Analysis

In the pursuit of understanding the complex interplay of variables affecting social-emotional development (SED) in Black children, a rigorous statistical approach is essential. The current study employed linear regression analysis to test four of the five primary components outlined in the theoretical model developed by Dunbar and colleagues (2017). Specifically, weighted hierarchical regression models were utilized to explore the relationship between predictors and SED among Black children within a diverse ecological context. Prior to conducting the regression, bivariate correlations were utilized to determine preliminary associations between the different variables included in the models.

### Weighted Hierarchical Regression

To comprehensively investigate the intricate predictors of SED in Black children, a three-step weighted hierarchical regression analysis was conducted. This statistical approach systematically explored the various factors influencing SED within this unique population. The predictor variables were entered in three hierarchical blocks or models.

#### *Model 1: Peer Rejection Experiences and SED*

The first research question was addressed in Model 1. This initial model examined the impact of peer rejection on SED in Black children. Prior to entering the variables in the model, the items measuring peer victimization and school loneliness were merged together to create the variable of peer rejection. In the next step, peer rejection was introduced in the model, and SED was regressed on the independent variable. The statistical significance of this model was assessed using the R-squared value ($R^2$) and the

regression coefficient. These key metrics revealed the extent to which Black children's peer rejection experiences were associated with their SED levels.

***Model 2: Emotion Regulation and Understanding and SED***

Model 2 aimed to address the second research question in the study. This model expanded upon Model 1 by introducing the variable of executive functioning skills, as a measure of emotion regulation and understanding. The objective was to assess how well this model explained the dependent variable, SED, in comparison to Model 1. Emotion regulation skills were assessed on the basis of scores received on tasks measuring executive functioning skills. Scores on the Numbers Reversed, DCCS, and Flanker tasks were merged together to form the measure of executive functioning skills, which was reflective of the sample's emotion regulation and understanding levels. Analysis of the $R^2$ and the beta values provided insights into the contribution of emotion regulation abilities to SED in Black children, in addition to their peer rejection experiences.

***Model 3: Child and Family Characteristics***

Model 3 delved into the third research question of the study, focusing on child and family characteristics as predictors of SED. This comprehensive model introduced variables related to child sex, temperament levels, parent involvement, parental warmth and discipline, parental psychological health and wellbeing, home environment, and family socioeconomic status (SES). By adding these factors to the prior models, Model 3 attempted to determine whether Black children's personal and family characteristics significantly predict their SED outcomes, beyond the influence of peer rejection experiences and emotion regulation skills. The derived $R^2$ and the coefficient values were

interpreted to examine the meaningfulness of these additional predictors and implicate the influential role of the new factors included in the model, besides the previously included factors.

**Evaluating Model Fit and Significance**

To evaluate the goodness of fit for the regression model, the $R^2$ statistic was utilized. The $R^2$ value reveals the proportion of variances in the dependent variable (SED) that can be attributed to the independent variables. It quantifies how closely the data points align with the model's predictions or the line of best fit. Ranging between 0 and 1, a higher $R^2$ value indicates a better fit between the model and the data. Moreover, the Wald test was performed in R to assess the significance of the three statistical models in the context of regression analysis. The Wald test analysis clarified whether including additional variables in the model significantly enhanced the model's explanatory power.

The weighted hierarchical regression analysis in this study employed a systematic approach to unveil the multifaceted predictors of SED in Black children. By systematically introducing variables measuring peer rejection, executive functioning skills, child characteristics, and family characteristics in three distinct models, this analysis aimed to provide a comprehensive understanding of the factors shaping SED within this specific population. The $R^2$ values, regression coefficients, and the Wald test results offered valuable insights into the unique contributions of each set of predictors. This comprehensive methodology aligns with the study's overarching goal of providing an in-depth exploration of the factors influencing SED in Black children, including both intrapersonal and contextual model. It highlights the importance of taking into account a

diverse range of variables and their potential interconnections when seeking to understand the intricate nature of SED within this particular context.

**Analyzing Complex Survey Data: The ECLS-K:2011 Study**

The current study made use of complex survey data collected as part of the ECLS-K:2011 study to comprehensively investigate SED in Black children. Typically, complex survey datasets diverge from straightforward random sampling techniques, instead necessitating the application of intricate sampling designs characterized by clustering, stratification, and weighting (Strugis, 2004). Due to the inherent complexity in the data collection and sampling processes, one inevitably encounters challenges related to homogeneity and disproportionate sampling when dealing with survey data (Hahs-Vaughn, 2011). It is imperative, therefore, to analyze these datasets differently from the traditional methods used in case of simple random samples. Ignoring the intricacies of complex sampling designs and the associated issues can lead to erroneous estimations of standard errors and biased population inferences (Hahs-Vaughn, 2005; Kim & Skinner, 2013). To mitigate these issues, specific weights have been meticulously generated for the dataset to recalibrate it into a representative sample.

When dealing with complex survey data employing a cluster design, it becomes essential to execute weighted hierarchical regression to account for the dataset's intricacies (Haensch & Weiss, 2020). Applying regression analysis for survey data ensures stability and consistency in parameter estimates (Kim & Skinner, 2013). Given the multifaceted nature of the ECLS-K:2011 study, the present analysis accounted for survey strata, clusters, and sample weights to provide more precise population estimates

and to correct for oversampling and non-response bias. This level of analysis necessitates the utilization of specialized statistical softwares (Lee et al., 2020). Consequently, for this research, the EdSurvey package within R was leveraged (version 2022.02.0). The EdSurvey package is specifically crafted for the analysis of data from the National Center for Education Statistics (NCES; Lee et al., 2020). Given the sophisticated nature of the ECLS-K:2011 dataset, the EdSurvey package emerged as the recommended choice for this study, enabling data analysis that aligned with the dataset's scope and complexity. This package compensated for the complexities of complex survey designs and plausible values associated with the ECLS-K:2011 data (Lee et al., 2020). The EdSurvey package encompassed an in-built model estimation method that takes into full consideration the complexity inherent in the ECLS-K:2011 data. For a deeper understanding of the model estimation process, one can refer to the technical report authored by Bailey and colleagues (2021).

The hierarchical regression analysis for the current study was conducted using the vcovHC function in R. Following the integration of data into R using the EdSurvey package, the vcovHC function aided in calculating robust variance-covariance matrices to manage the heterogeneity of data in the regression analysis. Furthermore, the Wald test was conducted to determine whether the additional set of predictors in each model contributed significantly to explaining the variance in the response variable of SED, beyond what was already explained by the variables in the previous steps.

The regression analysis involved the judicious selection and definition of appropriate weights using the weightVar argument. Notably, the ECLS-K:2011 data are

weighted to accommodate the unequal probabilities of selection at each sampling stage and to rectify for nonresponses (Mulligan et al., 2019). The use of weights is critical in producing estimates that are representative of the sampled cohort. The current study deployed the W9C19P_9T29B0 weight variable, which is the child-level base weight adjusted to account for nonresponses at the child-, parent-, and teacher-level for the Spring 2016 fifth grade sample. To adjust for standard errors, the jackknife replication variance estimation method (JK2) was utilized (Tourangeau et al., 2019). This statistical technique entailed the involvement of two Primary Sampling Units (PSUs) per stratum, with each survey estimate calculated for the full sample and its corresponding replicates, thereby delivering unbiased estimates of the standard error (Tourangeau et al., 2019). In the analysis for the current study, W9C19P_9T29B0 was specified as the main sampling weight, W9C19P_9T29B1 to W9C19P_9T29B80 as the replicate weights, and JK2 as the method of replication. Additionally, the EdSurvey package undertook the calculation of standardized coefficients and associated variances, leveraging the standard deviations of the variables themselves.

**Assumptions**

Before delving into the regression analysis, it is vital to validate the several assumptions underlying the statistical method. These assumptions serve as the foundational framework for the analysis, ensuring the integrity and accuracy of the results. For the current study, the following assumptions were tested: independence of error distribution, assumption of linearity, assumption of normality, and homoscedasticity.

### *Independence of the Error Distribution*

The independence of error distribution is a fundamental assumption in multiple regression analysis. It posits that the residual terms for any two observations should exhibit no correlation. The current study tested for this assumption using the Durbin-Watson statistic. A coefficient closer to two indicates a higher likelihood of independent residual terms (Field et al., 2012). Testing this assumption in R derived a value of 1.89, which suggests the residual terms were independent. Furthermore, the p-value of 0.75 was not statistically significant, suggesting that the assumption of independence was met.

### *Linearity*

For multiple linear regression models, there must be a linear relationship between the independent and dependent variable (Jeong & Jung, 2016). The absence of linearity can lead to an underestimation of the true relationship between variables and pose an increased risk of Type I and Type II errors (Osborne & Waters, 2002). The current study assessed linearity in the data by creating and scrutinizing residual vs fitted plots. A close examination of the residual plot revealed no distinct pattern in the data (i.e., the red line was approximately horizontal at zero). This indicated the data successfully met the assumption of linearity.

### *Normality*

The assumption of normality states the model residuals should be normally distributed around a mean of zero. For large datasets such as the ECLS:K-2011, normality can be successfully examined by utilizing statistical methods relying on the Central Limit Theorem (Lumley et al., 2002), which states that when the sample size is

sufficiently large ($N > 30$), the means of samples are approximately normally distributed around the true population mean, regardless of the population distribution (Islam, 2018; Knief & Forstmeier, 2021). Accordingly, with the current study involving a sample size of 2840, one can assume the distribution of sample mean approximated to normal distribution. Additionally, to ensure accuracy, the assumption of normality was tested utilizing the normal Q-Q plot (Jeong & Jung, 2016). Testing this assumption in R revealed the standardized residuals on the Q-Q plot seemed slightly skewed, but mostly normal, falling close to the line of best fit.

***Homoscedasticity***

The assumption of homoscedasticity or homogeneity of variance asserts that the variance of errors or residuals is constant across all levels of the independent variable. This assumption was tested by visually examining the scatterplots of standardized residuals. Violation of this assumption occurs when errors do not evenly distribute around the diagonal line (Osborne & Waters, 2002). An inspection of the scatter plot revealed that the assumption of homogeneity of variance was violated. For this purpose, the current study attempted to rectify for heteroscedasticity by employing a more robust regression analysis based on a heteroscedasticity consistent covariance matrix that provides a consistent estimation of the regression coefficients in the presence of heteroscedasticity of an unknown form (Long & Ervin, 2000). The current study accomplished this by employing the vcovHC function in R. It is part of the sandwich package (Zeileis et al., 2020) used to provide robust standard errors that adjust for heteroscedasticity, improving the reliability of standard error estimates and subsequent

inference from statistical tests. Previous studies have successfully employed this technique to account for the adverse effects of heterogeneity on the linear regression model, especially when the sample size is greater than 250 (Long & Ervin, 2000; White, 1980).

**Exploratory Factor Analysis**

In addition to testing the assumptions, an exploratory factor analysis (EFA) was conducted to look at the underlying structure of data from the ECLS:K-2011 dataset. This analysis aimed to determine whether specific measures could be combined to create a composite variable that accurately represented the underlying constructs. This was done for two specific variables in the current study, peer rejection and executive functioning skills. The purpose of this analysis was to determine whether items from the scale measuring peer victimization and the scale measuring school loneliness could be aligned under the common factor of peer rejection; and whether scores on the DCCS, Number Reversed, and Flanker tasks could be aligned under the common factor of executive functioning.

For this purpose, the psych package in the R statistical software (Revelle, 2017) was used and the Promax factor rotation method was employed. It is a form of oblique rotation that allows factors to correlate with each other and works well with large datasets (IBM SPSS, 2021). A parallel analysis was conducted to determine the number of factors to be included in the EFA. This was done by creating a visual scree plot and analyzing the eigenvalues by comparing actual data with simulated data. After examining the scree plot and determining the number of factors, the EFA was conducted. Factor loadings

were examined to determine whether the combined items meaningfully contributed to the factors. Additionally, the original EFA model was compared to a more complex model in order to determine which model provided a more accurate representation of the data structure.

## Chapter Six: Results

Bivariate correlations among the independent and dependent variables are presented in Table 2. Using the Pearson and Point-biserial correlation coefficients, strength of the association between variables was assessed based on the classification that has been recommended in prior research. According to this classification, a correlation coefficient of 0.00 indicates no correlation; a correlation coefficient between 0.10 to 0.30 indicates weak correlation; a coefficient of 0.40 to 0.60 indicates moderate correlation; a coefficient of 0.70 to 0.90 indicates strong correlation; and a correlation coefficient of 1 indicates the perfect correlation (Akoglu, 2018).

With respect to the dependent variable of social-emotional development (SED), several weak to strong correlations were identified. There was a strong positive correlation between SED and child emotion regulation and understanding, $r = 0.77$, $p < .01$, suggesting a positive linear association between the two variables. This indicates that Black children with higher emotion regulation skills also had better social-emotional skills. There was a weak positive correlation between SED and parent involvement, $r = 0.14$, $p < .01$, suggesting a positive linear association between the two variables. This correlation supports the idea that Black children whose parents were more involved in their school life demonstrated higher levels of SED. There was a weak negative association between SED and parents' psychological health and wellbeing, $r = -0.26$, $p < .01$, suggesting that Black children with parents with no issues related to their psychological health well-being displayed higher SED levels. Additionally, there was a weak positive correlation between SED and the home environment, $r = 0.19$, $p < .01$,

supporting the idea that Black children from more positive and supportive home environments showed better SED skills.

With respect to the independent variables, several small correlations were identified. There was a weak negative correlation between peer rejection, and child emotion regulation and understanding, $r = -0.14$, $p < .01$. This suggests a negative linear relationship between the two variables, indicating that Black children who had lesser experiences of victimization and loneliness at school demonstrated higher skills in areas of emotional regulation and understanding. With respect to the different variables included under the umbrella of broader influential factors, there was a moderate positive relationship between parent involvement and parental psychological health and wellbeing, $r = 0.44$, $p < .01$. This indicates a positive linear relationship, meaning parents of Black children with better psychological health also showed greater involvement in their child's school life. There was a moderate positive relationship between parent involvement and home environment, $r = 0.51$, $p < .01$. This suggests a positive linear association between the variables, indicating that Black children belonging to more positive and supportive homes also experienced greater involvement from their parents. Additionally, there was a moderate positive association between parental psychological health and wellbeing and home environment, $r = 0.57$, $p < .01$, indicating a positive linear relationship. This suggests Black children whose parents reported poorer psychological health also belonged to less involved and supportive homes. Please refer to Table 2 for more information.

**Exploratory Factor Analysis**

Before conducting the regression analysis, an exploratory factor analysis was conducted to determine whether items from the scales measuring peer victimization and school loneliness could be effectively combined to form a variable measuring peer rejection. Similarly, the analysis intended to determine whether scores from the three measures of executive functioning could be successfully merged to form a variable that is representative of executive functioning skills. First, scree plots were created for both variables of peer rejection and executive functioning, and parallel analysis was also employed. The observed eigenvalues for the plots were compared with the simulated data lines showing random eigenvalues. For both scree plots, there was only one factor lying above the corresponding simulated data line. Parallel analysis compared the eigenvalues of the actual data to values of the simulated data. For the variable of peer rejection, results revealed that the eigenvalue of the first factor in the actual data was 4.89, while it was 3.61 in the simulated data. The eigenvalue of the second factor in the actual data was 1.61, while it was 2.10 in the simulated data. Additionally, for the variable of executive functioning, results revealed that the eigenvalue of the first factor in the actual data was 2.68, while it was 1.96 in the simulated data. The eigenvalue of the second factor in the actual data was 1.01, while it was 1.31 in the simulated data. Based on this analysis, only one factor was utilized to load the variables.

Results of the exploratory factor analysis showed that, for the variable of peer rejection, the factor loadings for all seven items included in the analysis exceeded 0.5. For the variable of executive functioning skills, results showed that the factor loadings for all three items in the analysis exceeded 0.6. Prior research suggests that factor loadings

ranging from as low as 0.3 to as high as 0.5 are sufficient to demonstrate that the factors are cohesively related and have strong correlations with each other and the main factor (Napitupulu et al., 2017; Omura et al., 2022). Accordingly, for the current study, one could conclude that the items from the scales measuring peer victimization and school loneliness can be effectively combined to form the variable measuring peer rejection. Similarly, scores from the DCCS, Number Reversed, and Flanker tasks could also be effectively merged to form the variable measuring executive functioning skills. Please refer to Table 3 and Table 4 for more information.

In order to examine whether the one-factor EFA model accurately represented the dataset, a two-factor model was compared with the original model to explore if the new model provided a significantly better fit to the data. For the variable of peer rejection, results showed that of the seven items included in the analysis, four items loaded onto factor 1 and three items loaded onto both factors 1 and 2. For the variable of executive functioning, results showed that of the three items included in the analysis, all three items loaded onto factor 1. Based on this analysis and the previously factor extraction recommendations, it was concluded that a one-factor model was appropriate

**Regression Analysis**

Results of the three-model regression analysis are presented in Table 5. Model 1 focused on the first research question: to what extent do Black children's peer rejection experiences impact their SED? The first independent variable measuring peer rejection was entered into this model along with the outcome variable of SED. Results indicated peer rejection accounted for 11% of the variation in the outcome variable but the model

was not statistically significant ($\beta$ = -0.64, $p > 0.1$). This suggests the independent variable of peer rejection, did not predict the dependent variable of social-emotional development. Thus, to answer the first research question, Black children's experiences of peer rejection at school were not determined to have a significant impact on their social-emotional developmental outcomes when considered in isolation.

Model 2 focused on the second research question: after controlling for experiences of peer rejection, does child emotion regulation and understanding explain a unique amount of variance in Black children's social-emotional outcomes? The independent variables measuring peer rejection and child emotion regulation and understanding were entered into this model. Controlling for peer rejection and including the variable of child emotion regulation and understanding led to a model that accounted for 22% of the variance in the dependent variable. The additional variable of child emotion regulation and understanding included in this model was statistically significant ($\beta$ = 2.12, $p < 0.05$). This indicates child emotion regulation and understanding successfully predicted social-emotional outcomes in the sampled population. Moreover, adding this variable to the model resulted in the first variable of peer rejection becoming statistically significant ($\beta$ = -1.79, $p < 0.05$). Results from the Wald test suggested that including the independent variable of child emotion regulation and understanding significantly improved the fit of the model ($F$ = 4.02, $p < 0.05$). Thus, when rejection experiences are analyzed alongside emotion regulation abilities, both variables could determine social-emotional developmental outcomes. Thus, to answer the second research question, we reject the null hypothesis and determine that after controlling for

experiences of peer rejection, Black children's emotion regulation and understanding explains a unique amount of variance in their SED levels.

Model 3 focused on the third research question: after controlling for experiences of peer rejection and child emotion regulation and understanding, do broader influential factors explain a significant amount of variance in Black children's social-emotional outcomes? The independent variables of peer rejection and child emotion regulation and understanding were entered into this model, along with the variables measuring broader influential factors. These variables included child sex, temperament, parent involvement, parental warmth and discipline, parent psychological health and wellbeing, home environment, and SES. Controlling for the previous variables of rejection experiences and emotion regulation and understanding and including broader influential factors into the analysis in the prediction of SES, led to a model that accounted for 31% of the variance in the outcome variable. Out of the different variables included in the model measuring broader influential factors, parent involvement, parent psychological health and wellbeing, and home environment were statistically significant ($\beta = 3.15$, $p < 0.01$; $\beta = 4.08$, $p < 0.001$; $\beta = 1.75$, $p < 0.01$, respectively). Conducting the Wald test to compare model 2 and model 3 and further determine the model of best fit revealed that the additional variables measuring broader influential factors significantly improved the variance explained by the third regression model ($F = 7.86$, $p < 0.001$). This indicates that the broader influential factors in Black children's lives added a significant amount of predictive power for their social-emotional outcomes on top of their peer rejection experiences and levels of emotion regulation and understanding. Thus, to answer the third

research question, we reject the null hypothesis and determine that after controlling for experiences of peer rejection and child emotion regulation and understanding, broader influential factors do explain a significant amount of variance in Black children's SED levels.

## Chapter Seven: Discussion

The relationships between child-experienced peer rejection, child emotion regulation and understanding, broader influential factors, and social-emotional development (SED) in Black children were examined in this study utilizing weighted hierarchical regression models in a nationally representative sample.

### Research Question One

With regard to the study's first research question, results indicated that Black children's peer rejection experiences in isolation, did not impact their SED. These results do not replicate the findings of previous studies which documented the detrimental social-emotional effects of experiencing interpersonal discrimination in children in general (Marcelo & Yates, 2019), including the increased internalizing and externalizing behaviors resulting from experiences of peer rejection (Keiley et al., 2000; Laird et al., 2001). However, results of the current study point to the growing body of research highlighting the need to examine effects of interpersonal discrimination experiences such as peer rejection in the context of other personal and extraneous protective factors. One idea is that fostering a positive racial identity among Black children may help mitigate the adverse effects of such experiences, thereby reducing their impact on SED. For instance, a study by Greene and colleagues (2006) found a strong negative relationship between experiences of discrimination by adults and rejection by peers, and the psychological well-being of African American adolescents, including measures of self-esteem and depressive symptoms. Interestingly, children who exhibited a strong sense of belonging to their racial group and embraced their racial identity as an integral part of

themselves appeared to be less affected by such experiences of discrimination and rejection (Greene et al., 2006). The profound sense of affirmation and connection with one's ethnic group may serve as a protective shield, buffering the negative effects of rejection and exclusion from other social groups (Woo et al., 2019).

Unfortunately, Black children attending American public schools frequently encounter rejection from their White peers, systemic biases and unfair treatment due to their race, along with harsher disciplinary policies (Ford et al., 1994; Horner et al., 2010). These adversities can significantly impede their long-term development and mental well-being. In order to meet their social-emotional needs, Black children often have to rely on seeking support from resources outside of school, turning to community spaces that offer supportive and nurturing environments (Rodriguez, 2019). Additionally, they may draw upon core Afrocentric values and beliefs that provide them with a sense of community in a predominantly Eurocentric society, allowing them to engage in religious and spiritual activities and form interpersonal connections with individuals who share similar cultural backgrounds (Joyce et al., 2013). This might assist them with successfully navigating any challenging interactions with peers and adults in school settings.

Another perspective emphasizes the role of protective parenting in cushioning Black children from the impact of contextual stressors such as peer discrimination and rejection on mental health and developmental outcomes (Barton & Brody, 2018). Previous studies suggest that maintaining a good relationship with at least one caregiver and having familial support to lean on in the face of peer rejection can aid Black children and youth in effectively coping with such experiences without compromising their social-

emotional well-being (Gumpel & Ish-Shalom, 2003). Supportive parenting behaviors have been found to be fundamental to supporting Black student outcomes (Brody et al., 2014). These familial bonds and relationships in the lives of Black children may serve as potential protective factors in mitigating the impact of negative social encounter such as peer rejection (Miller-Johnson et al., 1999). The subsequent sections of this paper will delve deeper into the role of parents in the social-emotional development of Black children.

**Research Question Two**

With regard to the study's second research question, results provided evidence that Black children's individual characteristics could potentially play some role in their own developmental outcomes. Findings suggest Black children's emotion regulation and understanding skills can successfully predict their SED levels. These findings support the idea that the emotion regulation abilities of Black children remain fundamental to their SED outcomes, particularly in the face of the socio-economic adversities they experience including racial discrimination (Barbarin, 1993).

There is an extensive body of existing research endorsing these findings, with prior research highlighting how children and adolescent's emotion regulation and understanding is highly important for healthy social-emotional outcomes (Campos et al., 1989; Hamaidi et al., 2021; Thümmler et al., 2022). Emotion regulation skills regulate children's social adjustment and competence (Calkins & Mackler, 2011). Without these skills, children can struggle with expressing and managing emotions, developing age-appropriate social skills, and building and maintaining positive social relationships with

peers and other adults (Graziano et al., 2007; Séguin & MacDonald, 2018). Thus, the ability to understand, express, and regulate emotions has always been considered an important component of social and behavioral outcomes in children in general (Izard, 2001).

While most of the prior research is Euro-American centric, there is some emerging literature focusing on Black populations that supports findings of the current study. This research supports the link between healthy emotion regulation skills and positive SED (Stern et al., 2023). In a study conducted by Cunningham and colleagues (2009), the researchers examined sixty-nine African American youth aged 11-29 years living in high violence areas of a mid-sized city. The study concluded that African American children's emotion regulation and understanding was strongly associated with their internalizing and externalizing behaviors as well as their social skills (Cunningham et al., 2009). This association between emotion regulation abilities and social-emotional functioning can be especially crucial for Black children as they navigate their lives in a world defined by white supremacy. Black children are often susceptible to being perceived as hostile or reactive and may be forced to rely on protective factors within themselves such as emotion regulation and problem-solving skills in order to safeguard their health and development (American Psychological Association, 2008).

Prior research has often highlighted Black children's ability to manage and express their emotions in the face of adversities as being directly predictive of their developmental outcomes (Barbarin, 1993; Lozada et al., 2022). It is claimed that Black children with well-developed emotional attributes can take advantage of available

resources, acquire new information and insights, and further develop their talents despite negative societal messages (APA, 2008). It is a societal failure that the responsibility of navigating a harsh and biased system falls on Black children rather than on those perpetuating the biases. Black children are held to adult standards even before adolescence and are expected to be fully responsible for their actions, rather than being given the opportunity to have a childhood where they can be themselves, make mistakes, learn, and grow (The Center for Policing Equity, 2023). Black and other children of color should have access to a well-functioning system free of structural racism and inequities. Achieving this would require large-scale efforts to reform the U.S. education system through efforts like enacting antiracist practices and trainings in schools; increasing equitable funding, especially for under-resourced schools with a majority of non-White students; decreasing policing and surveillance of Black students and other students of color; increasing access to healthcare resources, including more counselors, psychologists, nurses, and social workers at school; and ending the still-prevalent segregation in schools, particularly in the northeastern and midwestern parts of the United States (Chatterji, 2020).

**Research Question Three**

With regard to research question three, results indicated broader influential factors play a crucial role in the social-emotional development of Black children. Specifically, findings of the current study stress the role of parents and family/home in supporting children's age-appropriate development. These findings reiterate and reinforce the beliefs of developmental theorists who have long conceptualized children's social-emotional

outcomes as dependent on their social interactions with caregivers as well as caregiver characteristics. Given that parents are one of the first entities in the child's environment, the parent-child relationship forms the crucible for child development (Bronfenbrenner, 1979). Specifically, in the context of Black children, parents communicate values, beliefs, and ideas about what it means to be Black in a white supremacist society, which is critical to promoting healthy social-emotional functioning (Harrison et al., 1990). Over the years, Black parents have adopted specific parenting practices nurturing their children's SED levels (Hughes et al., 2006).

The current study replicated findings from previous studies showing higher levels of parental involvement in Black children's education can positively impact their social-emotional outcomes and even alter the impact of other factors such as low socioeconomic status (Raver et al., 2007), although most prior research on parenting of Black children documents its effects on academic achievement (Clark, 1983; Shumow et al., 1999). Powell and colleagues (2010) conducted a study with African American and European-American parents and their children. The researchers concluded that greater parental involvement, particularly school-based involvement, predicted reductions in perceived problem behaviors and increases in social skills in African American children. Wang and colleagues (2014) conducted a longitudinal study with 1400 adolescents, of which 56% were African Americans, over 7th, 9th, and 11th grades. They found parental involvement contributing significantly to adolescent social-emotional developmental outcomes. Specifically, increase in quality of parental communication, scaffolding independence, and linking education to future success were associated with decreased

depressive symptoms and perceived problem behaviors (Wang et al., 2014). Some other studies with Black youth have also found evidence for linking involved parenting with better psychosocial adjustment and self-control (Brody et al., 2014, Brody et al., 2005).

Over the years, researchers have established the association between parental mental health and wellbeing and children's development (Smith, 2004). Although this research is, limited in the context of Black parents' and children's lives, Black parents have been found to experience higher levels of psychological distress than their White counterparts, and higher social-emotional developmental concerns are noted among children whose parents are struggling with their mental health (Mensah & Kiernan, 2009). This distress is attributable to discriminatory and racist actions and policies against Black parents. In a longitudinal study conducted in the United Kingdom with non-white ethnic groups, including Black individuals, researchers reported strong and direct associations between parents', particularly maternal mental health and wellbeing, and children's social and emotional behavior, including prosocial behavior (Bécares et al., 2015). The study explained how racial discrimination experienced by members of children's immediate environment impacted children's developmental outcomes by impacting caregiver mental health (Bécares et al., 2015). The relationship between Black parents' mental health and psychological wellbeing and their children's social emotional competence can be explained by the family economic stress model. This model suggests parents' mental health struggles including depression, anxiety, and low self-esteem are directly related to the practices implemented at home with their children (Hill, 1949). Parental distress has been associated with higher risks of social-emotional difficulties in

children as early as 36 months (Kvalevaag et al., 2015). In a study with 422, 10-11-year-old African American children and their families, the researchers examined the significance of the family stress model in understanding child development (Holmes et al., 2020). The results indicated that emotional distress and psychological issues in caregivers were directly associated with lower positive adjustment and higher levels of internalizing and externalizing behaviors in the sample population (Conger et al., 2002). The study concluded that economic pressures and stress in African American families negatively impacted the caregiver-care receiver relationship as it contributed to emotional distress in caregivers (Conger et al., 2002).

Similar to parental characteristics, the home environment is also at the core of the child's microsystem, and the quality of interpersonal relationships, interactions, and structures within the home determine positive child development (Bronfenbrenner, 1979). Research suggests that Black parents work to provide higher levels of structure at home as compared to Euro-American parents, which is associated with positive outcomes for children (Smetana, 2000; Smetana & Chuang, 2001). Additionally, enriching home environments where children and caregivers have the opportunity to engage in different activities such as reading books, visiting a museum or zoo, and taking music and art lessons, have been found to improve aspects of SED for all children in general (Phillips & Shonkoff, 2000), and Black children in particular (Iruka et al., 2015).

The role of positive parenting and home environments in Black children's SED can also be explained by the integrative model of minority child development. Building on the ecological models of development, this model highlights the different aspects of

the lived experiences of children from historically marginalized communities that contribute to their socio-emotional well-being (Garcia-Coll et al., 1996). This model suggests that parents and caregivers of children from marginalized groups adapt their parenting practices while applying the cultural assets and strengths unique to their communities to promote the social-emotional development of their children in the context of being Black (APA, 2008).

Thus, the findings of the current study continue to support prior literature on the role of parents and stable home environments in children's SED, while examining the concept of SED in the context of Black children. However, rather than placing the responsibility for altering white supremacist behaviors and policies on Black parents and families, there needs to be a methodical shift towards understanding the psychological, ideological, and material reasons for acceptance of the myths of white supremacy and the continued denial of equal opportunities for Black children and families (Dennis, 1981).

Black families experience the unjust pressure of striking a delicate balance between educating their children on navigating the outside world safely while also avoiding perpetuating any misconceptions about certain individuals within the larger society (Anderson et al., 2021). It is not the responsibility of Black families to conform to or change themselves in a white supremacist world because the burden of dismantling systemic racism and inequality should not fall on members of marginalized communities. Instead, society as a whole must address and challenge systems of oppression, privilege, and discrimination. Expecting Black families to adapt to oppressive structures places an

unfair and unjust burden on them, perpetuating inequality rather than addressing its root causes.

## Chapter Eight: Limitations and Future Research

While this study sheds light on important aspects of Black children's social-emotional outcomes, it is crucial to acknowledge its limitations. First, the cross-sectional nature of the study prevents us from establishing causal relationships between independent and dependent variables. Second, the study's reliance on a single measure of child attributes may not offer a comprehensive understanding of the study variables. For instance, SED was assessed solely through teacher questionnaires. Third, the use of a secondary dataset means that the research design and variables were predefined by third parties. Moreover, due to the limited nature of the dataset, the study could not explore all aspects of Dunbar and colleagues' (2017) model, a limitation that acted as a barrier in the analysis of social-emotional developmental outcomes in Black children as a function of their whole environment.

Despite these limitations, the current study contributes to the sparse research on the multiple systemic factors affecting Black children's social-emotional outcomes, with a focus on the children themselves. Findings of the current study underscore the importance of creating and integrating holistic early intervention strategies and policies that consider the home and family contexts shaping a Black children's immediate world and influencing their development.

Moving forward, future research should address the shortcomings of the current study. This includes testing the complete theoretical model proposed by Dunbar and colleagues (2017), incorporating all components and extending beyond the scope of the ECLS:K-2011 dataset. Additionally, future studies should diversify their data sources

rather than relying solely on one measure of data collection. Furthermore, exploring the model's applicability to developmental outcomes in other marginalized racial/ethnic communities would provide valuable insights.

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## Appendix

**Table 1**

*Regression Model Variables*

| Model | Operational Definition | Item-level Variable Name | Item/Content |
|---|---|---|---|
| Model 1 | | | |
| Peer rejection experiences | Measured using items on the child-level questionnaire assessing peer victimization and school loneliness | C9TEASED | *"Child was teased/called names"* |
| | | C9LIESABT | *"Others told lies or untrue stories about child?"* |
| | | C9PUSHCH | *"Others have pushed, shoved, slapped, hit, or kicked child"* |
| | | C9EXCLDCH | *"Others excluded child"* |
| | | C9LONELY | *"I feel lonely at school."* |
| | | C9LFTOUT | *"I feel left out at school"* |
| | | C9ALONE | *"I feel alone at school"* |
| Model 2 | | | |

| | | | |
|---|---|---|---|
| Peer rejection experiences | | | |

**Table 1 (continued)**

| Model | Operational Definition | Item-level Variable Name | Item/Content |
|---|---|---|---|
| Child emotion regulation and understanding | Measured in terms of executive functioning skills, using scores on the DCCS, Numbers Reversed and Flanker tasks | X9DCCSSCR | *Computed (Overall) Score on the DCCS Task* |
| | | X9NRSSCR | *Numbers Reversed Age Standard Score* |
| | | X9FLANKER | *Computed (Overall) Score on the Flanker Task* |
| Model 3 | | | |
| Peer rejection experiences | | | |
| Child emotion regulation and understanding | | | |
| Broader influential factors | | | |

| | | | |
|---|---|---|---|
| Child characteristics - child sex | Recorded as male, female, or unknown, as reported in parent interview | X_CHSEX_R | *"I have the child recorded as male/female. Is that correct?"* |
| Child characteristics - temperament | Measured using the Temperament in Middle Childhood Questionnaire (TMCQ) | X9ATTMCQ | *TMCQ teacher report attentional focus* |

**Table 1 (continued)**

| Model | Operational Definition | Item-level Variable Name | Item/Content |
|---|---|---|---|
| | | X9INTMCQ | *"TMCQ teacher report inhibitory control"* |
| Family characteristics – parent involvement | Measured using responses to the child-level parent questionnaire on school-based involvement | P9ATTENB | *"Attended back to school night"* |
| | | P9ATTENP | *"Attended PTA/PTO meeting"* |
| | | P9PTCONF | *"Attended parent-teacher conf"* |
| | | P9ATTENS | *"Attended school event"* |

| | | | |
|---|---|---|---|
| | | P9VOLSCH | *"Volunteered at school"* |
| | | P9METPAR | *"Go to mtg or join in activity"* |
| Family characteristics – parent warmth and discipline | Measured using the discipline warmth and emotional supportiveness scale, part of the child-level parent questionnaire | P9WARMCL | *"Warm, close time together"* |
| | | P9CHLIKE | *"Child likes me"* |
| | | P9SHOWLV | *"Always show child love"* |
| | | P9EXPRES | *"Express affection"* |

**Table 1 (continued)**

| Model | Operational Definition | Item-level Variable Name | Item/Content |
|---|---|---|---|
| | | P9PTHARD | *"Being parent harder than expect"* |
| | | P9CHDBTH | *"Child does things bother me"* |
| | | P9SACRFC | *"Sacrifice to meet child's need"* |
| | | P9FLANGR | *"Often feel angry with child"* |

| | | |
|---|---|---|
| | P9LISTNCH | *"Make time to listen to child"* |
| | P9DISWOR | *"Discourage talk about worries"* |
| | P9ENCTRB | *"Encourage talk about troubles"* |
| | P9ENCFRD | *"Encourage talk about friends"* |
| | P9ENCOPN | *"Encourage express opinions"* |
| | P9STOPLS | *"Lose patience stop listening"* |
| | P9ARGUE | *"Frequently argue with child"* |
| | P9NOPUNISH | *"Threaten to punish"* |
| | P9TALKOUTPNSH | *"Talks parent out of punishment"* |
| | P9EARLYPNSH | *"Let child off punishment early"* |

**Table 1 (continued)**

| Model | Operational Definition | Item-level Variable Name | Item/Content |
|---|---|---|---|
| Family characteristics – parent psychological health and wellbeing | Measured using the parent psychological health and well-being instrument included in the child-level | P9BOTHER | *"Respondent unusually bothered"* |

| | | | |
|---|---|---|---|
| | parent questionnaire | | |
| | | P9APPETI | *"Respondent has poor appetite"* |
| | | P9BLUE | *"Respondent can't shake blues"* |
| | | P9KPMIND | *"Respondent trouble focusing"* |
| | | P9DEPRES | *"Respondent had trouble focusing"* |
| | | P9DEPRES | *"Respondent felt depressed"* |
| | | P9EFFORT | *"Respondent felt everything an effort"* |
| | | P9FEARFL | *"Respondent felt fearful"* |
| | | P9RESTLS | *"Respondent sleep was restless"* |
| | | P9TALKLS | *"Respondent talked less than usual"* |
| | | P9LONELY | *"Respondent felt lonely"* |
| | | P9SAD | *"Respondent felt sad"* |

**Table 1 (continued)**

| Model | Operational Definition | Item-level Variable Name | Item/Content |
|---|---|---|---|

| | | | |
|---|---|---|---|
| | | P9NOTGO | *"Respondent could not get going"* |
| | | P9STRESS | *"Respondent experienced stress"* |
| Family characteristics – home environment | Measured in terms of home-based involvement using the child-level parent questionnaire. | P9GAMES | *"How often do you all play games?"* |
| | | P9NATURE | *How often do you talk about nature or do science projects with child?"* |
| | | P9EXERCS | *"How often do you play a sport or exercise together?"* |
| | | P9PRACTC | *"How often do you practice reading, writing or working with numbers?"* |
| | | P9LIBBST | *"Visited the library/bookstore"* |
| | | P9CONCRT | *"Gone to a play/concert/show"* |

| | | | |
|---|---|---|---|
| | | P9MUSEUM | *"Visited art/museum/historical site"* |
| | | P9ZOO | *"Visited a zoo/aquarium/farm"* |

**Table 1 (continued)**

| Model | Operational Definition | Item-level Variable Name | Item/Content |
|---|---|---|---|
| | | P9SPORT | *"Attended sporting event"* |
| | | P9CHREAD | *"Frequently read outside of school"* |
| | | P9READMN | *"How long read outside school"* |
| | | P9MONTIM | *"Monitor time child spends online"* |
| | | P9MONCON | *"Monitor content child watches online"* |
| Family characteristics – socioeconomic status (SES) | Measured using the composite SES variable assessing family income | X9INCCAT_I | *"Continuous SES measure (imputed)"* |

**Table 2**

*Correlations Between Independent and Dependent Variables*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|
| Social development | - | - | - | - | - | - | - | - | - |
| Peer rejection experiences | **-0.33** | - | - | - | - | - | - | - | - |
| Child emotion regulation and understanding | **0.77** | **-0.14** | - | - | - | - | - | - | - |
| Child sex | 0.02 | 0.01 | 0.01 | - | - | - | - | - | - |
| Child temperament | **0.23** | **-0.12** | **0.25** | 0.05 | - | - | - | - | - |
| Parent involvement | **0.14** | -0.08 | 0.04 | 0.02 | 0.00 | - | - | - | - |
| Parent warmth and discipline | **0.57** | -0.03 | 0.06 | 0.03 | 0.09 | **0.52** | - | - | - |
| Parent psychological health and wellbeing | **-0.26** | 0.08 | **-0.61** | 0.00 | -0.02 | - **0.44** | - **0.85** | - | - |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Home environment | **0.19** | -0.04 | **0.68** | 0.00 | **0.51** | **0.51** | **0.65** | **-0.57** | - |
| Socioeconomic status (SES) | 0.09 | 0.00 | 0.03 | 0.04 | 0.00 | 0.01 | 0.07 | 0.08 | 0.04 |

*Note.* Point-biserial correlations calculated for the categorical variable "child sex" in relation to other continuous variables. Pearson correlations used for the continuous variables.
Bolded values in the table indicate significant correlations. All correlations were significant at $p < 0.01$**.**

**Table 3**

*Factor Analysis for Items Measuring Peer Rejection*

| Item | Factor Loading |
|---|---|
| Factor 1: Peer Rejection | |
| Child was teased/called names. | **.57** |
| Others told lies or untrue stories about child? | **.59** |
| Others have pushed, shoved, slapped, hit, or kicked child. | **.63** |
| Others excluded child | **.51** |
| I feel lonely at school | **.83** |
| I feel left out at school | **.78** |
| I feel alone at school | **.87** |

*Note.* Factor loadings above .30 are in bold

**Table 4**

*Factor Analysis for Items Measuring Executive Functioning (Emotion Regulation)*

| Item | Factor Loading |
|---|---|
| Factor 1: Executive Functioning | |
| 1. Numbers Reversed | **.75** |
| 2. DCCS | **.69** |
| 3. Flanker | **.63** |

*Note.* Factor loadings above .30 are in bold

**Table 5**

*Weighted Hierarchical Regression Analysis for Social-Emotional Development (SED)*

| Model | Estimate | *SE* | 95% CI | | *p* | Wald |
|---|---|---|---|---|---|---|
| | | | *LL* | *UL* | | |
| Model 1 | | | | | | |
| Peer rejection experiences | -0.64 | 0.03 | -0.69 | -0.58 | 0.26 | |
| Model 2 | | | | | | 4.02* |
| Peer rejection experiences | -1.79* | 0.92 | -3.59 | 0.01 | 0.03 | |
| Child emotion regulation and understanding (executive functioning) | 2.12* | 1.37 | -0.56 | 4.80 | 0.01 | |
| Model 3 | | | | | | 7.86 |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | *<br>*<br>* |
| Peer rejection experiences | -1.79* | 0.92 | -3.59 | 0.01 | 0.03 |
| Child emotion regulation and understanding (executive functioning) | 2.12* | 1.37 | -0.56 | 4.80 | 0.01 |
| Child sex | 0.04 | 0.00 | 0.03 | 0.04 | 0.48 |
| Child temperament | 0.03 | 0.00 | 0.02 | 0.03 | 0.48 |
| Parent involvement | 3.15** | 1.17 | 0.85 | 5.44 | 0.00 |
| Parent warmth and discipline | 0.06 | 0.00 | 0.05 | 0.06 | 0.47 |
| Parent psychologi | 4.08*** | 2.04 | 0.07 | 8.08 | 0.00 |

| | | | | | |
|---|---|---|---|---|---|
| cal health and wellbeing | | | | | |
| Home environment | 1.75** | 0.89 | -0.17 | 3.31 | 0.04 |
| Family socioeconomic status (SES) | 0.13 | 0.00 | 0.11 | 0.14 | 0.44 |

*$p < 0.05$. **$p < 0.01$. ***$p < 0.001$.

**Figure 1**

*Pictorial Representation of The Integrative Conceptual Model of Adaptive Racial/Ethnic and Emotion Socialization (Dunbar et al., 2017; source. wileyonlinelibrary.com*)