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Positive parenting as a moderator for reducing depression in inner-city children exposed to contextual risk factors? A longitudinal multilevel analysis of a family-based intervention program.

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POSITIVE PARENTING AS A MODERATOR FOR REDUCING DEPRESSION IN INNER-CITY CHILDREN EXPOSED TO CONTEXTUAL RISK FACTORS? A LONGITUDINAL MULTILEVEL ANALYSIS OF A FAMILY-BASED INTERVENTION PROGRAM

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DEDICATION

This dissertation is dedicated to Mom and Dad,

Meixia Liu and Guoping Zhang.

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ABSTRACT

POSITIVE PARENTING AS A MODERATOR FOR REDUCING DEPRESSION IN INNER-CITY CHILDREN EXPOSED TO CONTEXTUAL RISK FACTORS? A LONGITUDINAL MULTILEVEL ANALYSIS OF A FAMILY-BASED INTERVENTION PROGRAM

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Depression in inner-city children is a serious social problem. Given the existing evidence supporting the links among neighborhood conditions, family functioning, parenting, and child outcome, this study expands the examination of the relationship among contextual factors and child depression from a longitudinal developmental perspective. This study also aims to examine how positive parenting as a protective factor moderates the effect of contextual risk factors on child depression in a sample of low-income, inner-city families.

This present study used the secondary data from the Schools and Families Educating (SAFE) Children study (aka SAFE Children Project) with is a longitudinal panel study with randomized controlled trial of a family-based preventive intervention on children from Chicago's inner-city neighborhoods. This project started in 1997 with 424 first-grade students and their primary caregivers receiving the intervention treatment or being assigned to control group. Subsamples for this present study were selected from waves 1 to 9 datasets, including related instruments and demographic information. The selected sample at Wave 1 consisted of 47.6% Mexican American children (n=201), 42.5% African American children (41), and 9.7% other Hispanic or

Anglo-White American children (n=41). Out of 49% were male children, while 51% were female children. Two studies were conducted using the SAFE Children project dataset. The first study focused on exploring the effects of major study variables on child depression using wave 1 through wave 5 datasets of the SAFE Children project. The second study focused on exploring the effects on child depression of major study variables using Wave 6 to Wave 9 datasets.

This dissertation has employed the multilevel analysis to examine predictors of children's depression using parental reports. The finding has indicated that the developmental trajectory of child depression is not linear, as evidenced by a significant negative quadratic effect from wave 1 to 5, but the trajectory decreased from wave 6 to 9. No difference was found between treatment status and child depression in Study one, but in Study two, the booster group showed lower levels of depression than the treatment and control groups. Across the nine waves, increases in parental depression were found to contribute to the development of children's depression. Higher levels of positive parenting led to lower depressive symptoms in children age 6-8 but seemed to be an emerging trend in association with decreased levels of child depression in children age 9-12. Results of this dissertation study did not confirm that positive parenting buffered the effects on child depression of contextual risk factors, including low family cohesion communication, negative school climate, and negative neighborhood conditions over the years. Lastly, implications for future practice, policy, and research are discussed.

Keywords: child depression, positive parenting, parental depression, family risk, inner-city neighborhoods, longitudinal multilevel analysis

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CHAPTER I: INTRODUCTION

Children in Inner-Cities: Lived Experiences

Inner-city neighborhoods have been depicted as “islands of risk and despair” (Fitzpatrick & LaGory, 2000, p. 121). This particular area in every city has become the region’s highest concentration of non-White Americans, since the segregation policies were implemented to “keep social harmony or balance in the whole community" (Rothstein, 2017, p. 6). The governments purposely adopted the public housing policy to “herd African-Americans into urban ghettos, which had a big influence as any in the creation of the de jure system of segregation" (Rothstein, 2017, p. 17). The red-lining policy was also implemented to facilitate racial and class-based segregation by refusing to insure mortgages to people living near African-American neighborhoods (Rothstein, 2017). Thus, the increased population density was populated to concentrate non-White American neighborhoods into slums. Racial residential segregation has become a leading cause of the racial difference in socioeconomic status and racial disparities in health (Williams & Collins, 2016).

Wilson (2012) described the inner-city neighborhood composing of impoverished families, high crime rates, a high concentration of public housing, and high proliferation of single-parent families. Inner-city neighborhoods are plagued by high rates of school dropout and crime, teenage pregnancy, individual/family poverty, low rates of homeownership and business investment, social exclusion, and disproportionate rates of multiple social problems (Brody et al., 2001; Fowler et al., 2014; Ross & Mirowsky, 2001; Wilson, 2012). Such poverty, crime, minority/social discrimination, and incarceration worsen or limit the life chances of vulnerable and

fragile individuals living in inner-city neighborhoods. People living in these neighborhoods may be limited by education and employment opportunities (Williams & Collins, 2016).

These complicated neighborhood conditions can impact child development outcomes. Studies indicate children[1] living in inner-city neighborhoods are more vulnerable than adults to environmental risks (Kohen et al., 2008; Osofsky, 1995; Wortley et al., 2008). They are inclined to experience enhanced levels of poverty, substance abuse, and criminal activities (Fitzpatrick et al., 2005), as well as face greater exposure to the potential risk of community violence and experience serious behavioral or mental health problems (Attar et al., 1994; Kohen et al., 2008; Milam et al., 2010; Shaw et al., 2003). These conditions and circumstances may increase the severity of stress. Witten et al. (2015) interviewed 40 inner-city children aged 9-12 years, showing that many children described distress and discomfort as they faced homelessness, drunkenness, and signs of the sex industry. These findings also have been observed in international contexts. A study of 445 youth who participated in Youth Outreach Centers in precarious neighborhoods across EI Salvador indicated that the majority of youth reported feeling unsafe where they live and 61% reported having at least one murder occurred in their precarious neighborhoods (Roth & Hartnett, 2018).

Statement of the Problem

Depression in children is a serious public mental health issue in the U.S. (Lu et al., 2017; Wagstaff & Polo, 2012). It is primarily characterized by depressed moods, diminished interest or pleasure in activities, weight changes, sleeping issues, psychomotor retardation or slowing of physical movement, fatigue or lack of energy,

[1] The author uses the term "children" to include youth or adolescents.

feelings of worthlessness, feelings of inappropriate guilt, difficulty in concentrating, a preoccupation with death, irritability, and complaints (APA, 2013; Merrell, 2013).

The Substance Abuse and Mental Health Services Administration (SAMHSA) reported that nearly 3.2 million adolescents age 12-17 (about 13.3% of this age sector population) had a major depressive episode (MDE) in the past year, and nearly 2.3 million adolescents (about 9.4% of this age sector population) had a past year MDE with severe impairment (Ahrnsbrak et al., 2017). Adolescents who had a past MDE with severe impairment occupied 70.7% of adolescents who had a past year MDE (Ahrnsbrak et al., 2017).

Limited data exist about rates of depression among inner-city children specifically. In a national survey of Children's Health, 3.6% of the children aged 3-17 years living in the Metropolitan principal city were currently diagnosed with depression (Ghandour et al., 2019). Regarding issues of depression in inner-city children, Ofonedu et al. (2013) interviewed 10 African American youth aged 13-17 years living in inner-city neighborhoods, and they described depression as a part of life.

Children with depression often are diagnosed with another mental disorder. About 3 out of 4 children aged 3-17 with depression also have anxiety (73.8%) and behavioral problems (47.2%) (Ghandour et al., 2019). Based on parental reports, lifetime diagnosis of either depression or anxiety among children aged 6-17 increased from 5.4% in 2003 to 8.4% between 2011-2012 (Bitsko et al., 2018). Overall, depression in childhood is a known indicator of mental health problems in adulthood (Hari, 2017).

Risk factors associated with depression, among inner-city children, include poverty, low parental support, chaotic community environments, and macro-/micro-

aggression and discrimination (Anakwenze & Zuberi, 2013; Clark-Lempers et al., 1990; Comas-Díaz, 2016; McLoyd, 1990). Researchers have found that exposure to environmental risk factors and inadequate family support is linked with depression in inner-city children (Krenichyn et al., 2001; Vazsonyi et al., 2006; Youngstrom et al., 2003). Low parental involvement with children's life may also be a risk factor for child depression. Marion (2017) focused on examining a pattern of low parental involvement in an inner-city school by interviewing five elementary school parents, five teachers and the school principal. Findings revealed ineffective home-school communication and a lack of shared meaning regarding parental educational involvement between parents and teachers. Poverty is also a leading factor affecting mental health of children (Anakwenze & Zuberi, 2013). The prevalence of depression is unevenly distributed across different socioeconomic status (SES) (Gilman et al., 2002). People with lower SES levels are inclined to be at a higher risk for mental illness (Gilman et al., 2002; Hudson, 2005).

Despite the increasing number of depressed children residing in an inner-city neighborhood, the use of mental health services remains low. Appropriately 1 out of 4 children with mental illness receive help in the U.S. (Hari, 2017). Ahrnsbrak et al. (2017) have noted an increasing trend in the number of youths with depression; approximately 58.5% of adolescents (an estimated 2.1 million) with an MDE in the past year, and 52.5% of youths (an estimated 1.2 million) with an MDE in the past year with severe impairment did not receive treatment in 2017. Children with untreated depression may have serious sequela, such as the increased likelihood of hospitalization (Bardach et al., 2014), depression recurrence in adulthood (Naicker et al., 2013), risk-taking behaviors (e.g., crime) (Anderson et al., 2015), substance abuse (Pang et al., 2014), and other mental disorders (e.g., comorbid with anxiety)

(Anakwenze & Zuberi, 2013; Fleming & Offord, 1990). Depression is a vital risk factor for suicide in children and youth. Clinical evidence has demonstrated that depressed adolescents are more likely six times to attempt suicide than those who had no depressive symptoms (Nock et al., 2013).

Theoretical Perspectives on Understanding Depression in Inner-city Children

The concurrent and prospective risks related to depression among children living in inner-city neighborhoods are connected with family, school, and community factors. Understanding these factors involved in the development of children's psychological difficulties is essential for identifying effective intervention mechanisms. Five foundational theories for interpreting children's behaviors – stress theory, family systems theory, parenting theory, and ecological theory – are discussed here for foundational understandings of the relationship between family, school, and community factors and depression in children.

Stress Theory

Stress is deemed as "the perception of threat, with resulting anxiety discomfort, emotional tension, and difficulty in adjustment" (Selye, 2013, p. 208). Stress is a physical and psychological reaction to a change that requires an adjustment through self-healing or accessing support from external systems. It results from a given situation, stimulus, or stressors. For inner-city children, such stress situations or stimuli include exposure to violence (Aisenberg & Herrenkohl, 2008; Youngstrom et al., 2003), low socioeconomic status (Assari, 2017; Letourneau et al., 2013), high-risk behaviors in families (Talati et al., 2013), poor academic performance (Tizard et al., 2017; Tolan et al., 2004), social discrimination (Comas-Díaz, 2016; Russell et al., 2018), and adverse school climate (Shim-Pelayo & De Pedro, 2018), among others.

When several stressors co-exist, they may cause stress exposure or stress symptoms (Assari, 2017; Ofonedu et al., 2013).

Children living in inner-city neighborhoods may struggle with various issues that are particularly unique to people of color. McIntyre (2000) has described that many inner-city youths face various forms of discrimination, social isolation, and living instability. Ofonedu et al. (2013, pp. 96-106) revealed that inner-city African-American youth described being depressed as "being dead while still alive," "being in the dark," "endless body and emotional pains," which affected their whole being, thoughts, and emotions. They reported that adverse life events and experiences caused them to view their environment as painful, threatening, distressing, and unmanageable. They reported feelings of unremitting sadness, extreme weariness and boredom, loss of hope, power and self-worth, erratic emotional states, helpless, anger, and guilt. In addition, they mentioned stressful home life and experience and high levels of violent community crimes, which heightened their emotional distress and then caused their depression. Children showed the resilience to cope with being depressed and attempted to protect themselves from fragile contextual environments and emotional pains. They admitted the increased need for emotional support from family, friends, and teachers.

Resilience Theory

Traumatic experiences may not inevitably cause damage to individuals who are stuck in adverse situations, and risk factors may not necessarily lead to psychological disorders in more than half of children exposed (Rutter, 1987). Walsh (2003) presented a family resilience framework, proposing that individuals with the same adversity may have different outcomes. Individuals exposed to high-risk

conditions, such as violence and poverty that are disproportionately prevalent in inner-city communities, can lead productive lives (Walsh, 2003).

Resilience refers to the "process of, capacity for, or outcome of successful adaptation to adverse situations despite challenging or threatening circumstances" (Masten et al., 1990, p. 426). Individuals with resilience can address stress and overcome adversity (Walsh, 2012). A study examining the effects of resilience on the likelihood of having a diagnosis of post-traumatic stress disorder (PTSD) in an inner-city sample of primary care patients (n = 767) indicated that resilience was robustly associated with a reduced likelihood of PTSD (Wrenn et al., 2011). Resilience informs the risk, vulnerability, and protective factors relative to outcomes that account for resilience in the adversity (Cowan et al., 1996). Risk factors predispose individuals to adverse outcomes (Cowan et al., 1996), and vulnerability factors increased the likelihood of adverse outcomes (Luthar & Zelazo, 2003). However, protective factors, such as family bonding and teachers' and social support, increase children's resilience (Tiet et al., 2010), and moderate the impact of risk factors buffering against poor outcomes (Rutter, 2012). Among those protective factors, parenting has been proved to promote the resilience of children and adolescents (Sandler et al., 2015). For example, acceptance-involvement is a parenting tactic, referring to those parents who are warm, firm, involved, and sensitive to their children's needs (Jaffe, 1998). Zakeri et al. (2010) found that acceptance-involvement parenting was predictive of improving resilience in children, while psychological autonomy-granting and behavioral strictness-supervision styles did not significantly predict the increase of resilience.

Children with high resilience can survive amid adversity, such as those experiencing family dysfunction or exposure to community violence within the

complicated inner-city neighborhoods, as well as move forward with optimism and confidence (Ginsburg & Jablow, 2005). Those children may develop successful coping strategies - tolerating frustration, exhibiting a positive attitude, and then seeking social support for problem-solving (Machmutow et al., 2012; Smith & Carlson, 1997). Coping may protect children against emotional anxiety and distress for controllable stressors and reduce the effect of uncontrollable stressors (Edlynn et al., 2008; Kuo, 2001).

However, resilience is not an all-or-none phenomenon (Luthar, 1993). Children experiencing high levels of stress who seemed resilient in some domains of social competence might have difficulties in other areas and might be highly vulnerable to emotional distress over time (Luthar et al., 1993). The adoption of different coping strategies may differentiate children with different emotional experiences. In a study involving 240 inner-city, African American adolescents, findings indicated the approach coping method was not linked to anxiety (Edlynn et al., 2008) and the avoidant coping served as a protective pattern. Specifically, those children who used more avoidant coping remained stable in levels of anxiety over time, and those who used less avoidant coping reported anxiety that increased over time. They might avoid sharing their inner thoughts openly with parents, teachers, or other people, and use avoidant coping methods when addressing their psychological difficulties. Whereas, as violence exposure increased, the use of avoidant or hopeless coping was related to increases in depression symptoms in children (Machmutow et al., 2012; Seiffge-Krenke & Klessinger, 2000; Young & Limbers, 2017). Contextual risk factors have placed inner-city children at risk during the transition from childhood to adults in inner-city neighborhoods, and hopeless coping may further lead to an increase of depression. Protective factors, such as parental support, may

contribute to enhancing children's resilience. In this way, it is of interest to know how positive parenting as a protective factor can moderate the effects of risk factors and vulnerability on adverse outcomes (e.g., depression) in inner-city children.

Parenting Theories

Parenting refers to parental interactions with a child using warmth, rejection, structure, chaos, autonomy support, and coercion (Skinner et al., 2005). Since the 1930s, researchers have investigated how individual differences in parenting practice affect child development (Power, 2013). Earlier studies identified two dimensions of parenting on the quality of parent-child interaction, including (A) parental acceptance, warmth, or support, and (B) parental control or discipline (Power, 2013). In the 1960s, research continued to expand the range of parenting characteristics, including cognitive stimulation, scaffolding, monitoring, and family rituals (Power, 2013). In the mid-1960s, research shifted the focus on parenting style as first identified by Baumrind (Power, 2013). In terms of two orthogonal dimensions of warmth (responsiveness) and control (demandingness), Baumrind described three styles of parenting associated with three patterns of child behavior, which corresponded to high or low values on the warmth and/or control dimensions (Maccoby et al., 1983). The authoritative parenting style - high levels of both warmth and control - is related to assertive, self-reliant child behavior (Baumrind, 1966, 1967; Baumrind et al., 2010). The authoritarian style is characterized by low warmth and high control and is associated with discontented, withdrawn child behavior. The permissive or indulgent style encompasses high warmth and low control, which is associated with low self-control and low self-reliance in children. Based on these three parenting styles, Maccoby et al. (1983) added uninvolved parenting as the fourth parenting style that characterizes low levels of both warmth and control, which is similar to the or

rejecting-neglecting style that Baumrind (1971) identified. Among these styles, authoritarian parenting, including parenting intrusiveness, guilt induction, and love withdrawal, predicts the high severity of internalizing and externalizing problems (Barber et al., 2005; Lansford et al., 2014). Differently, parents with authoritative parenting style show high levels of warmth and emotional responsiveness, respect and encouragement for autonomy, and inductive discipline through reasoning to explain parents' actions, which is considered most appropriate for promoting children's development among these four parenting styles (Baumrind, 1967; Chao, 2001; Piko & Balázs, 2012; Pinquart, 2017).

Positive parenting refers to high levels of observed warmth and support and effective behavior control (Schofield et al., 2014), which is similar to authoritative parenting. Positive parenting has been studied and found to facilitate children's positive behavior, social adjustment, and academic success (De Graaf et al., 2008; Eisenberg et al., 2005; Sanders, 1999; Waller et al., 2012), as compared to coercive (or harsh or detrimental) parenting. Researchers identified positive parenting practices as offering support for children's positive behavior, being actively involved in child education, adopting proactive parenting and non-coercive discipline, setting clear expectations, and using incentives and positive reinforcement (Frick et al., 1999; Smith et al., 2015; Waller et al., 2012). With the use of positive parenting, parents adopt mutual respect and non-coercive methods of encouraging compliance (Smith et al., 2015).

Based on the childrearing goals and needs, Grusec and Davidov (2015) described five domains of parenting that promote socialization in children, including child protection, parent control, guided learning, group participation, and reciprocity of others' behaviors. Trust and supportive relationships facilitate children's perceived

obligations of disclosure to parents. Psychological control, meaning that parents attempt to control their child's emotional state, predicted more disclosure but less secrecy (Smetana et al., 2006) and children's aggressive behaviors (Murray et al., 2014).

In summary, if inner-city parents are offered support to become mindful and supportive in parenting, this change of parenting behavior may result in improvements in parent-child interactions and increasing parent-child trust (Gorman-Smith et al., 1996; Tolan & McKay, 1996; Vazsonyi et al., 2006). Furthermore, effective parenting as a protective factor may play a determinant role in enhancing active coping, thus reducing depression among inner-city children. Warm, positive, and supportive parenting may replenish the deficit incurred by contextual risk factors, even if the deficit reoccurs, as well as prevent inner-city children from reaching the threshold for depression.

Family Systems Theory

Family system theory has its origins in system theory. Systems theory, developed in the 1940s by Gregory Bateson, is commonly used to explain behaviors of groups of people. This theory focuses on analyzing social phenomena (Payne, 2014). According to Ludwig von Bertalanffy, a system is "any entity maintained by the mutual interaction of its parts" (Davidson & Harris, 1983, p. 26). For example, an individual is a system, including body, elements, and mind, and can be part of a more extensive system when interacting with other relevant systems. The wholeness within the system is greater than the sum of its parts (Nichols & Davis, 2016). Systems theory asserts that the property of a system arises from the relationships among its components and emphasizes the interconnections of individuals' intra-system with other systems (Payne, 2014), which connects social factors and psychological

functioning with their lives. The properties are lost when a system is destroyed or reduced to isolated elements (Nichols & Davis, 2016).

Family systems theory can be integrated with the theory of cybernetics, which is a model of how a system operates (Nichols & Davis, 2016). Based on cybernetics, a system can self-regulate and share with other cybernetic systems to maintain stability by using energy through the feedback loop (Nichols & Davis, 2016), which can be extrapolated to theorize how children maintain the stability of their behaviors. For example, a child with depressive symptoms may have frequent disagreements with their parents or more withdraw into their room, which could, in turn, maintain their depressive symptoms. In family systems theory, a feedback loop points to a pattern in which the family system process is monitored and adjusted toward identified goals. A negative feedback loop refers to the behavior patterns in which change is discouraged or ignored to restore equilibrium to the system (Nichols & Davis, 2016). Harsh parents may discourage children from expressing their emotions that may disrupt the homeostasis of the system.

Positive feedback loops are cycles of behavior patterns that promote change and reinforce the direction that a family system is taking, regardless of whether the change is good or bad (Nichols & Davis, 2016; Whitchurch & Constantine, 2009). As an example of a positive feedback loop, increases in positive parenting and parental academic involvement may lead to improvements in child mental health and resilience, which also may predict more positive mental health. Positive parenting can stop positive feedback loops that take the form of escalating unhealthy conditions. One study examined whether supportive parenting mitigated the longitudinal effects of peer victimization on depressive symptoms in children, and result findings indicated that increases in supportive parenting contributed to less severe depressive

symptoms in children (Bilsky et al., 2013). Nevertheless, this analysis fails to make a correlation between other parenting strategies and depression.

Family systems theory emphasizes wholeness as the primary unifying feature of a system (Bowen, 1976; Cox & Paley, 2003). A family system is greater than the aggregation of family members (Cox & Paley, 2003), and each member plays a crucial role in interacting with other members and strengthening the family unit. The family system establishes boundaries that set guidelines for inclusion or exclusion and contracts that are determined overtly or covertly, so individuals can be interconnected and interdependent (Minuchin et al., 2007). Under the guidance of family contracts and family boundaries, family members exhibit behaviors that are mutually related and formulate the family pattern of behaviors within the system (Bowen, 1976). Each member takes on a particular role based on shared family culture and being affected mutually by other members regarding the aspects of position within the family, personality, values, and beliefs. Maintaining the pattern of behaviors may lead to family equilibrium that can be positive and negative. For example, in the parent-child system, parenting practices such as expressions of warmth and commitment to improving family interactions (Eisenberg et al., 2005; McKee et al., 2008), may reduce children's depression resulting in a family equilibrium that is most optimal for family members. As such, children may be likely to share stories or feelings with their parents of trust. By contrast, overcontrolling or authoritarian parenting practices may destroy normal family functioning or exacerbate children's psychological difficulties (Calzada et al., 2017). This pattern has also been found among families in inner-city neighborhoods with high levels of violence exposure (Jones et al., 2008). Family systems theory explains that increasing parenting behaviors of parents can change a family's system and then affect depressed children. However, additional studies are

needed to investigate the impact of parenting that interacts with contextual factors on depression in children.

Ecological Theory

A similar theory within the framework of general systems theory is ecological systems theory (Bronfenbrenner, 1979a, 1979b, 1986). According to Bronfenbrenner, the ecological environment emphasizes the systematic process of an individual's overcoming problems and completing developmental tasks by interacting with a series of environmental systems. These environmental systems range from proximal (e.g., home, school) to distal settings (neighborhood). With the similar aforementioned concept of levels of systems, Bronfenbrenner (1986) proposed that an individual's environment consisted of five-layer systems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem. Each layer of the environment generates an effect on the individual's development. The microsystem is closest to individuals and contains the structure within which a developing individual has direct contact with the immediate environment. The mesosystem exists as the connection between the individual's microsystems (Berk, 2000). The exosystem defines the larger structures that impact personal development by interacting with microsystem structures (Berk, 2000). The macrosystem refers to cultural values, customs, laws, social morality, social belief systems, and social resources, which profoundly affect an individual's behavioral patterns. The Chronosystem refers to the time dimension, including internal elements (e.g., an individual's physiological change occurring with age) and external components (e.g., the timing of an individual's death).

From the ecological theory perspective (Bronfenbrenner, 1986), the emergence of depressive episodes in inner-city children and youth is viewed as a product of the complicated interrelationship that occurs between the individual and other broader

systems. At their microsystems level, psychological difficulties and coping methods affect the expression of depression (Sanchez et al., 2013; Tolan et al., 2002). At the mesosystem level, peer relationship and family functioning, which are the most powerful and immediate context for socialization in children (Bronfenbrenner, 1986), can moderate and mediate levels of depression experienced by children and youth. At the exosystem system (e.g., school and community), exposure to community violence occurred may give rise to fear, hopelessness, or depressive moods (Ofonedu et al., 2013; Scorgie et al., 2017). At the macrosystem level, children may experience social discrimination relative to race, socioeconomic status (SES), and living environments, which may contribute to depression (Patil et al., 2018; Seaton et al., 2010). At the chronosystem level, individual and contextual factors can impact the experience of depression over time in children as they grow and develop transitioning from early childhood to late adolescence.

Many existing empirical studies focused on inner-city youth or families using the ecological theory framework (Sanchez et al., 2013; Sheidow et al., 2014). Drew (2012) have employed multilevel analysis to examine factors associated with depression in children. Findings indicated that school-based factors associated with child depression included perceived school connectedness, perceived teacher support, and median school-level income. Factors not associated with child depression were found to be harshness of discipline and the presence of mental health and social services. In another study of 156 mother-child dyads exploring the social determinants of health of inner-city children (Kemp et al., 2016), neighborhood strain and maternal depression had a significant effect on child mental health problems.

Summary

Informed by theories mentioned above, a model proposed, as shown in Figure 1, depicts the relationship between childhood depression and the reviewed contextual factors (representing micro, mezzo, and macro levels) that delineate the intersectionality of social determinants of depression. Inner-city youth are exposed to higher levels of stress associated with family risk factors (i.e., parental depression, poverty, low quality of family relationships), negative school climate, and chaotic neighborhood conditions, which are risk factors for depression (Clark-Lempers et al., 1990; Comas-Díaz, 2016; McLoyd, 1990). These causal factors may be interrelated to intensify depressive symptoms in children. Effective parenting practices play a moderating role in adjusting the relationship between contextual factors and depression.

Gaps in Knowledge

A large number of studies have focused on identifying risk and protective factors associated with externalizing problems/ problems in inner-city children (see Table 2.1). However, few studies have focused on identifying risk and protective factors associated with internalizing problems/ behaviors, especially depression. A review of the past three decades of research indicates the need to focus on three gaps in future studies in order to understand depression in inner-city children better.

First, overall, there are few published studies examining depression in inner-city children. The path to internalizing problems/ behaviors, including depression, has not been studied to the extent as has been the path to externalizing problems/ behaviors in inner-city children. The majority of the studies focus on the effect of neighborhood and family factors on children's externalizing problems/ problems such as antisocial behaviors (Tolan & McKay, 1996), aggression (Gorman–Smith & Tolan, 1998), delinquent behaviors (Madden-Derdich et al., 2002), substance abuse (Werch

et al., 2001), school dropout (Crum et al., 1998), and academic performance (Ardelt & Eccles, 2001). More research should focus on investigating the severity of depressive symptoms and how multilevel contextual factors lead to depression in inner-city children.

Second, there are few studies examining the association between parenting practice (i.e., types of parenting) and children's depression, and even fewer studies on parenting training programs as an intervention strategy for reducing depression in children. Treatments for depression have been considered a critical component of understanding vulnerability and resilience (Cooley-Quille et al., 2001; Southwick & Charney, 2012; Southwick et al., 2005), as well as reduce children's stress and depression. Early prevention efforts have been advanced to promote the protective role of families in preventing violence, exploitation, abuse, and neglect, as well as reducing the rates of children's behavioral and psychosocial problems (Fowler et al., 2014; Gorman-Smith et al., 2002). However, few studies exist examining the relationship between the protective role of families (i.e., parenting practices) and depression among inner-city families (Jones et al., 2008; Ofonedu et al., 2013; Sagrestano et al., 2003; Smokowski et al., 2004). Although some researchers have offered parent training programs that are efficacious in improving parenting competence, very few parenting interventions have been developed to address depressive symptoms already being exhibited by children (e.g., Dumbrill, 2006; Letarte et al., 2010; Sanders et al., 2000; Wiggins et al., 2009). Studies examining parenting and child outcomes in inner-city children are outdated (e.g., Abdul-Adil & Farmer Jr, 2006; Ardelt & Eccles, 2001; Beyers et al., 2003; Jarrett, 1999). And, especially in regards to inner-city families and their children who may face unique challenges, researchers and clinicians have had difficulty reaching them for research

and treatment (Leijten et al., 2016), which may account for the paucity of research examining the mechanism between parenting and children's depression, including how positive, supportive parenting practices contribute to the reduction of children's depressive symptoms.

A recent meta-analysis of preventive parenting interventions for internalizing problems in children revealed lasting preventive effects from 6 months to 11 years post-intervention (Yap et al., 2016). However, some parenting interventions have shown no significant effect in reducing child depression (e.g., Cardamone-Breen et al., 2018; Yap et al., 2019). Cardamone-Breen et al. (2018) conducted a single-session parenting intervention that provided individual-tailored psychoeducation to each parent based on their self-assessment of parenting behaviors. They did not find the effect of parenting intervention on reducing adolescent depression levels, though intervention group parents showed significantly greater improvement in parenting practice. Another individually tailored Web-based parenting program was evaluated (Yap et al., 2019), and findings indicated a greater reduction in parent-reported adolescent depressive symptoms in the intervention group, and the effects were mediated by the improvement in parenting. However, no other significant intervention effects were found for adolescent-reported parenting and adolescent depression. Findings from these studies suggest further examination of how parenting training delivered through family-based preventive intervention programs impact children's depressive symptoms; and how parenting training might moderate the effect of contextual risk factors on inner-city children's depression.

Third, there are few studies examining depression in inner-city children over time. Depression is a developmental phenomenon, with rates changing over time (de Lijster et al., 2019; Garber et al., 2002; Kim & Cicchetti, 2006; Mazza et al., 2010).

The feelings of hopelessness decline with age among inner-city children (Bolland et al., 2005), but some evidence suggests rates of depression among adolescents increases rapidly and come close to rates or beyond among adults (Mojtabai et al., 2016; Twenge et al., 2019).

A gender difference has been well established in studies of depression, with females showing higher levels of depression than males starting in adolescence (Nolen-Hoeksema, 2002; Nolen-Hoeksema & Aldao, 2011; Van de Velde et al., 2010), but little is known about whether these differences are consistently found among inner-city children across time. The timing effects of individual-, family-, school-, and community-level predictors on the developmental course of depression in inner-city children remain unclear as well (Li, 2017). More studies are needed to examine the trajectories of inner-city children's depressive symptoms and associated critical predictor variables.

Most studies with a longitudinal design used a hierarchical regression model (Sagrestano et al., 2003; Smokowski et al., 2004), rather than multilevel analysis to identify the developmental trajectory of child depression and associated factors across time. Findings from these studies may be inaccurate because the use of hierarchical regression for longitudinal data is limited in addressing model dependency levels because residuals for depression outcomes from the same participant may violate the general linear model independence assumption (Hoffman, 2015).

Scope of the Study

The purpose of this study is to illustrate how parenting moderates the relationship between contextual risk factors and depression. The study sample consists of inner-city children aged 6-12 and their parents. Parents' report on measures of depression and contextual constructs across multi-waves of data collection will be

used. This study examines contextual level factors- family, school, and community- as well as explores the impact of positive parenting on depression in inner-city children.

Definition of Terms

Inner-city

Inner-city is considered the "core area" of the city (Kennett, 1980). Wilson (2012) described the inner-city neighborhood composing of impoverished families, high crime rates, a high concentration of public housing, and high proliferation of single-parent families. Social disorganization has become the formation of inner-city neighborhoods with unique community characteristics, including economic inequality, social stratification, racial segregation, and community delinquency/crime in space (Kohen et al., 2008).

Depression

Depression in children is primarily characterized by symptoms including depressed mood, diminished interest or pleasure in activities, feelings of worthlessness or inappropriate guilt, fatigue or lack of energy, difficulty in concentrating, and irritability (APA, 2013; Merrell, 2013).

Neighborhood conditions

Neighborhood conditions refer to the residents' neighborhood environment, which may produce an impact on social interaction, behaviors, and academic achievement in children (Milam et al., 2010). Measuring Neighborhood conditions includes the degree of children’s exposure to community violence, criminal activities, and poverty (Horgas et al., 1998; Milam et al., 2010).

School climate

The National School Climate Council (2007) defined the school climate as the quality and character of school life. A positive school climate may promote students’

learning and psychosocial development, whereas a negative school climate may discourage students' psychosocial development.

Families risk factors

Family risk factors refer to the risk of poverty, parental depression, child maltreatment, substance abuse, and poor family dynamics (Garbarino & Sherman, 1980) (Garbarino & Sherman, 1980; Kaplan & Girard, 1994). High-risk families may have a negative impact on the development of children (Garbarino & Sherman, 1980).

Positive Parenting

Parenting (also called child-rearing) refers to the process of parental participation in promoting a child's physical, social, emotional, and intellectual development from infancy to adulthood (Brooks, 2013). Kulkarni (2010) defined positive parenting through five defining principles: loving through warmth and nurturing, understanding of a child's temperament, reasonable with clear limits and discipline, protective by providing a safe environment, a teacher through providing learning opportunities, and a model through demonstrating appropriate behavior and knowing himself/ herself. Positive parenting emphasizes on praising good behavior, setting clear rules, taking time to listen, working as a team, and using positive disciplining (De Graaf et al., 2008).

The Significance of the Study

This study posits parenting as a moderator against depression in children who are exposed to risk environments. Employing longitudinal panel survey data from a low-income, minority sample living in inner-city neighborhoods provides an alternative to comprehensively capturing the picture of the causal relationship between contextual risk factors and depression influenced by parenting practices in an under-studied and high-risk population. This study is not limited to examining the

relationship between positive parenting and children's depression, but instead, considers positive parenting as a moderator for promoting the psychological adjustment for at-risk children. In using multiple level methods, this study feeds into the research of preventive interventions for depression and exploring the mechanism for treating depression in inner-city children. Understanding how community mechanisms relate to depression in children, along with developing early interventions integrating the cooperation among family, school, and community, can improve family interactions and emerging school adjustment and then diminish behavioral problems and promote psychosocial development in inner-city children.

Relevance to Social Work

This study examines the trajectory of depression among children in an inner-city context, findings from which may encourage social workers to more regularly screen for depression in inner-city children, support the need for re-examining current policies that address mental health needs of inner-city children, and inform social workers to design preventive programs that promote parents' participation in family-centered prevention programming to minimize the risks of children developing depressive disorders or other mental disorders in inner-city neighborhoods.

CHAPTER II: LITERATURE REVIEW

In this chapter, the literature on child depression is discussed in detail, together with empirical evidence available on the associations between parenting and children's depression. Research findings on depression outcomes for inner-city children are critically analyzed. Additionally, because the present study uses the SAFE Children project dataset [(Schools and Families Education (SAFE) Children study (1997-2008) (Tolan et al., 2016)], published studies using this dataset are also reviewed to identify gaps in existing knowledge and to inform the research questions and methods for this study.

Search Methods

Given that this dissertation study is focused on inner-city children, the following keywords were employed to identify existing studies: "child* or youth or adolescent*" and "behavior* or depression or depressive symptom or internalizing problem* or externalizing problem*" and "inner-city or urban*." To search relevant literature on preventive intervention with children living in inner-city neighborhoods, the keywords: "prevent* or protect* intervention* or parenting" and "inner-city or urban* were used as search terms using the following databases: Social Sciences Citation Index, PsycINFO (EBSCO), Social Services Abstracts, Sociological Abstracts, and Social Work Abstracts Plus and Google Scholar. This search was supplemented with the review of reference lists of studies found in reference lists of studies found through the use of the above keywords that link with the present study. The literature search for the initial review was refined to identify studies published in English and peer-reviewed journals.

A priori eligibility inclusion and exclusion criteria were developed to select studies to be reviewed. The author included studies that examined the individual-, family-, community, school-level predictors of behavior problems in urban or inner-city neighborhood children aged from 6 to 19 years were included as were studies of programs using family-, school-, and/or community-based frameworks that were implemented to prevent or protect children from depression and other mental health problems. This present study targets depression in inner-city children, so studies of children with academic and cognitive outcomes were excluded. In that the focus of this study is prevention, studies on children/youth with impairments or medical issues or those concerning children/youth treated in clinical conditions were also excluded from the review. Studies using either or both quantitative and qualitative research methods were considered in the review.

A title and abstract screen were conducted to select studies for the full-text review. Also, a manual search of the reference lists from the full-text papers was carried out to identify additional potential sources. All in all, the electronic and manual searches produced 55 empirical studies and 20 intervention program studies. Study characteristics were extracted from identified papers, and two tables were developed; one on children's internalizing and externalizing problems; the second on prevention-focused intervention programs for inner-city families.

Research on Inner-City Children

Table 2.1 describes the characteristics, research methods used, and findings from 55 studies using survey methods. Table 2.2 depicts the program/intervention description, research design used, and findings from 20 intervention studies. Table 2.3 displays relevant information that was abstracted from Table 2.1 and Table 2.2, which shows the study's publication year, the research methods, primary statistical analyses used, child gender, predictors, and outcome variables.

As shown in Table 2.3, only three studies were published during the period between 2010 and 2019. The majority of the studies (52 out of 55) used quantitative methods. Forty-two out of the 52 quantitative studies employed a longitudinal design. In those studies, most applied multiple or hierarchical regression to analyze longitudinal data, with five studies using only a multilevel model (hierarchical linear model or linear mixed model). About 70% of the studies focused on predicting/explaining externalizing problems in children, such as aggression (e.g., Jones et al., 2008) or violent behavior (e.g., Spano et al., 2006), while studies concerning depression were limited. More than half of the studies (58%) explored the impact of neighborhood on child outcomes (e.g., Sheidow et al., 2001), but only one study examined the effect of school factors on child outcomes (e.g., McKay et al., 2003).

Concerning studies of interventions with inner-city children, studies were evenly dispersed among three publication year periods (1990-1999, 2000-2009, and 2010-2019, respectively). Five studies described the intervention program, while 15 studies used basic statistical methods to test the effect of interventions. Sixty percent of the intervention studies focused on externalizing behavioral problems (e.g., aggression, drug abuse, violence), and one intervention study centered on cognitive behavioral therapy workshops for treating depression inner-city youth (i.e., Sclare et al., 2015). Few studies of inner-city children examined the effect of school climate on child outcomes. Lastly, there was a lack of studies that examined the effect of risk factors on depression in children.

Research is needed to understand whether multiple contextual factors are linked with children's depression and to what extent, parenting moderate these relations among inner-city families. Few studies used multilevel analysis methods for analyzing longitudinal data, so between-person and within-person variations across years in

longitudinal studies cannot be addressed (Hoffman, 2015). More studies should employ multilevel models to address model dependency and include categorical or continuous predictors at any level (Hoffman, 2015).

SAFE Children Project Findings

This study utilized data from the SAFE Children intervention study (Tolan et al., 2016). The SAFE Children project was designed to test the effectiveness of a preventive intervention for increasing parenting and children's academic achievement with 1st-grade children and their families living in inner-city Chicago. Research findings from eight previous studies using this project data are shown in Table 2.4. Table 2.5 displays information that was summarized in Table 2.4. All studies focused on exploring externalizing problems in children. Only one study included depression as one of the predictors of risk for delinquency and drug use (Gorman-Smith et al., 2002). Most studies used a multilevel method to analyze the collected longitudinal data. A study was focused on examining several early risk predictors for externalizing problems (Gorman-Smith et al., 2002). The results of an initial evaluation of the SAFE Children project indicated that linear-growth trends through 6 months after invention led to an overall effect of increased levels of academic performance and better parental involvement in school among inner-city families; high-risk youth had improvement in problem behaviors and social competence, and high-risk families gained additional benefits for parent monitoring (Tolan et al., 2004). The evaluation of the effectiveness of booster intervention recognized a relative improvement in reducing aggression and promoting concentration in children, with an additional benefit for high-risk groups in academic achievement, behavior, and family organization (Fowler et al., 2014).

In addition to previously mentioned studies, the other five relevant empirical studies evaluated the impact of interventions on externalizing problems, such as ADHD

symptoms, children's aggression and delinquency, drug use, and academic achievement. Kim and Glassgow (2018) used multilevel methods to examine associations among the neighborhood, household context, and children's aggression and involvement with delinquency. Their findings revealed that living in a disadvantaged neighborhood and a father's absence in the household predicted children's aggression. Fowler et al. (2014) examined the developmental course of ADHD symptoms using growth mixture modeling, indicating that the initial intervention for inner-city children entering the first grade produced the positive developmental trajectories for impulsivity and hyperactivity, but the booster intervention had no additional effect on the change of trajectory in ADHD indicators. Their findings were consistent with existing study results (Henry et al., 2012; Tolan et al., 2004). Miller and Tolan (2019) focused on exploring the effect of neighborhood factors and parenting practice on childhood aggression. Their findings, reported two years after the initial study, demonstrated that neighborhood impoverishment, neighborhood social processes, and parental monitoring and supervision were significantly linked with aggressive behavior. However, neighborhood economic deprivation continued to elevate the risk of developing aggression in children, despite the protective effects of high-quality parenting. Differently, Kim and Glassgow (2018) elaborated that interventions aiming at improving the quality of school could mediate the adverse effects of individual and neighborhood disadvantages on children's school performance. Lissuzzo (2005) proposed that parent relationship quality was associated with family functioning and child aggression, but family functioning could not mediate the relationship between parent relationship quality and child aggression.

In conclusion, neighborhood characteristics, school climate, parental relationship, and parenting practice become predictors for determining the risk of externalizing problems in inner-city children. No studies reviewed from the SAFE Children project to

my knowledge focus on exploring the effect of interventions on internalizing problems, or depression specifically. Depression is one of the most common mental health issues and can lead to other mental disorders in children. However, studies of depression among inner-city families are scarce. As such, this study aims to investigate depressive symptoms in inner-city children and identify the effects of risk and protective factors on child depression in complicated contexts.

Drivers of Depression in Inner-City Children

This study mainly addresses social determinants of depression within the contextual system, which leads to health disparities in inner-city children. As such, this section discusses several linkages between risk and protective factors and child depression. The following sections also discuss how parental support plays a moderator role between contextual risk factors and child depression.

Neighborhood Conditions and Depression

Existing research has identified the negative effects of urban neighborhood characteristics or factors on child outcomes, particularly in inner-city neighborhoods or low-income urban communities (Truong & Ma, 2006). Latkin and Curry (2003) found that baseline perceptions of community problems predicted higher levels of depression at a follow-up assessment. Gary et al. (2007) revealed that individuals who perceived more severity of community problems were more likely to experience higher depression and anxiety. The same results were also found in a study of investigating 3788 same-sex twin pairs to examine the relationship between neighborhood constructs and depression (Cohen-Cline et al., 2018).

Children residing in the inner-city may suffer from a high risk of depression due to increased exposure to violence, poverty, drug use, and criminal and gang activity (Chum et al., 2019; Fitzpatrick et al., 2010; Fitzpatrick et al., 2005). Cutrona et al. (2006)

proposed three pathways by which neighborhood characteristics influence depression in individuals' lives, including facing daily stress (e.g., lack of resource and physical stressors, and the people in the neighborhood), experiencing the vulnerability to adverse events, and forming ties (e.g., informal social control, social support, and family-role performance). For example, a study investigated 786 current and former drug users in inner-city Baltimore, Maryland indicating that neighborhood crime was linked with depressive symptoms through perceptions of neighborhood disorder and experiences of violence in the neighborhood (Curry et al., 2008). Vulnerable neighborhoods are usually viewed as chronic stressors, which subsequently may result in psychological distress (Goldman-Mellor et al., 2016; Matheson et al., 2006; Osypuk et al., 2012). Children living in these impoverished neighborhoods expressed pessimism about future life chances (Bolland et al., 2007; Umlauf et al., 2015). This pessimism may include perceptions of limited educational opportunities, low employment, high crime rates, inadequate housing, and crowded neighborhoods.

Violence is pervasive within vulnerable neighborhoods, and violence exposure is the most pressing issue in children. Exposure to violence places children at a higher risk for psychological difficulties, especially depression disorder. Fitzpatrick et al. (2005) surveyed a sample of 1,538 mostly low-income African students aged 10 to 18 years in an inner-city community; findings indicated that youth exposed to hazardous environments (including unsafe home, school, and neighborhood) reported high levels of depressive symptoms. Moses (1999) examined the prevalence of violence with a non-randomly selected population of 337 inner-city youth aged 14-19 years and found a positive relationship between exposure to violence and depression in inner-city children. Gorman–Smith and Tolan (1998) investigated a sample of 245 fifth and seventh-grade boys from economically disadvantaged inner-city neighborhoods in Chicago, with results

revealing violence exposure was associated with the increases in depression over a period of one year. However, some studies indicated no significant relationships between violence exposure and depression in inner-city children (Cooley-Quille et al., 2001; Mazza et al., 2010). For example, Fitzpatrick and Boldizar (1993) did not find a significant relationship between chronic violence and depressive symptom. Fitzpatrick claimed that youth might be protected from adversity by the use of coping skills. Children may be emotionally and behaviorally affected by community violence exposure but adapt to stressed environments.

In summary, research on the effect of neighborhood conditions on child depression is outdated. Parenting may play an important role in protecting children against depression and help them adapt to adversity living in inner-city neighborhoods. It is still necessary for studies to examine whether neighborhood conditions lead to depressive symptoms in inner-city children after controlling parenting variables.

School Climate and Depression

School factors exert a significant impact on behavioral patterns in children (Gadeyne et al., 2006). Positive school climate is a catalyst to promote parental involvement in schooling and reduce the risk for depression in children (Denny et al., 2016; Denny et al., 2011; Dixon & Tucker, 2008; Dixon, 2010; Drew, 2012). McKay et al. (2003) conducted a study regarding the effect of racial socialization and social support on parental involvement in activities, with a sample of 161 parents and 18 teachers from an urban elementary school serving primarily African American children. The findings revealed that both teachers and parents agreed on school climate and parental involvement levels. Also, parental perceptions of positive school climate were positively associated with their involvement in schooling, and racism awareness is negatively linked with parental involvement in activities at school (McKay et al., 2003). Drew (2012)

focused on the relationship between school climate and adolescent depressive symptoms, using the data from the National Longitudinal Study on Adolescent Health. Based on the multilevel linear regression model, Drew found that higher perceived school connectedness and perceived teacher support were associated with few depressive symptoms in a sample of 9,524 youth. Moore et al. (2018) examined the relationship between school climate and mental health problems using the California Healthy Kids Survey (CHKS) data. In the study of 1,169 school-attending youth in grades 9th and 11th, they found that homeless youth had high rates of depression tendency, but positive school climate and perceived school safety were associated with lower rates of depression. A similar study using the same data also indicated the associations between the positive school climate and lower depressive symptoms (Shim-Pelayo & De Pedro, 2018).

However, children experienced depressive symptoms that were not recognized as legitimate by teachers but seen as acting-out behaviors (Ofonedu et al., 2013). An inappropriate response from teachers and stressful life circumstances deepens children's depression at school and ultimately results in poor concentration and academic failure in inner-city children (Ofonedu et al., 2013). Children often hide their negative emotions due to uncertainty of how teachers and peers would respond if revealed. In this way, it is crucial to examine the consistency of perceptions of child depression between parents and teachers and identify how school climate affects depressive symptoms in children. A number of studies have examined the relationship between school climate and depression (Denny et al., 2016; Drew, 2012), but nearly none of these studies focus on the school climate and depression relationship specific to inner-city children. Research should focus on examining whether how school climate predicts children’s depressive symptoms among impoverished, high-risk families in inner-city neighborhoods over time.

Family Risk Factors and Depression

Many studies have focused on exploring how depression is associated with family characteristics, such as parental relationship, family relationship/ process/ functioning, and family cohesion. A study of 1,102 students in the fifth and seventh grades of 17 Chicago public schools revealed that family beliefs, cohesion, family structure, and family support were related to depression in children (Tolan et al., 1997). Youth reporting higher levels of depression claimed less support and family closeness and intimacy and more parent-child conflicted relationships (Greenberger et al., 2000). Sagrestano et al. (2003) surveyed a sample of 302 inner-city African children aged 9 to 15 years in Chicago. They found that changes in family functioning and increases in family conflicts were associated with changes in depression for children. Increased family conflicts and feelings of being unconnected with one another at home caused children's feelings of worthlessness, inadequacy, and, eventually, emotional situations (Ofonedu et al., 2013).

In addition to the link between the quality of family relationships and depression, parental depression is also a predictor for the risk of child depression (Hammen et al., 2011; Sander & McCarty, 2005; Spiro, 2018). In an early study of parental and child depression, Fendrich et al. (1990) proposed that parental depression was a more significant risk factor than family risk factors for youth psychopathology, including depression. A meta-analysis of 193 studies examined the strength of the association between mothers' depression and children's behavioral patterns and indicated that maternal depression was significantly associated with higher levels of internalizing and externalizing symptoms (Goodman et al., 2011). Maternal depression is significantly associated with less positive warmth, more hostile, negative parenting, and more disengaged or withdrawn parenting, which indicates the increasing risk of punitive parenting and child behavior (Cummings & Kouros, 2009; Edwards et al., 2003; England

et al., 2009; England & Sim, 2009; Widom et al., 2007). A study sample of 107 sexually abused mothers and 156 comparison mothers recruited from a parental clinic examined the mediating effect of maternal depression on the association between childhood abuse and parenting practice, including parent stress and discipline strategies (Schuetze & Eiden, 2005). They found that maternal depression was significantly associated with harsh or punitive parenting and also mediated the impact of maternal childhood sexual abuse on adverse parenting.

Low socioeconomic status (SES) is a risk factor for depression (Dupéré & Perkins, 2007; Galea et al., 2007; Inaba et al., 2005; Propper et al., 2005). The prevalence of depression is inappropriately distributed across different socioeconomic status (SES) strata (Gilman et al., 2002). People with lower SES levels are inclined to have a higher risk of mental illness (Gilman et al., 2002; Hudson, 2005). Research has found that the health outcome of family members increases as SES increases (Stringhini et al., 2012). A study of 15,112 adolescents showed that low-income increased the risk of depression (Goodman et al., 2003), since they have to worry about how they are able to afford the basics in their life. Children often compare their economic situations with other peers and also watch the endless media portraying only those who are rich and successful. They may avoid talking with other peers about their family and pretend to be satisfied with their life. However, more studies should be involved in linking depression with family-level factors and exploring how family-level factors (e.g., the quality of family relationships and parental depression) have an impact on children's depression among inner-city families.

Parenting as a Buffer

Children with depressive moods have difficulty investing hope and seeking help. As such, seeking parental support within the family system is very important for those

children. Parenting represents a major source of social support for children (Bokhorst et al., 2010), which can reduce the impact of environmental risk and adversity in children (Mason et al., 1996; Pettit et al., 1999), and then facilitate children's social adjustment and psychosocial development (Dumbrill, 2006; Letarte et al., 2010; Sanders et al., 2000; Wiggins et al., 2009). A study examining the influence of violence exposure and parental support on depression in a sample of youth (N=824), revealed that depressive symptoms on average increased from year one to two and then were stable or declined from year two to four, and that mother support predicted decreased depressive symptoms (Eisman et al., 2015). Enhancing positive parental support can contribute to reducing the probability that violence exposure causes depression in children living in disadvantaged communities.

Many parenting training programs (e.g., Triple P Positive Parenting Program and Pathways Triple Parenting Program) have been designed to improve parenting skills, manage misbehavior of parents, increase emotional parent-child bond, reduce child behavior problems, and facilitate children's social adjustment and psychosocial behaviors (Sanders & Pidgeon, 2005; Sanders et al., 2000). For example, the Triple P program equips parents with positive parenting behavior management strategies by enhancing their positive attitudes, knowledge, and skills. Research findings indicate that Triple P intervention for parents produces positive effects for parents on children regarding emotional and behavioral management (Wiggins et al., 2009). A recent study examined the predictors of externalizing and internalizing behaviors in Kindergarten aged children, indicating that maternal psychological distress, mediated by parenting behaviors, could predict children's externalizing and internalizing behaviors (Heberle et al., 2015). Parents who attend the PTP program reported substantial reductions in child externalizing and internalizing problems. A meta-analysis of preventive parenting interventions revealed

lasting preventive effectiveness from 6 months to 15 years postintervention for internalizing problems in children and to 5.5 years postintervention for depression (Yap et al., 2016).

Parenting interventions can be effective for parents in managing children's behaviors. Cohen and Wills (1985) proposed that supportive parenting had a primary effect on decreasing depressive symptoms in children and moderates the adverse effect of stress on children, regardless of their level of stress. Natsuaki et al. (2007) used data collected from 777 African American families and found that parental use of inductive reasoning was a protective factor for depression, particularly in youth living in highly disordered neighborhoods. Sagrestano et al. (2003) proposed that decreases in parental monitoring were associated with increases in depression for inner-city African children aged 9 to 15 years. Supportive parenting can protect against depressive symptoms (Allen et al., 2006; Auerbach et al., 2011; Bilsky et al., 2013; Dallaire et al., 2006), alleviate the generation of cognitive diatheses for depression, and enhance the self-perceived competence for addressing depressive thoughts in children (Bruce et al., 2006). Whereas, hostile, harsh, and disengaged/withdrawn parenting may be associated with increased depression levels (England et al., 2009). Depression in youth is associated with harsher discipline parenting (Simons et al., 2002) and the laissez-faire or authoritarian parenting style (Kandel & Davies, 1982; King et al., 2016). Children who have less supportive interaction with parents may have more serious depressive symptoms and more cognitive vulnerability to depression (Mezulis et al., 2006; Rapee, 1997).

However, there is an inconsistency of findings that parenting practices contribute to improving psychosocial and emotional functioning in children, which can be explained by parents' adopting monitoring and discipline that are not associated with depression (Gorman–Smith & Tolan, 1998) or length of parenting intervention (Cardamone-Breen et

al., 2018). Cardamone-Breen et al. (2018) conducted a randomized controlled trial comparing a parenting intervention with a 3-month waitlist control. Intervention group parents were required to attend a single-session, individually tailored, web-based parenting intervention to prevent adolescent depression. Researchers collected data of a community sample of 349 parents, together with 327 adolescents aged 12-15 years. Study findings demonstrated there was no significant effect of the intervention on adolescent-report of parenting and on reducing depression in adolescents in the short-term (Cardamone-Breen et al., 2018). They suggested long-term studies for adequately assessing the relationship between improving parenting and children's depression (Cardamone-Breen et al., 2018). Another study investigated 1888 children aged 8-14 from public elementary and public schools, in a three-wave, to test the model describing whether social support could mitigate the deleterious effect of peer victimization on depression outcomes (Bilsky et al., 2013). Their results revealed that the reduction of supportive parenting led to increasing levels of depressive symptoms, and depressive symptoms increased as peer victimization increased. However, supportive parenting and peer victimization did not interact in the prediction of depression. How parenting interacts with other protective or risk factors buffer their effect on depression is scant in research. In this way, this dissertation study shifts the focus on inner-city families to examine the direct and mediating effects of positive parenting, and then discusses how to develop effective parenting interventions particularly targeting vulnerable and fragile families.

Purpose of this Study

Given the existing evidence supporting the links among neighborhood conditions, family functioning, parenting, and child outcomes, this study expands the examination of the relationships among community-level factors, family-level factors, and children’s

depression using a longitudinal developmental perspective. This study aims to examine how positive parenting as a protective factor moderates the effect of contextual risk factors on children's depression in a sample of low-income, inner-city families. The purpose of this study is threefold. First, this study aims to (a) depict the trajectory growth of depression in inner-city children from the transition to grade school to the emerging adult stage, and (b) compare the trajectory of depressive symptoms among youth in the intervention vs. comparison conditions. Second, this study will examine associations between environmental factors, including parenting, family dynamics, school risk factors, and neighborhood risk factors, and depression across time. Third, this study proposes to identify whether positive parenting moderates the impact of negative factors in familial, school, and neighborhood contexts on depressive symptoms among children. All in all, this study will produce a greater understanding of the differential impact of time-varying predictors (e.g., family risk factors, negative school climate, severe neighborhood conditions) and other time-invariant predictors (e.g., gender and intervention conditions) on depression in children across the time.

Research Questions and Hypotheses

Considering the internal and external forces present within a parent-child system, the overarching research question in this dissertation study focuses on examining the interacting effects of parenting and contextual factors on depression in inner-city children aged 6 to 12. The primary research question is divided into three sub-questions listed below.

Question #1: Are there differences in the developmental trajectory of depression between children participating in a family-based preventive intervention and a control group of children not participating in the intervention? Specifically, how much variance

does the treatment condition (family-based preventive intervention) account for in the different growth patterns of children's depression over time?

- Hypothesis #1: The treatment group of children has a lower level of depressive symptoms than the control group after the intervention has ended and for the rest of the study.

Question #2: Which time-varying predictors impact on the developmental change of depression? The question deals with predictor variables (Positive parenting, family income, parental depression, low family cohesion, negative school climate, and vulnerable neighborhood conditions).

- Hypothesis #2: Lower levels of family income, Higher levels of parental depression, lower levels of family cohesion, higher levels of negative school climate, and higher levels of neighborhood risk are predictive of higher levels of depressive symptoms.
- Hypothesis #3: Positive parenting is positively predictive of a low level of child depression.

Question #3: Does positive parenting moderate the impact of environmental risk factors on youth depression? The question investigates how parenting practices are related to the change of depression of children in the context of risk factors over time.

- Hypothesis #4: High exposure to vulnerable neighborhood conditions is related to high levels of child depression, but to a lesser extent for children whose parents demonstrate positive parenting behaviors.
- Hypothesis #5: Perception of negative school climate would be associated with higher levels of child depression, but to a lesser extent among children who experience positive parenting behaviors.

- Hypothesis #6: Family risk factors, specifically parental depression and low family cohesion, are related to higher levels of child depression, but in the context of positive parenting behaviors, it will be associated to a lesser extent with depressive symptoms among children.

Summary

In summary, inner-city children face challenges associated with family-, school-, and neighborhood-level risk factors, and can have difficulty accessing acceptable treatment (Leijten et al., 2016). Positive parenting has been found to be related to lower levels of depression in children (e.g., McLeod et al., 2007). However, relatively few studies have examined the combined effects of parenting, overall family dynamics, and a series of contextual risk factors on depression in inner-city elementary school-aged children. Effective parenting, together with healthy family functioning, plays a vital role in helping children adjust to psychological difficulties. Further studies should be conducted, examining whether positive parenting can alleviate the adverse effects of contextual risk factors on depressive symptoms in inner-city children. Therefore, this study will explore the linkage between child depression and contextual factors, including exposure to high-risk family, school climate, neighborhood conditions, the quality of family relationship, and parenting, which can inform the identification of depression-based parenting treatment models.

CHAPTER III: METHODS

This chapter details the methods for exploring the association between parenting and depression in inner-city youth in a particular context using the SAFE Children Project dataset.

SAFE Children Project

This study utilized data from the SAFE Children Preventive Interventions (Tolan et al., 2016). The SAFE Children project was designed to test the effectiveness of a preventive intervention for increasing parenting and children's academic achievement with 1st-grade children and their families living in inner-city Chicago, not for preventing depressive symptoms. The goal of the study was to enhance well-being among elementary school-aged, inner-city children in Chicago (Tolan et al., 2004). The project focused on four components including: "(1) enhancing parent and child orientation to and involvement with school ; (2) academic tutoring; (3) social competence and peer relations of the child; and (4) parent and family functioning to enhance the child's academic performance, the parental investment in the child's well-being and development, and the social competence and self-control of the child" (Tolan et al., 2016, p. iv). The intervention research involved three phases consisting of 11 waves of data collection starting in 1997 and spanning approximately 13 years.

The initial SAFE Children project consisted of a group-based family intervention and a first-grade reading-tutoring program (Fowler et al., 2014). The group interventions, including 4 – 6 families and consisted of 20 weekly sessions, focused on parenting skills, family relationship, understanding and managing various challenges to the families, increasing support for parents, skills and issues regarding parental schooling

involvement, and managing issues associated with neighborhood problems (Fowler et al., 2014). All families were invited to the group, including parents or caregivers and children. The tutoring program comprised both phonics and whole language approaches and involved one-on-one tutoring sessions to the first-grade children with university students occurred twice weekly for 30 mins each at schools during the 22-week intervention period. The combination of these two programs was designed to encourage more positive attitudes about parental educational involvement, lower isolation, and more supportive relationship for parents, as well as could facilitate greater self-control, lower aggression, and higher social competence for children (Fowler et al., 2014). Increasing parental warmth or positive parenting would prevent children's depressive symptoms. The first phase involving 5 waves spanned over two years.

The booster interventions that were added in wave 6 were similar to the initial interventions, with some change in content to cater to the needs of participating children who were transitioning into adolescence. The booster family groups mainly focused on effective parenting practices, parental involvement in schooling and managing children's motivation, peer relations, and ecological challenges associated with neighborhood violence and safety (Fowler et al., 2014). Research indicated that SAFE Children might improve family functioning among inner-city families and then prevent the growth of behavioral problems in children (Fowler et al., 2014).

Research Design

The SAFE Children project was a longitudinal panel study with a randomized controlled trial of a family-based preventive intervention on children and youth in the Chicago inner-city neighborhoods. Random assignment occurred regardless of participation patterns in the initial intervention or retention in this project to avoid the

potential selection bias (Shadish et al., 2002). Random assignment was conducted within the classroom in each participating public school.

This project started in 1997 with 424 the first-grade students and their primary caregivers receiving the intervention treatment or being assigned to control group. The first phase of this project consisted of four waves of primary caregivers and child interviews (waves 1, 2, 4, 5) and five waves of teacher interviews. The second stage involved 382 of the original 424 families to evaluate the booster effects of an additional intervention during the fourth grade, as compared with those receiving the initial intervention only and not receiving any interventions.

Using the SAFE Children Project dataset, two studies were conducted. The first study focuses on exploring the effects on child depression of major study variables using Wave 1 to Wave 5 datasets of the SAFE Children project. The second study focuses on exploring the effects on child depression of major study variables using Wave 6 to Wave 9 datasets. These two studies primarily respond to same research questions together with six hypotheses.

Participants

Eligibility for the SAFE Children project included families of children living in disadvantaged neighborhoods in inner-city Chicago. Seven primary schools from 96 census tracts were selected, all of which were located in predominantly poor and racially segregated inner-city neighborhoods (Kim & Glassgow, 2018). Caregivers of children were asked if they resided within the neighborhood boundaries of the schools in which their children would attend first grade. Of 507 families of children in kindergarten at seven Chicago public schools were eligible, 424 families out of these (84%) agreed to take part in and completed the first two pretest assessments and 83 families declined to participate (Tolan et al., 2016). Overall, in the initial intervention,

225 families were randomly assigned to SAFE Children intervention group, while 199 were in the control condition (Tolan et al., 2016). In the booster intervention, 101 families who received the initial intervention were randomly assigned to receive the second phase interventions in fourth grade, which was marked as Wave 6.

A subset of cases from Waves 1 to 9 of the dataset, including related instruments and demographic information were selected to answer the research questions. The selected sample at Wave 1 consisted of 47.6% Mexican American children (n=201), 42.5% African American children (41), and 9.7% other Hispanic or Anglo-White American children (n=41). Out of children in the sample, 49% were male children, while 51% were female children. Two-thirds of children resided in single-parent households, and 54.9% of primary caregivers, most of whom were mothers, had not graduated from high school. Regarding annual family income demographics from Wave 1, 59% of families reported an annual income below $20,000 and 86% below $30,000. In terms of household size and mobility, 62% of families reported five or more people living in the household, and 57% of families had moved one or more times in the previous year. The sample size achieved the minimum cases for conducting the multilevel analysis, based on the criterion of a minimum ratio of 100/10 to test random effects (Hoffman, 2015; Hox, 1998).

Data Collection

The SAFE Children program consisted of 11 waves of data collection in three phases (Fowler et al., 2014). In 1997, primary caregivers of all kindergarten children in seven Chicago public schools were contacted and invited to participate in the survey. Of the 742 families that were assessed as eligible to participate in the research, 318 families were excluded from the study (235 families did not meet the inclusion criteria and 83 families declined to participate) (Tolan et al., 2016). The

final study sample consisted of 424 families who were randomly assigned to either the intervention (n=225, 55%) or the control (n=199, 45%) condition. Families and their children were followed over a 13-year period during which 9 waves of data — repeated measures on time-varying variables and time-invariant factors — were gathered. In addition, during this period, two waves of follow-up measures of long-term outcomes such as incarceration, mental health status, and teen pregnancy were also collected.

Phase 1 with the initial intervention included waves 1, 2, 4, and 5 in which data was collected from both children and their primary caregivers and teachers. In wave 3, data was only collected from teachers only. A single baseline assessment before the intervention was taken in wave 1, followed by evaluations at post-test and at 6-month, 12-month, and 24-month post-intervention.

A booster intervention was added in wave 6 to differentiate the effects of interventions from the randomly selected treatment group as children entered the fourth grade in Fall 2000. A total of 348 families out of 424 families (82%) consented to participate, while 76 families could not be located (n=58) or declined to participate (n=18). A total of 114 families initially randomly assigned to the intervention condition received the booster intervention. They were compared with 111 families randomly assigned to the control condition who completed the research instruments but did not participate in the booster intervention. Phase 2 incorporated four assessments (waves 6 – 9): pre-test, post-test, and 6-month and 12-month follow-up assessment, consisting of waves 6, 8, and 9 of data collection from both children and their primary caregivers. Data was collected from teachers in waves 6, 7, and 8.

Phase 3 comprised of waves 10 and 11 in which data was collected from children and their caregivers to assess the long-term effects of the initial and booster

interventions. A total of 312 families consented to participate in Phase 3 of the study. Over 90% of the parents who participated in Phase 3 were mothers (see Henry et al., 2012; Tolan et al., 2016 for a detailed description of the research design of the SAFE Children Project).

Variables and Measures

Relevant predictor variables and outcome variables alongside measurements were included in this study, as shown in Table 3.1 of Appendix C. All measurement items are listed in Appendix A as well.

Outcome Variables

Child depression at waves 1 through 9 was measured using the depression sub-scale of the Parent Observation of Classroom Adaption – Revised (Tolan et al., 2004). Parents were asked to rate statements, such as “child is irritable." “Child looks sad or down.” Responses for the three items ranging from 1 “almost never” to 4 “almost always” were summed, with higher values indicating greater severity of depressive symptoms. Depression was measured with a 3-item scale, and responses were captured on a four-point scale, which met a minimum set of 3 items suggested by Hair et al. (2006). However, the internal reliabilities of this scale across waves were .330, .358, .457, .399, .432, .498, and .485, respectively. The values of Cronbach’s alpha value were far lower than .70, which is indicative of an unreliable scale and high measurement error.

Bretz and McClary (2015, p. E) proposed that “the traditional threshold of .70 as indicative of acceptable reliability may be a flawed metric when applying in diagnostic assessment.” In a study of the jigsaw learning method, Berger and Hänze (2015) found that Cronbach’s alpha was .45 for the pre-test and .60 for the post-test;

they explained these values are acceptable given the limited number of scale items and the broad range of the measuring construct.

Cronbach Alpha has three core assumptions: (1) the observed score of each item is the result of adding the item's true score and error; (2) Tau equivalency indicates all items carry equal loadings and have the same amount of variance; and (3) alpha assumes uncorrelated error scores (Starkweather, 2012). In social science research, the small number of a scale may violate the assumption of Tau equivalence and underestimate reliability (Tavakol & Dennick, 2011). Herman (2015) proposes that the value of Cronbach's alphas may underestimate the internal consistency of a scale involving fewer than 10 items. Values of Cronbach alpha are closely associated with the number of items in a scale. The shorter the scale length is, the fewer the value of alpha. Increasing the number of items may lead to acceptable values for Cronbach's alpha (Taber, 2018). Additionally, Starkweather (2012) suggested calculating composite reliability as an alternative to alpha. The compositive reliability is superior to Cronbach's alpha since it is more robust to violate the assumptions and provides a less biased estimate of reliability.

Therefore, this present study conducted the exploratory factor analyses using the maximum likelihood extraction method with oblique rotation across waves. Results indicated variances explained in this scale across waves were 43.962%, 43.957%, 46.432%, 46.422%, 46.855%, 50.435%, and 49.359%, exceeding the minimum variances of 20% recommended by Reckase (1979). The composite reliabilities across waves were .666, .698., 719, .702, .724, .733, and .740, as shown in Tables 4.1.2 and 4.2.2.

Alpha values also should be interpreted within the context of the research area. In Gorman-Smith et al. (2002)'s study of predictors of participation in a family-

focused preventive intervention for substance use, the three-items scale was used to measure child depression with internal reliability of .39. Researchers also used some scales with low internal reliabilities in some studies (Fowler et al., 2014; Xu et al., 2018). In a study of a five-item scale measuring depressive symptoms in children (sadness, irritability, hopelessness, sleep problems, and concentration), indicating an informative scale that can be used for researchers to evaluate depressive symptoms in adolescents (Dunn et al., 2012). The three-items scale in this present study also incorporates the items of sadness and irritability. Most importantly, the values of Chronbach's alpha and compositive reliability increase across waves in this current study. Thus, the three-items scale is retained in the analysis.

Time-Varying Variables

Family risk factors

Family risk factors were evaluated using household/ family income, whether families receive food assistance, the Beck Depression Inventory for caregivers (Beck et al., 1996), and the family relationship scale (Tolan et al., 1997). Family income was an ordinal variable with three categories, from less than $10,000 to $50,000. Whether to receive food assistance was measured by asking caregivers about the status of the use of food stamps, and it was a dichotomous variable (Yes = 1).

The Beck Depression Inventory (BDI) was used as a self-report measure of caregivers' perceptions of depressive symptoms across waves 1-9, such as "feel sad," "discouraged about the future," "lost interest in people," with responses ranging from 0 "I make the decision about as well as I ever could" to 3 "I can't make the decision at all anymore." Responses for 19 items at each wave were averaged, with higher values indicating greater severity of depression. A meta-analysis of BDI's Cronbach's alpha for this scale indicated a mean coefficient alpha of .86 (Beck & Steer, 1988).

Cronbach's alpha for this scale among Waves 1 and 9 of this study ranges from .853 to .914.

Family relationship quality was measured by a combination of family cohesion, communication, and support (Tolan et al., 1997). Parents were asked to rate 17-item statements, such as "my family doesn't care about me." "My family and I have the same views about what's right and wrong." "I am able to let others in the family know how I really feel." "Family members like to spend free time with each other." "family togetherness is very important." "Kids should value a close relationship with their family and should not have to be asked to spend time at home." "Parents should teach their children what they need to know to make it in the world." Responses ranged from 1 "not true" or "strongly disagree" to 4 "always true or almost always true" or "strongly agree." Responses were averaged, and lower scores indicated a closer family relationship. Cronbach's alpha for this scale across waves was ranged from .707 to .805.

School Climate

School climate was measured using a six-item scale to collect information about parents' perceptions of school climate among waves 1 and 9 (CPPRG, 1999; McMahon et al., 1999). Parents were asked to respond to a series of questions and statements consistently across waves, such as "teachers or staff are sensitive to the special needs of children." "The staff care about students as individuals." "Teachers understand parents' point of view." "Parents are encouraged to visit for special concerns." "Teacher and staff work hard to get parents involved." and "Appointments are easy with teachers and principal." Responses ranged from 1 "strongly agree" to 5 "totally disagree" and were averaged, with high values indicating negative school climate. Cronbach's alpha for this scale ranged from .834 to .950.

Neighborhood conditions

Neighborhood conditions were measured using a subscale of the Chicago Youth Development Study (CYDS) neighborhood measure – the extent of community problems (Tolan & McKay, 1996). Caregivers were asked to rate the extent to which they agree with statements describing their views of what it is like for their families living in their neighborhood (Gorman-Smith, Tolan, & Henry, 2000; Gorman-Smith, Tolan, Henry, et al., 2000). Responses to 13 items were captured using a 5-point (1 to 5) Likert scale, which reflected how responders felt about their community and the extent to which drugs, gangs, crime, and homelessness are serious issues/threats/problems. The neighborhood conditions measure consists of sample questions, such as "vacant lots are a problem on my block." "Gangs are a problem in my neighborhood." "Drugs are a problem in my neighborhood." Responses for the subscale were averaged, with higher values indicating more severe or negative neighborhood conditions. The neighborhood measure had good internal consistency, with Cronbach's alpha ranging from .848 to .918.

Positive parenting practices

Positive parenting characteristics were measured using a parental report questionnaire that was developed based on the Pittsburgh Youth Study (Loeber et al., 1991). Positive parenting measures the use of reinforcement and encouragement and the extent of parental involvement. The inventory in this study consists of two sub-scales: parent involvement and warmth (Gorman-Smith et al., 1996), which consists of 18 questions using a 5-point Likert scale ranging from 1 "don't know" or "hardly ever" to 5 "yesterday/today" or "often." Examples of positive parenting questions include, "Do you say something nice about it; praise or give approval?" "When was the last time that you discussed his/her plans for the coming day?" Responses were

averaged, and higher scores indicated higher levels of positive parenting practice. The psychometric properties of the positive parenting practices scale have been examined in several studies, with internal consistency reliabilities reported for each subscale ranging from .68 to .81. Confirmatory factor analysis has also supported the validity of the parenting scale (Gorman-Smith et al., 1996). Cronbach's alpha for this scale among waves 1 and 9 in this study ranges from .802 to .838.

Time-Invariant Variables

Time-invariant or between-group variables selected for this study were child gender, child race/ethnicity, treatment status, and mother' educational level. Gender was a dichotomous variable (Male =1 and Female = 0). Race/ethnicity was also a nominal variable comprising of African American, Hispanic, and others (African American = 1 and Hispanic = 2, other = 3). The treatment status was a nominal variable, including control group = 2, initial intervention group = 1, and booster intervention group = 0. The mother's education level at wave 1 and wave 6 was asked of caregivers who filled in parent questionnaires to report their educational level. Responses were coded as a categorical variable (0 = not finish high school, one = finish high school or above).

Data Analysis

This dissertation study analyzed how positive parenting moderates the impact of contextual risk factors on child depression. Data points used with relevant factors were showed as clarification in Table 3.1. Data analyses were conducted in three steps: (1) the use of descriptive statistics to describe the study sample, (2) bivariate correlations to explore associations between independent variables and the outcome variable, child depression, and (3) a multilevel analysis method to examine the relationship between contextual factors and depression across time. Descriptive data

analysis, bivariate analysis, and multilevel analysis were conducted using SPSS and SAS software. This dissertation study adopted a p-value of .05 as the standard to report significance.

Multilevel Analysis

Analysis of repeated observations in longitudinal research can be conducted using univariate analysis of variance (ANOVA). ANOVA requires the independence and normality of residual variances, as well as homogeneity of variance for different levels of between-person factors such as treatment vs. control group. Also, ANOVA is limited to research situations involving within-person and between-person change, where the time of repeated measurement is more than two occasions and subjects are sampled in specific groups. In other words, the change is considered fixed, and the random effect is ignored. However, in real situations, subjects are independently and randomly sampled, randomly varying parameters exist within and between individuals. Using ANOVA approaches may violate the assumptions of sampling independence (Heck et al., 2013).

In addition, the use of ANOVA does not allow for the inclusion of subjects with missing data on any occasion in the analysis. Any person with partial data is eliminated from the analysis through listwise deletion, which may lead to a considerably large loss of information about the sample within a longitudinal analysis (Hoffman, 2015). In this dissertation study involving nine waves with some missing data in some individuals, ANOVA is not a viable approach to examine repeated-measure data.

The multilevel analysis method, also called the linear mixed model or random coefficient model, examines repeated measures data with within-person and between-person factors (Laird & Ware, 1982). In using the multilevel model, a two-level

analysis will be specified, with the change in time-varying predictors across time assigned as Level 1 and random variation in the individual intercepts (e.g., differences between individuals) and growth rates appointed at Level 2 (Hoffman, 2015). Also, this approach can include categorical or continuous at any level and does not require the same data structure for each person, which is beneficial because some subjects dropped out during the longitudinal study.

Previous research has illustrated the advantages of the use of multilevel mixed models in longitudinal repeated data (Finch et al., 2016; Heck et al., 2013; Hoffman, 2015; Hox et al., 2017; Rabe-Hesketh & Skrondal, 2008). Notably, the value of using multilevel modeling (MLM) approach for the analysis of longitudinal randomized controlling trial data is its capacity to address autocorrelation of longitudinal and nested data and to estimate outcomes with missing values (Rabe-Hesketh & Skrondal, 2008). Maximum likelihood (ML) and Restricted ML estimations, which address missing data issues allowing for valid estimations, will be used based on the use of different multilevel models and statistical analysis tools (Hoffman, 2015; Schafer & Graham, 2002). Also, the MLM approach for longitudinal data could address or control dependency that arises due to constant mean differences across the person, intercept differences across groups, and individual differences in the effect of predictors (Hoffman, 2015). With that, the impact of predictors pertaining to multiple levels of analysis can be investigated simultaneously and accurately (Hoffman, 2015).

Using MLM analysis, this present study will examine between-person variation, or inter-individual differences and examine within-person variation that explains intra-individual differences simultaneously and their interaction. The null model and the conditional model will be performed separately. Akaike information criterion (AIC) and Likelihood ratio test will be used to select models (Hoffman,

2015; Rabe-Hesketh & Skrondal, 2008). Also, the pseudo-R^2, the most common measure of effect size in multilevel analysis, will be used to calculate the variance proportion reduction in each variance component from two alternative models (Hoffman, 2015). Adding a main effect for the between-person factor to a model can reduce the level-2 random intercept variance while adding a main effect for the within-person can reduce the level-1 residual variance. However, in model with time-varying factors, a reduction in level-1 residual variance may cause the level-2 random intercept variance to increase. As such, pseudo-R^2 was used when the models to compared have the same level-1 fixed effects (Hoffman, 2015). The other approach for assessing effect size is to compute total R^2 that is the square of the Pearson correlation between the predicted outcome and the actual outcome. Total R^2 reveals the total reduction in the overall variance of the outcome across any models with fixed effects (Hoffman, 2015).

All in all, in specifying a repeated measures analysis for this dissertation study using the multilevel model, three aspects are considered. The first is to test the sphericity assumption using repeated measures, within-person ANOVA. The sphericity assumption refers to the structure of the repeated measures covariance matrix upon which the repeated observations should be independent and have constant variance. The second is considering the expected within-person effects that describe whether individuals change over time and by how much. The potential mean differences across measurement occasions are specified as a time-related slope, and it is significant to test whether the outcome means are equal across occasions and the slope rate changes over some relevant interval of time. If the means of the dependent variable are not the same across time, it would be essential to investigate further how individuals are changing across time through identifying growth trajectories. A linear

growth trend that assumes the rate of personal change is the same over time is most common. However, adding higher-order polynomials within individuals to the model, such as a quadratic or cubic trend, may improve prediction if necessary (Heck et al., 2013). After determining reasonable growth trajectories for describing the developmental pattern of individuals, the third is to consider possible within-person variables and between-persons variable that may affect an individual's growth trajectories. For example, at level 2, this study examines whether the trajectories are the same for different levels of static factors (e.g., subjects in treatment or control groups, subjects in male or female groups). At level 1, time-varying predictors, such as neighborhood conditions, school climate, the quality of the family relationship, parental depression, and positive parenting, can be entered to predict changes in child depression. The combined linear mixed regression equation for Study 1 is the following:

$$
\begin{aligned}
\mathrm{y}_{ti} = {} & \beta_0 + \beta_1 \mathrm{NC} + \beta_2 \mathrm{SC} + \beta_3 \mathrm{FR} + \beta_4 \mathrm{PP} + \beta_5 \mathrm{Pdep} + \beta_6 \mathrm{I}_{\{Control\}} + \beta_7 \mathrm{Sex}_{\{Female\}} \\
& + \beta_8 \mathrm{Race}_{\{African\}} + \beta_9 Race_{\{Mexican\}} + \beta_{10} Edu_{\{1\}} + \beta_{11} Food_{\{1\}} \\
& + \beta_{12} Income_{\{1\}} + \beta_{13} Income_{\{2\}} + \beta_{14} \mathrm{NC} * \mathrm{PP} + \beta_{15} \mathrm{SC} * \mathrm{PP} \\
& + \beta_{16} \mathrm{FR} * \mathrm{PP} + \beta_{17} \mathrm{Pdep} * \mathrm{PP} + (\beta_{18} + \mathrm{U}_{1i}) \, \mathrm{Time} + \mathrm{U}_{0i} + \mathrm{SubID} \\
& + \mathrm{e}_{ti}
\end{aligned}
$$

$$
\mathrm{e}_{ti} \overset{iid}{\rightarrow} \mathrm{N}\,(0, \delta^2)
$$

$$
\mathrm{U}_i \overset{iid}{\rightarrow} \mathrm{N}\,(0, \delta^2)
$$

$$
\mathrm{SubID} \overset{iid}{\rightarrow} \mathrm{N}\,(0, \delta_s^2)
$$

where terms are defined as follows:

y_{ti} is the outcome at time t for individual *i*,,

β_0 is the intercept,

β_{1-13} is the simple main effect of predictors,

β_{14-17} is the two-way interaction of parenting by contextual risk factors,

β_{18} is the simple main effect of time,

U_{0i} is the intercept variance,

U_{1i} is the time slope variance,

e_{ti} is the deviation from the intercept at time for individual *i.*

IDD represents that errors and samples are independent and identically distributed.

The combined linear mixed regression equation for Study 2 is the following:

$$y_{ti} = \beta_0 + \beta_1 NC + \beta_2 SC + \beta_3 FR + \beta_4 PP + \beta_5 Pdep + \beta_6 I_{\{Control\}} + \beta_7 I_{\{Booster\}} + \beta_8 Sex_{\{Female\}} + \beta_9 Race_{\{African\}} + \beta_{10} Race_{\{Mexican\}} + \beta_{11} NC * PP + \beta_{12} SC * PP + \beta_{13} FR * PP + \beta_{14} Pdep * PP + (\beta_{15} + U_{1i}) Time + U_{0i} + SubID + e_{ti}$$

$$e_{ti} \overset{iid}{\rightarrow} N(0, \delta^2)$$

$$U_i \overset{iid}{\rightarrow} N(0, \delta^2)$$

$$SubID \overset{iid}{\rightarrow} N(0, \delta_s^2)$$

where terms are defined as follows:

y_{ti} is the outcome at time t for individual *i*,

β_0 is the intercept,

β_{1-10} is the simple main effect of predictors,

β_{11-14} is the two-way interaction of parenting by contextual risk factors,

β_{15} is the simple main effect of time,

U_{0i} is the intercept variance,

U_{1i} is the time slope variance,

e_{ti} is the deviation from the intercept at time for individual *i*,

IDD represents that errors and samples are independent and identically distributed.

CHAPTER IV: RESULTS

This chapter reports on the results of the data analysis using SAFE Children Project dataset to answer the research questions posed in this study. Since a booster group was added in the second phase between the sixth and seventh waves of data collection, the research consisted of two studies, the first one with data from waves one through five and the second one with data from the post-booster group, with data from waves six through nine.

Study One Results

Study One focuses on exploring the effects on child depression of major study variables (parenting, family income, the use of food stamps, parental depression, the quality of family relationship, school climate, and neighborhood conditions) using Wave 1 to Wave 5 datasets of the SAFE Children project. The data for this study consists of 424 families in Wave 1, including children and their caregivers.

Descriptive and bivariate results

The descriptive results are presented in Table 4.1.1. At Wave 1, out of 51.2% of children were female, while 48.8% were male. Almost half of the children were African American (42.1%) and Mexican American (47.6%), followed by others (9.7%), including Anglo-white and others. In terms of intervention status, 46.9% (n=199) of children at Wave 1 were in the control group, while 45.1% were in the treatment group. As far as mothers' demographics, mothers' average age was 31.31 (SD = 6.12); 54.9% of mothers did not complete high school. Regarding family income, about 35.6% of families had less than $10,000, and 50.4% of families had

income between $10,000 and $30,000, followed by families with income between 30,000 and $50,000.

In terms of time-varying variables, the means and standard deviation for child depression, positive parenting, the quality of family relationship, parental depression, school climate, and neighborhood conditions at Wave 1 (Time 1), Wave 2 (Time 2), Wave 4 (Time 3), and Wave 5 (Time4) are illustrated in Table 1. Besides, these predictors had some change in trajectories but did not consistently significantly increase or decrease from Wave 1 to Wave 5. The trajectories of these predictors are presented in Figure 4.1. Pearson correlations between continuous independent variables and child depression were conducted and presented in Table 4.1.2. The quality of family relationship and parental depression had statistically significant associations with child depression at the same wave. Positive parenting was negatively related to child depression at Wave 4, and school climate was positively associated with child depression at Wave 5. The neighborhood condition was not correlated with child depression.

In addition, whether participants in the treatment group varied significantly from those in the control group were analyzed with respect to child gender, race/ethnicity, mother education at Wave 1, family income at Wave 1, use of food stamp at Wave 1, child depression, positive parenting, the quality of family relationship, parental depression, school climate, and neighborhood conditions. As shown in Table 1.1, results showed that treatment and control groups were similar concerning this demographic information and major predictor variables.

Rationale for use of MLM with repeated measures data

The repeated-measures (RM) ANOVA approach was used to determine if child depression changed over time. The mean of child depression at Wave 1 was 4.09

(SD=1.14), the mean at Wave 2 was 4.20 (SD=1.07), the mean at Wave 4 was 4.22 (SD=1.15), and the mean at wave 5 was 4.14 (SD=1.09). The Mauchly's Test of Sphericity is used to examine equal means for individual development in child depression over time, and results showed a significant difference ($p < .001$). Since sphericity is not met, and there are repeated measures for time-varying factors, this study adopts a mixed model approach to investigate developmental patterns in child depression to reduce model residuals.

Examining the shape of growth trajectories of child depression over time

Typically, individuals are changing at a constant rate over a period of time, which can be represented as a linear growth curve. Results of the RM ANOVA indicated no significant difference in child depression over time, $F (3, 1047) = 1.51$, $p = .21$. Results also showed no significant difference between linear time component and child depression, $F (1, 349) = .352$, $p = .55$. However, a significant difference between the quadratic time component and child depression was found, $F (1, 349) = 4.20$; $p < .05$. Figure 4.1.3 provided a plot of the linear growth trajectory, suggesting that the shape of the average growth trend is linear. Therefore, in considering that children may experience more complex patterns of developmental change, a quadratic component within individuals was added to the model to test for the presence of a growth pattern over time.

A series of time-related multilevel models were examined, as shown in Table 4.1.3. The interclass correlation (ICC) of the null model (Model 1) indicated 16.92% of the variance at the between-person level (Level 2) and the remaining 83.08% of the variance arose from personal change across time (Level 1), which suggests that it is valuable to investigate time-varying predictors that can distinguish levels of depressive symptoms at different times within persons. In Model 2a, a linear function

of time as a predictor was entered and not statistically improved the model, −2ΔLL (~1) = .65, p = .42, with AIC and BIC in Model 2a more than those in Model 1. Added random effect and compared with Model 2a, Model 2b with random linear time was better than Model 2b with fixed linear time, −2ΔLL = 13.27 (~2), p < .005. In Model 3, a polynomial function of time as the second predictor was added and improved the model as a smaller AIC indicates a better model fit, −2ΔLL (~1) = 4.02, p < .01. There were significant linear and quadratic change across time (p's <. 05)

Does the time-related slope vary across treatment status?

The average child depression score was plotted for the treatment and control group as a function of time (see Figure 4.1.2). Visual inspection of the plot suggested that groups at wave 1 showed a little difference in child depression levels, and the control group increased from wave 1 to 2 while the treatment group showed a small decline after the intervention. Depression levels in the control group decreased from wave 2 to 3, while depression levels in the treatment group increased. However, both groups had similar decreased trajectories of change in children's depression levels from wave 4 to 5. In comparison waves 1 and 4, depression scores increased in the control group and seemed to decrease at a tiny rate in the booster group. In Model 4, a dummy coded variable for the treatment group was added (0 = control, 1 = treatment). Overall, this model showed a non-significant improvement, and the main effect of treatment was not significant (p = .64), suggesting that there was no difference between treatment and control groups in depressive levels across waves 1 to 5. Both interactions of treatment by the time were not significant (p's > .05). No statistically significant intervention effect on child depression was found between the treatment and control groups, but in controlling the tiny effect of interventions, this study adopted Model 4 as the basic, unconditional growth model for further multilevel

analysis. The ICC indicated 29.10% of the variance in child depression due to person mean difference, and 79.90% is due to within-person variation across time.

Results of mixed-effects models.

A series of follow-up multilevel analyses were conducted next, and the results were shown in Table 4.1.4. Model 4 was taken as a baseline model, and subsequent models were compared against this unconditional model.

Model 5. Adding time-invariant predictors

Child's gender, child's ethnicity, mother's education at Wave 1, family income at Wave 1, and use of food stamps at Wave 1 were added as time-invariant predictors of the intercept. The model fit significantly better than the unconditional model as indicated by a significant likelihood ratio test, $-2\Delta LL = 94.3$, $df=7$, $p < .001$; both AIC and BIC were lower. Also, relative to the baseline model, the proportional reduction in level-2 random intercept variance was pseudo-R2 = .0818. Therefore, 29.10% of the variance (.39/(.39 + .95) = .2910) in reported child depression was originally due to between-person mean differences, and approximately 8.18% of it can be explained by the effects of between-person predictors. The effects of these between-person predictors accounted for an additional 4.78% (5.02% - .24%) of the total variance in child depression, as compared with the baseline model. The fixed effects of linear time and time-squared on the intercept were significant (p's < .05). Compared to children of other ethnicities who were treated as the reference group, Mexican American children had substantially lower levels of depression ($\beta = -.36$, $p < .01$). In contrast, African-American children did not show significantly different levels of depression. Other factors did not show significant relationships with child depression.

Model 6a. Adding time-varying predictors

Parental depression, the quality of family relationship, school climate, neighborhood conditions, and parenting were added as time-varying predictors for child depression. The model fit significantly better than the basic model as indicated by a significant likelihood ratio test, $-2\Delta LL = 214.6$, df=5, $p < .001$; the AIC and BIC were lower. The effects of these time-varying predictors accounted for an additional 4.18% (4.42% - .24%) of the total variance in child depression, including 5.21% of the repeated variance and 13.59% of the random linear time slope variance. Results obtained a significant positive effect on child depression of parental depression (β =1.00, $p < .001$) and school climate ($\beta = .27$, $p < .001$), which revealed that higher levels of parental depression and negative school climate were related to higher levels of child depression. Positive parenting was found to be negatively associated with child depression ($\beta = -.22$, $p < .01$), indicating high levels of positive parenting behaviors were related to lower levels of child depression. The family relationship was also negatively related to child depression ($\beta = -.19$, $p < .005$), indicating that greater levels of the low family cohesion and communication indicated low levels of childhood depression. As expected for bivariate correlations shown in Table 4.12, neighborhood conditions did not seem to predict child depression independently.

Model 6b. Adding interaction between positive parenting and other within-person predictors

The addition of interactions (positive parenting * parental depression, positive parenting * family relationship, positive parenting * school climate, and positive parenting * neighborhood conditions) did not improve the model, and all interaction effects were not significant.

Model 7. Final model

The final model was constructed, incorporating all time-varying and time-invariant predictors to control for significant predictors fully, even if some of the predictors were not significant. Because interactions of parenting with some other predictors were not significant, they were not retained in the final model. Overall, the final model (AIC = 4580.8, BIC = 4661.4) had a better fit than the baseline model (AIC = 4850.3, BIC = 4882.6) and were better than any of other models (all p's $< .001$). Relative to the baseline model, the effects of all predictors accounted for an additional 8.23% (8.47% - .24%) of the total variance in child depression. Relative to Model 6a, the proportional reduction in level-2 random intercept variance was pseudo-R2 = .1091, indicating the effects of between-person predictors can explain 10.91% of the variance.

Results indicated that both linear and quadratic polynomials were significant in explaining the growth in child depression ($\beta = .18$, $p < .05$; $\beta = -.05$, $p < .05$), which suggested that child depression significantly increased as children grew up, but this effect was not linear, as evidenced by a significant negative quadratic effect. Figure 4.1.1 illustrated the developmental pattern of change in child depression. In this model, treatment status, child sex, the use of food stamps, and mother education at Wave 1 were not related to child depression. Compared to children of other ethnicities who were treated as the reference group, Mexican Americans had significantly lower levels of depression ($\beta = -.33$, $p < .01$), whereas African-American children did not show significantly different levels of depression. Children living in low-income families (less than $10,000) had higher levels of depression by .26 ($p < .05$), as compared with children living in high-income families (range from $30,000 to $50,000).

In terms of time-varying variables, higher levels of parental depression (β = 99, p < .001) was associated with increased child depression. Positive parenting was also found to be negatively associated with child depression (β = .08, p < .005). However, school climate and family relationship were not associated with child depression (β = .08, p < .10; β = -.05, p < .44), after controlling for other variables. Neighborhood conditions were also not significantly associated with childhood depression (β = .05, p < .34).

Study Two Results

Study Two focused on exploring the effects on child depression of major study variables using Wave 6 to Wave 9 datasets of the SAFE Children project, after the booster group was implemented. The data for this study consists of 363 families in Wave 6, including children and their caregivers.

Descriptive and bivariate results

The descriptive results are presented in Table 4.2.1. At Wave 6, out of 53.7% of children were female, while 46.3% were male. Almost half of the children were African American (41.6%) and Mexican American (49%), followed by others (9.4%), including Anglo-white and others. In terms of intervention status, 45.2% (n=164) of children at Wave 6 were in control group, while 26.7% (n=97) were in treatment group and 28.1% (n=102) were in booster group. Approximately 20.5% of mothers did not complete high school. Regarding family income, about 23.1% of families had less than $10,000, and 53.8% of families had income between $10,000 and $30,000, followed by families with income between 30,000 and $50,000.

In terms of time-varying variables, the means and standard deviation for child depression, positive parenting, family relationship, parental depression, school climate, and neighborhood conditions at Wave 6 (Time 1), Wave 8 (Time 2), and

Wave 9 (Time 3) are illustrated in Table 2.1. Besides, these predictors had some change in trajectories but did not consistently significantly increase or decrease. The trajectories of these predictors are presented in Figure 4.2.1. Pearson correlations between continuous independent variables and child depression were conducted and presented in Table 4.2.2. Positive parenting, family relationship, and parental depression had statistically significant correlations with child depression at the same wave across time. School climate and neighborhood conditions were positively correlated with child depression at wave 8 and 9. Study 2 examined whether treatment status was different with respect to child gender, race/ethnicity, mother education at Wave 6, family income at Wave 6, use of food stamp at Wave 6, child depression, positive parenting, family relationship, parental depression, school climate, and neighborhood conditions. As shown in Table 4.2.1, results showed that treatment and control groups were similar with regard to this demographic information and major predictor variables.

Examining the shape of growth trajectories of child depression over time

The repeated-measures (RM) ANOVA approach was used to determine if child depression changed over time. The mean of child depression at wave 6 was 4.27 (SD = 1.16), the mean at wave 8 was 4.20 (SD = 1.23), and the mean at wave 9 was 4.07 (SD = 1.13). The Mauchly's Test of Sphericity showed a significant difference. Results of the RM ANOVA indicated the significant difference in child depression over time, $F(2, 602) = 2.727$, $p < .05$, showing a small effect size (partial eta square = 0.011), with a power of 62.9%. Results also showed a significant difference between linear time component and child depression, $F(1, 301) = 7.11$, $p < .01$, but a non-significant difference between the quadratic time component and child depression, F

(1, 301) = .08, p = .78. Thus, a quadratic component within individuals was not added to the model to test for the presence of the growth pattern over time.

A series of time-related multilevel models were examined, as shown in Table 4.2.3. The interclass correlation (ICC) of the null model (Model 1) indicated 44.20% of the variance at the between-person level (Level 2) and the remaining 45.80% of the variance arose from personal change across time (Level 1), which suggests that it is valuable to investigate both time-varying and between-person predictors. In Model 2, a linear function of time as a predictor was entered and statistically improved the model, $-2\Delta LL\ (\sim 1) = 8.92$, $p < = .005$, with AIC and BIC in Model 2 less than those in Model 1. Adding a random time effect was not better than Model 2 with fixed linear time. Therefore, only the fixed linear time was included in the subsequent analyses.

Does the time-related slope vary across treatment status?

The average child depression score was plotted for treatment status as a function of time (see Figure 4.2.2). Visual inspection of the plot suggested that three groups decreased from wave 6 to 9. Still, the booster group decreased in the shape of the developmental pattern in a larger part, then the control group, as compared with the treatment group. The booster had lower levels of child depression overall, followed by the control and the treatment group. Also, the control group decreased in a linear shape of trajectory in child depression. As such, it can be summarized that the shape of developmental patterns in depression may occur among children over time. In Model 4, the treatment status was added; this model showed a non-significant improvement. The main effect of treatment status was not significant, $F\ (2, 361) = 2.06$, $p < .13$. However, the booster group seemed to have a lower depression score than the treatment group ($\beta_{booster} = -.26$, $p < .06$). Compared with the booster group, children in the treatment groups had higher levels of depression. No significant

difference between booster and treatment groups was found. Eventually, Model 3 with linear fixed time was adopted as the baseline model for further multilevel analysis.

Results of mixed-effects models

A series of follow-up multilevel analyses were conducted next, and results were shown in Table 4.2.4. Model 3 was taken as a baseline model, and subsequent models were compared against this basic model.

Model 4. Adding time-invariant predictors

Due to a large missing value in mother education at Wave 6, family income at Wave 6, and use of food stamps at Wave 6, only child sex and child ethnicity were added as time-invariant predictors of the intercept. The model fit significantly better than the baseline model as indicated by a significant likelihood ratio test, $-2\Delta LL$ (~3) = 24.4, $p < .001$; the AIC and BIC were lower. Also, relative to the baseline model, the proportional reduction in level-2 random intercept variance was pseudo-R2 = .0948, indicating the effects of between-person predictors can explain approximately 9.48% of the variance. The effects of these between-person predictors accounted for an additional 2.92% (4.20% - 1.28%) of the total variance in child depression. The fixed effects of linear time on the intercept were significant ($p < .005$). Compared to children of another ethnicity who were treated as the reference group, Mexican American children had significantly lower levels of depression ($\beta = -.26$, $p < .05$), whereas African-American children did not show significantly different levels of depression. The booster group was significantly associated with child depression ($\beta = -.26$, $p < .05$), while child sex did not predict the difference in child depression.

Model 5a. Adding time-varying predictors

Parental depression, family relationship, school climate, neighborhood conditions, and parenting were added as time-varying predictors for child depression. The model fit significantly better than the basic model as indicated by a significant likelihood ratio test, $-2\Delta LL$ (~5) = 124.5, $p < .001$; the AIC and BIC were lower. The effects of these time-varying predictors accounted for an additional .68% (1.94% - 1.28%) of the total variance in child depression, including 3.69%% of the repeated variance and 3.47% of the random intercept variance. Results obtained a significant positive effect on child depression of parental depression ($\beta = .38$, $p < .05$), indicating higher levels of parental depression was related to higher levels of child depression. Positive parenting had an emerging trend in the association with child depression ($\beta = -.19$, $p < .06$). Family relationship, school climate, and neighborhood conditions seemed not to be predictive of child depression independently over the years, across waves 6 to 9.

Model 5b. Adding interaction between positive parenting and other within-person predictors

The addition of interactions (positive parenting * parental depression, positive parenting * family relationship, positive parenting * school climate, and positive parenting * neighborhood conditions) did not improve the model, and all interaction effects were not significant.

Model 6. Final model

The final model was constructed, incorporating all time-varying and time-invariant predictors. Interactions of parenting with other time-varying predictors were not retained in the final model. Overall, the final model (AIC = 2872.4, BIC = 2926.9) had a better fit than the baseline model (AIC = 3004.5, BIC = 3028.8) and were better than any of other models (all p's < .001). The ICC for the final model

became 47.42%. Relative to the baseline model, the effects of all predictors accounted for an additional 3.69% (5.97% - 1.28%) of the total variance in child depression. Relative to Model 5a, the proportional reduction in level-2 random intercept variance was pseudo-R^2 = .0912, indicating 9.12% of the variance can be explained by the effects of between-person predictors.

Results indicated that linear time was significant in explaining the growth in child depression (β = -.08, $p < .05$), which suggested that child depression significantly decrease as children grew up from ages 9 to 12. Figure 4.2.1 illustrated the developmental pattern of change in child depression. In this model, the main effect of treatment status was not significant, $F(2, 362) = 1.94$, $p < .15$. However, the booster group seemed to have a lower depression score than the treatment group ($\beta_{booster}$ = -.24, $p < .06$). Compared to children of other ethnicities who were treated as the reference group, Mexican American children had significantly lower levels of depression (β = -.51 $p < .003$), whereas African-American children did not show significantly different levels of depression. Child sex was not related to child depression.

In terms of time-varying variables, higher levels of parental depression (β = .38, $p < .05$) were associated with increased child depression. Positive parenting seemed to be negatively associated with child depression (β = -.19, $p < .07$). However, family relationship, school climate, and neighborhood conditions were not associated with child depression after controlling for other variables.

CHAPTER V: DISCUSSION AND CONCLUSIONS

This study examined the growth pattern of child depression and explored the various-levels predictors of depression among inner-city children over time. Two studies on identifying predictors of child depression over time among inner-city children were conducted. This study advances the understanding of familial and contextual factors: identifying parental depression as the most significant predictor for child depression, recognizing the negative association between positive parenting and child depression, and providing evidence that contextual factors (family relationship, school climate, and neighborhood conditions) as statistically insignificant predictors for child depression over time.

This study identified the trajectory of depression in inner-city children aged 6 to 12 years old. Results demonstrated that the developmental trajectory of child depression was not linear overall, as evidenced by a significant negative quadratic effect from wave 1 to 5; however, decreased from waves 6 to 9. This finding was similar to other studies (e.g., de Lijster et al., 2019). In de Lijster et al. 's study of children at ages 1 ½, 3, 6, and 10, trajectories of depression symptoms were low, increasing, decreasing, and increasing symptoms up to age 6, followed by a decrease to age 10. The possible explanation for increased scores of depressive levels maybe that because children at age 6 typically transition to elementary school and would be expected to comply with strict school rules, follow directions from teachers, learn and focus on schoolwork, spend time with classmates, and be exposed to neighborhoods, they may show more externalizing problems and underreport the internalizing symptoms (Thomas & Guskin, 2001). It is noted that this dissertation study does not

examine the trajectories of individual depressive symptoms in adolescents, but Kouros and Garber (2014) have found that depressive symptoms in this population increased linearly over time. In starting with Study 1, this present study showed no impact on the treatment group whatsoever. The initial intervention did not distinguish the trajectories of child depression between control and treatment groups, but the booster interventions that were added as children entered the fourth grade produced effects that children in the booster group showed lower levels of depression than treatment and control groups. In Tolan et al. (2009)'s study, the booster was revealed to improve child aggression and concentration, with additional benefits for high-risk groups in family organization, child behaviors, and academic achievement.

The multilevel analysis results indicated that child characteristics were not associated with child depression after controlling for other predictors, except for Mexican American and children from low-income families. This study also found that children from low-income families had higher levels of depression than from high-income families, which is consistent with findings from previous studies (Hammack et al., 2004). Relatedly, other studies have reported that the more frequently children were exposed to poverty, the greater was their risk for being depressed (Najman et al., 2010). Children from low-income families may experience deprivation of resources and then may feel inadequate and have low self-esteem that, which in turn, may lead to increased rates of depression.

This present study found that African-American children reported higher levels of depressive symptoms than Mexican-American children, which was contrary to findings from previous studies of adolescent populations. Although few previous studies compare rates of depression between African-American and Mexican young children, it is essential to recognize that young children are more likely to act out

behaviors rather than exhibit internalizing problems, as compared with adolescents. For instance, Cowell et al. (2005) found that many of young Mexican children did not report the most typical symptoms of depression.

Consistent with previous studies, the study findings highlight the evident relationship between parental depression and child depression over time (Cuijpers et al., 2015; Letourneau et al., 2013). In terms of the link between parental depression and child depression, the possible mechanisms could be: elevated coping difficulties (Compas et al., 2010; Dunbar et al., 2013), involvement in negative family interaction cycle (Johnson, 2019; Liu, 2003), increased child-parent interaction (Liu, 2003), perceived lower level of parenting competency (Forehand et al., 2012; Parent et al., 2010), as well as children's perceptions of hopelessness (Garber & Flynn, 2001) due to parental depressive symptoms, which could then lead to the development of depression in the child. To my knowledge, most of the previous studies examined the association between parental depression and childhood depression among majority White samples. The results of this present study that highlight parental depression may contribute to the maintenance of children's depression and thus represent a possible opportunity for preventive interventions in an ethnic minority sample of young children.

In terms of positive parenting and child depression, the findings of this study indicated that higher levels of positive parenting were predictive of lower levels of depression in children aged 6 to 8 but seemed not to be statistically significant in later childhood around 9 to 12 years old ($p < .06$). These findings highlighted the importance of parental support in early childhood and did not confirm the relationship in later childhood. Existing studies have reported inconsistent results for the association between positive parenting and child depression. Some studies insisted on

the negative relationship (e.g., Cupito et al., 2016; DeLay et al., 2013), while others did not find a unique association (Frazer & Fite, 2016).

Meta-analytic studies investigating the relationship between parenting and psychological difficulties in children have contributed to the debate over whether parenting affects children's psychological well-being. Several studies found that parenting accounts for a rather small proportion of variance in internalizing and externalizing problems (McLeod et al., 2007; Rothbaum & Weisz, 1994). These findings ran counter to the common belief that parenting was predictive of the adjustment of psychological difficulties in children (McLeod et al., 2007). McLeod et al. (2007) conducted a meta-analysis of 45 studies examining the relationship between parenting and child depression. The results of this study revealed that parenting explained approximately 8% of the variance in child depression - a relatively small effect size based on Cohen (2013)'s criteria. In other words, some parenting strategies may be sufficient. For example, parental rejection and control played a highly significant role in the development of child depression (Bowlby, 1988; Clark & Ladd, 2000; Garber & Flynn, 2001). Low parental warmth and acceptance may promote a sense of helplessness in children that formulates the basis of negative self-schemas and, in turn, contribute to child depression (Garber & Flynn, 2001). In this way, negative parenting may play a catalytic role among children who are vulnerable to depressive episodes due to other reasons.

However, positive parenting may not play the catalysts among those children if parents only showed warmth abut did not engage much time in their children's life. Positive, supportive parenting could be associated with lower levels of child depression (Brent et al., 2009; Jones et al., 2008), but yet not serve as an influential causal variable directly contributing to child depression. Also, Shamah (2011)

suggested that parenting behaviors should be adjusted across the lifespan of children to accommodate children's developmental changes and needs.

Increased parental warmth may contribute to decreased internalizing problems in young people in the long term (Zhou et al., 2008). Parents would not tell children what not to do, but offer love and support, encourage children to allow to take age-appropriate risks and increase autonomy, help children set goals and solve problems, and support them to manage emotions (Yap et al., 2015). Thus, it is essential to investigate what levels of "parenting" and "involvement" are just right, for who, and at which developmental stage (Yap, Pilkington, Ryan, & Jorm, 2014; Yap, Pilkington, Ryan, Kelly, et al., 2014). We also need to recognize how parents exert appropriate positive parenting over the years, including offering parental support and warmth and parental involvement in childrearing.

Regarding the effect of the family relationship, there were positive correlations between low family cohesion and communication and child depression at each wave. These findings can be reconciled with a large body of cross-sectional research that demonstrates evidence for highlighting the effects of the family relationship on psychological difficulties, including depression (Crawford et al., 2011; Eshbaugh, 2008; Sander & McCarty, 2005; Sheidow et al., 2014). However, the results of multilevel analysis in this present study did not substantiate that family relationship was predictive of change in child depression over time. These findings can be at odds with the notions: (A) enhanced child-parent relationship quality was constantly predictive of child depression (Branje et al., 2010; Moon & Rao, 2010), and (B) interparental relationship functioning moderated the interplay between parental and child depressive symptoms (Papp, 2012). It is noted that, in this present study, without controlling for other between-person variables, low family cohesion

and communication were negatively associated with high levels of child depression, which seemingly contradicted the hypothesis. However, after between-person factors were added, the effect of the family relationship on child depression was flattened. A more likely explanation for consistent findings is the family relationship masked its impact on child depression and which then was counteracted by between-person factors because of the small number of items measuring child depression.

The lack of a significant association between family cohesion and communication and child depression in this present study may be a result of low levels of child depression due to the small number of items measuring child depression. Some children with depressive symptoms in this current study might report positive family support and cohesion, or some children without depressive symptoms might report negative communication, cohesion, and support in the family. Since the small number of items measuring scale and sample size, the relationship between family relationship quality and child depression cannot be captured overall. A larger number of items may allow a statistically significant relationship to be recognized. Besides, some immediate factors would moderate the effects of this association between the quality of the family relationship and child depression, such as the severity of child depression. Said differently, if children showed high levels of depression, poor family functioning would worsen its effect. Conversely, if children are not vulnerable to depressive disorders, poor family functioning would affect their externalizing or other internalizing symptoms rather than depression. However, clinical evidence has substantiated that poor family dysfunction would lead to pathological triangles and then exacerbate depressive symptoms. Increasing parent-child conflict causes stress for children and, subsequently, can result in increased severity of child depression. As such, the effects of the family relationship or

dynamics using multilevel analysis should be further examined to contribute to the existing literature base.

With regard to the link between school climate and child depression, there was a positive correlation between school climate and child depression at wave 5, 8, and 9, which was consistent with prior research (Drew, 2012). In the multilevel analysis, the school climate was not significantly associated with child depression after controlling for other variables. The findings are at odds with other findings: (1) higher perceived teacher support was associated with lower levels of child depression (Drew, 2012; Reddy et al., 2003), (2) higher perceived school connectedness was associated with lower levels of child depression (Drew, 2012; Frydenberg et al., 2009; Shochet et al., 2001), as well as (3) there was a possible relationship between youth-school relationship and adolescent depression (Moon & Rao, 2010). In the existing literature, rather few studies explicitly examined the relationship between school climate and child depression. The possible explanation for inconsistent findings is treatment status and ethnicity may offset the effect of the school climate. Actually, without controlling between-person factors, school climate was predictive of child depression. The alternative explanation for the insignificant relationship in the present study may be a result of a low rate of child depression and a low number of the school climate scale (six items), which would require a larger sample to detect the actual effect in a longitudinal framework. It can be that the larger number of scale items allowed significant results to be captured. According to Drew (2012), alternatively, it may be some dimensions of school climate (i.e., teacher support and school connectedness) are associated with child depression while the impact of other dimensions of school climate may not be as salient to child depression. Although this study did not find a relationship between school climate and child depression over the years, results

suggest future research should examine multiple dimensions of school climate to increase estimating accuracy and further explaining the link between school climate and child depression.

It also should be noted that neighborhood conditions were not a predictor of child depression in this study. This finding was consistent with a study that neighborhood indicators were not associated with childhood depressive symptoms among children aged 8-12 years old (Kemp et al., 2016). However, it seemingly contradicted the results of other existing studies that showed the negative parental perception of neighborhood conditions were predictive of adolescent depressive symptoms (Ford & Rechel, 2012; Richardson et al., 2015). According to the results of the bi-correlate analysis in this present study, the correlations between neighborhood conditions and child depression were not significant across waves 1 through 6 but were significant at waves 8 and 9, with a small size. This study targeted children aged from 6 years to 12 years. Therefore, the possible explanation is the effect of neighborhood conditions on child depression is substantial in adolescence rather than early and middle childhood. Adolescents are more sensitive to and aware of potentially disadvantaged circumstances than young children and then more sensitive to environmental change (Kleinepier & van Ham, 2018). Alternatively, it may be that this study only focused on one dimension of neighborhood conditions (the extent of neighborhood problems), and some neighborhood factors may be associated with child depression, such as the lack of neighborhood support, belongingness, and resources. Existing growing research has revealed pathways to depression in inner-city children were formulated from their perceptions of neighborhood disorders (Curry et al., 2008). High exposure to community problems is associated with higher levels of psychological distress, irrespective of children's race/ethnicity background

(Ceballo et al., 2001; Nebbitt et al., 2011), which may disrupt developmental growth in children (Butler et al., 2012; Margolin & Gordis, 2000). Therefore, it is imperative to continuously explore the effects of neighborhood risk factors on child depression over the years.

It can be concluded that positive parenting is not a significant moderator for the associations between contextual risk factors and the development of depression in inner-city children in this dissertation study. Increased positive parenting may be directly associated with decreased levels of child depression, but it does not act as a protective factor; in other words, it does not change the strength of associations between family risk variables and child depression. Based on family systems theory, difficulties in family interactions arise due to dominant positions and power that interact in the relationship, and attachment needs for belonging become stuck or threatened (Johnson, 2019). If negative interaction pattern, together with underlying emotions, still exists within the family system, family members may be continuously stuck in negative patterns or cycles - diminishing quality of family relationship. This pattern may thus hinder their change even if parents strive for enhancing levels of their positive parenting practice, such as increasing the extent of communication. This present study cannot merely sum up that positive parenting is not essential in this inner-city families because positive parenting is a powerful predictor for improving the child-parent relationship. Given that the sample families may be potentially fragile, it is necessary to explore how family dynamics mediate the effects of parenting, coupled with contextual risk factors, on child depression among inner-city families over the years.

In general, this study identified significant predictors for child depression (i.e., parental depression and positive parenting, as suggested by Belsky (1984)'s

determinants of parenting model that highlights the importance of parent characteristics. Due to the limitation of secondary data analysis, this present study does not test all risk factors proposed by Bronfenbrenner's theory. This study also did not find the effects on child depression of contextual risk factors over the years, such as low family cohesion and income, negative school climate, and adverse neighborhood conditions. Future research can explore the influences of children's perception of risk contexts and experiences on child depression using a longitudinal repeated-measures framework.

Strengths and Limitations

This study had several strengths. This study used a secondary data set to explore the predictors of child depression at the levels of family, school, and community. The data used in this study were collected as a part of a randomized control trial research design and were analyzed using a multilevel method to examine the developmental trajectory of child depression in the broader context. Multilevel analysis was used to ensure accurate estimations and illustrating longitudinal dynamics for relationships between predictors and child depression over time.

Despite its strengths, a few limitations of the present study warrant attention due to the use of secondary data. First, this study cannot track the progress of the project and supervise or control the quality of project implementation. As such, this study cannot monitor and validate the data used in the analyses. Second, some of the scales did not capture children’s experiences well. For example, child depression was measured by parents’ perceptions of children’s irritability, sadness, and energy. On the one hand, parents with depression or negative psychosocial status would affect their perceptions of children’s depressive symptoms. On the other hand, this scale included limited items, leading to low reliability. This study conducted a factor analysis for the three-item scale,

indicating a unidimensional scale with the appropriate total variances around 40%, which exceeds the minimum variances of 20% recommended by Reckase (1979). The composite reliabilities across most of the waves were over .70. However, measuring multiple dimensions of child depression from children's perspectives would strengthen this study.

Additionally, all measures were self-reported by parents since this study started to survey children aged six years who could not complete the survey at that early age. Single informant data can lead to overestimating the magnitude of effect and inflated association among relevant variables due to shared method variance (Campbell & Fiske, 1959). Future studies can utilize multiple informants and comprehensive confirmatory factor analysis marker techniques to detect and correct method variance and limitations.

Finally, this study targeted low-income families mainly from Chicago's inner-city neighborhoods. The participating families in the study were primarily African-American and Latinx. The generalizability of study results to other families, ethnic groups, and other cultures is limited and should be approached cautiously. In comparison to low-income families from inner-city neighborhoods with families from other neighborhoods in the U.S and other countries, children from different racial and ethnic groups may have different perceptions about how contextual risk factors influence their depressive symptoms. Future research should focus on examining predictors of child depression and how parenting strengthens the child-parent relationship and influences their levels of depression from a broader cultural context.

Implications for Practice

The analysis of relationships among positive parenting, contextual risk factors, and child depression leads to the following implications for future practice and policy. Research has revealed a positive relationship between parental depression and child

depression. As such, parental depression should be assessed in order to provide appropriate services to improve levels of parental involvement with children. It would be challenging for parents to engage in positive parenting practice if service providers were blind to parental depression. Although the low family cohesion and communication experienced within the family by children did not emerge as a predictor, the results of bivariate analyses showed the family relationship – family cohesion and communication - was significantly correlated with child depression for each wave ($p < .05$). Service providers should, nevertheless, consider the impact of family dynamics in order to design and provide appropriate preventive interventions to parents from low-income families.

Given that the SAFE Children project was not designed to serve children with depressive symptoms, family-oriented interventions should focus on improving parents' childrearing knowledge and skills regarding family interaction associated with depression among low-income families, such as harsh parenting and rejection and positive interaction with children. In this study, most low-income families came from African-American and Hispanic groups. Thus, social service practitioners should implement culturally adapted evidence-based practice and consider the cultural discrepancy and competency. It is crucial to develop interventions that target parenting behaviors associated with depression among these special populations, rather than just offer training and collect data for proving the effectiveness of preventive interventions. In this way, these interventions would represent an avenue for future research that may improve the quality of childrearing (Sander & McCarty, 2005).

The results of this study indicated that children from families with less socioeconomic hardship had lower levels of depressive symptoms. For families experiencing high levels of economic hardship, workforce preparedness training should be provided to improve their economic assets. Policies on family asset building and

management can facilitate their capabilities in shielding against financial and economic hardships that are detrimental to children's wellbeing. Parents in this study generally had low educational attainment. It is imperative to create an opportunity regarding the offering of formal or informal education programs for parents as to enhance their parenting competence.

Existing research indicated that many low-income families with multiple cultural backgrounds are referred to therapy to complete the requirements from external institutions and agencies (Boyd-Franklin, 2013; Hodgkinson et al., 2017). They may expect to receive material supports and immediate treatment over therapy services for a certain time. In this way, for those families in need of therapy services, practitioners should develop culturally specific competence, respect the resistance of those families, and employ appropriate therapeutic approaches to address their concerns. Programs to eliminate barriers and improve mental health service accessibility for inner-city families are needed.

Implications for Future Research

Given that this study did not find statistically significant effects on child depression of family relationship, school climate, and neighborhood conditions over time, identifying the impact mechanism of depression in children living in fragile, low-income neighborhoods using the longitudinal repeated-measure research design is highly recommended. On the one hand, the developmental trajectory of child depression can be tracked in a natural context; on the other hand, the proximal and distant predictors of child depression can be recognized across the years. In considering limited existing literature on depression in children living in low-income families, there may be huge variations among children's characteristics and personal challenges they confront in the U.S. It is essential to collect qualitative data using a longitudinal design to understand

their different experiences and recognize most solid, immediate factors associated with childhood depression.

Additional studies can be designed to explore the potential moderators (e.g., family dynamics, parenting efficacy, child resilience) for the association between contextual risk factors and child depression. The results of Study 2 did not confirm the direct effects of positive parenting and family relationship on child depression in later childhood using the data from the SAFE Children project if $p < .05$ was adopted as the standard to report significance. That is not to say strengthening positive parenting and family dynamics is not important. Regarding how to engage parents in effective parenting practice among low-income families in later childhood, more research should be conducted to identify effective paths and interventions to develop effective parenting intervention programs in natural contexts, coupled with considering developmental characteristics of children. A sequential set of studies can develop population-specific, preventive family-based interventions associated with child characteristics, family socioeconomic status, and family dynamics. In this way, these studies can focus on examining effective factors and strategies to increase effective, supportive parenting and thus decrease levels of child depression within the family system. Moreover, future research can observe how the family systems and interaction of change can be against child depression among fragile families.

Conclusion

This study illustrates the growth patterns of child depression, as well as examines whether positive parenting moderates the effect in the association between contextual risk factors and child depression across childhood among fragile inner-city families from children aged 6 to 12. It addresses the research gap in knowledge of the understanding of contextual factors of child depression among low-income families over time.

This study advances knowledge about the role of time-varying factors in children's depression. This knowledge is essential to address inner-city neighborhood issues and reduce health disparities in children living in low-income families. Second, this study increases the understanding of familial and contextual factors: identifying parental depression as a key predictor of child depression, recognizing the positive influence of positive parenting on child depression, and that contextual factors (family relationship, school climate, and neighborhood conditions) have an insignificant role buffering child depression over time. Specific implications for practice and future research were presented to inform practice and research with low-income families and their children.

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Appendix A

Questionnaires and Scales Used

Child age

Mother ages at W1

Target child gender

1 = Male 2 = Female

Treatment Status

0 = Control 1 = Treatment 2 = Booster

Mothers highest education from w1 to w9

1 = under 7 years of school

2 = 7-9years of school

3 = 10-11 yrs of school (some high school)

4 = H.S. grad

5 = one year of college (also business & tech school)

6 = attended college

7 = college grad

8 = professional (MA, Med, MD, PhD)

Fathers highest education

1 = under 7 years of school

2 = 7-9years of school

3 = 10-11 yrs of school (some high school)

4 = H.S. grad

5 = one year of college (also business & tech school)

6 = attended college

7 = college grad

8 = professional (MA, Med, MD, PhD)

Ethnic group which best fits

1 = African American or Black

2 = Mexican American

3 = Puerto Rican American

4 = Anglo-American

5 = other Hispanic

6 = Asian American

7 = Native American

8 = other

Total family income

1 = less than $5,000

2 = $5,000-$9,999

3 = $10,000-$14,000

4 = $15,000-$19,999

5 = $20,000-$24,000

6 = $25,000-$29,000

7 = $30,000-$39,000

8 = $40,000-$49,000

9 = more than $50,000

Food stamps - member of household received in past year

0 = No 1=Yes

Child depression scale

p#poc040	is irritable	1 = Never / almost never 2 = Sometimes 3 = Often 4 = Almost always / always
p#poc043	looks sad or down	
p#poc045	Energy	

Parental depression scale (Beck Depression Inventory)

p#bdi001	feel sad	0 = I do not feel sad. 1 = I feel sad. 2 = I am sad all the time and I can't snap out of it. 3 = I am so sad or unhappy that I can't stand it.
p#bdi002	discouraged about the future	0 = I am not particularly discouraged about the future. 1 = I feel discouraged about the future. 2 = I feel I have nothing to look forward to. 3 = I feel that the future is hopeless and that things cannot improve.
p#bdi003	failure	0 = I do not feel like a failure. 1 = I feel I have failed more than the average person.

		2 = As I look back on my life, all I can see is a lot of failure. 3 = I feel I am a complete failure as a person.
p#bdi004	get satisfaction out of things	0 = I get as much satisfaction out of things as I used to. 1 = I don't enjoy things the way I used to. 2 = I don't get real satisfaction out of anything anymore. 3 = I am dissatisfied or bored with everything.
p#bdi005	feel guilty	0 = I don't feel particularly guilty. 1 = I feel guilt a good part of the time. 2 = I feel quite guilty most of the time. 3 = I feel quite guilty all of the time.
p#bdi006	feel punished	0 = I don't feel I am being punished. 1 = I feel I may be punished. 2 = I expect to be punished. 3 = I feel I am being punished.
p#bdi007	feel disappointed in myself	0 = I don't feel disappointed in myself. 1 = I am disappointed in myself. 2 = I am disgusted with myself. 3 = I hate myself.
p#bdi008	feel worse than anybody else	0 = I don't feel I am any worse than anybody else. 1 = I am critical of myself for my weaknesses or mistakes. 2 = I blame myself all the time for my faults. 3 = I blame myself for everything bad that happens.
p#bdi009	thoughts of killing myself	0 = I don't have any thoughts of killing myself. 1 = I have thoughts of killing myself, but I would not carry them out. 2 = I would like to kill myself. 3 = I would kill myself if I had a chance.
p#bdi010	cry anymore	0 = I don't cry any more than usual. 1 = I cry more now than I used to. 2 = I cry all the time now. 3 = I used to be able to cry, but now I can't even though I want to.
p#bdi011	get irritated	0 = I am no more irritated now than I ever am. 1 = I get annoyed or irritated more easily than I used to. 2 = I feel irritated all the time now. 3 = I don't get irritated at all by the things that use to irritate me.
p#bdi012	lost interest in people	0 = I have not lost interest in other people. 1 = I am less interested in other people than I used to be.

		2 = I have lost most of my interest in other people. 3 = I have lost all of my interest in other people.
p#bdi013	ability to make decisions	0 = I make decisions about as well as I ever could. 1 = I put off making decisions more than I used to. 2 = I have greater difficulty in making decisions than before. 3 = I can't make decisions at all anymore.
p#bdi014	way I look like	0 = I don't feel I look any worse than I used to. 1 = I am worried that I am looking old or unattractive. 2 = I feel that there are permanent changes in my appearance that make me look unattractive. 3 = I believe that I look ugly.
p#bdi015	can work well as before	0 = I can work about as well as before. 1 = It takes an extra effort to get started at doing something. 2 = I have to push myself very hard to do anything. 3 = I can't do any work at all.
p#bdi016	can sleep well as usual	0 = I can sleep as well as usual. 1 = I don't sleep as well as I used to. 2 = I wake up 1-2 hours earlier than usual and find it hard to go back to sleep. 3 = I wake up several hours earlier than I used to and cannot get back to sleep.
p#bdi017	get more tired than usual	0 = I don't get more tired than usual. 1 = I get tired more easily than I used to. 2 = I get tired from doing almost anything. 3 = I am too tired to do anything.
p#bdi018	my appetite	0 = My appetite is no worse than usual. 1 = My appetite is not as good as it used to be. 2 = My appetite is much worse now. 3 = I have no appetite at all anymore.
p#bdi021	worried about my health than usual	0 = I am no more worried about my health than usual. 1 = I am worried about physical problems such as aches and pains; or upset stomach; or constipation. 2 = I am very worried about physical problems, and it's hard to think of much else. 3 = I am so worried about my physical problems, that I cannot think about anything else.

Family Relationships Scale - measuring low cohesion, low communication, and low support

p#frs001	my family expects too much of me	

p#frs002	my family knows what i mean when i say something	1 = not true 2 = hardly true or sometimes 3 = true a lot of the time 4 = always true or almost always
p#frs003	my family doesnt care about me	
p#frs004	i often dont understand what other family members are saying	
p#frs005	if someone in the family has upset me i keep it to myself	
p#frs006	i have trouble accepting someone elses answer to a family problem	
p#frs008	my family doesnt let me be myself	
p#frs009	my family and i have the same views about what is right and wrong	
p#frs011	i am tired of being blamed for family problems	
p#frs012	i am able to let others in the family know how i really feel	
p#frs013	my family and i have the same views about being successful	
p#frs014	im available when others in the family want to talk to me	
p#frs015	i listen to what other family members have to say even when i disagree	
p#frs017	family members ask each other for help	
p#frs019	family members like to spend free time with each other	
p#frs020	family members feel very close to each other	
p#frs022	we can easily think of things to do together as a family	

Positive Parenting Practices Questionnaire - measuring warmth involvement

p#psd001	when was the last time that you discussed his plans for the coming day	1 = don’t know 2 = more than 1 month ago 3 = within the last month 4 = within the last week 5 = yesterday/today
p#psd002	in past 12 months, discussed plans for the coming day	1 = don’t know 2 = less than a month ago 3 = at least once a month 4 = at least once a week 5 = almost every day
p#psd003	when was the last time you talked with_about what actually done during the day	1 = don’t know 2 = more than 1 month ago

		3 = within the last month 4 = within the last week 5 = yesterday/today
p#psd004	in the past 12 months how often have you talked with_about actually done during the day	1 = don't know 2 = less than a month ago 3 = at least once a month 4 = at least once a week 5 = almost every day
p#psd007	does_help with family fun activities	1 = hardly ever 3 = sometimes 5 = often
p#psd008	does_like to get involved in such family activities	
p#psd009	how often do you have time to listen to_when he wants to talk to you	
p#psd010	do you and_do things together at home	
p#psd011	does_go with members of the family to movies, sports events, or other outings	
p#psd012	how often do you have a friendly talk with _	
p#psd013	does_help you with chores, errands and/or other work	
p#psd014	do you talk with_about how he is doing in school	
p#psd029	give him a wink or a smile	1 = never / almost never 3 = sometimes 5 = almost always/ always
p#psd030	say something nice about it; praise or give approval	
p#psd031	give him a hug, pat on the back, or a kiss for it	
p#psd032	give him some reward for it, like a present, extra money, or something	
p#psd033	give him a special privilege such as staying up late, or doing some special activity	
p#psd034	do something special together, such as going to the movies, to a game	

Parent Report on School Climate

p#scp001	Teachers/staff sensitive to special needs of children	1 = strongly agree 2 = agree 3 = neutral 4 = disagree 5 = strongly disagree
p#scp002	The staff care about students as individuals	
p#scp003	appointments easy with the teachers and principal	
p#scp004	teachers understand parents point of view	
p#scp005	Parents are encouraged to visit for special concerns	
p#scp006	teachers and staff work hard to get parents involved	

CYDS Neighborhood Measure - measuring neighborhood conditions

p#COM013	dirty/unkempt yards are a problem on my block	1 = Strongly agree 2 = Agree 3 = Neither agree or disagree 4 = Disagree 5 = Strongly disagree
p#COM015	vacant lots are a problem on my block	
p#COM016	morning noise is quite irritating on my block	
p#COM017	night noise is quite irritating on my block	
p#COM018	abandoned/boarded-up homes are a problem on my block	
p#COM019	vandalism is a problem in my neighborhood	
p#COM020	burglary is a problem in my neighborhood	
p#COM021	homelessness is a problem in my neighborhood	
p#COM022	gangs are a problem in my neighborhood	
p#COM024	graffiti is a problem in my neighborhood	
p#COM026	drugs are a problem in my neighborhood	
p#COM028	violent crime is a problem in my neighborhood	
p#COM030	crime worsened in my neighborhood in last few years	

Appendix B

Chapter 2 Literature Review Tables

Table 2. 1

Protectors and Risk Factors Relative to Internalizing and Externalizing Problems in Inner-city Youth and Children

Source	**Study Purpose**	**Settings**	**Sample**	**- Sample size - Gender (% F) - Age (M, range) - Race (Total)**	**Data and/or Waves**	**Main Analytical Methods**	**Findings**
Ardelt & Eccles, 2001	Examine the effects of parental efficacy on promotive parenting strategies, children's self-efficacy, and child's academic success.	- inner-city Philadelphia	Inner-city families	- 376 mothers - DNP - 100% F - 252 Black	Cross-sectional Survey with randomized selection	t test, Path model	- Mother's parental efficacy is a stronger predictor of children's self-efficacy and academic success in Black singer-parent households and Black families with a week marriage than in White families or Black families with a strong marriage. - Mothers' promotive strategies are not associated with children's self-efficacy and academic success.
Beyers et al., 2003	Examine associations among neighborhood structure, parenting process, and the development of externalizing behavior.	- Nashville, TN; Knoxville, TN, and Bloomington, IN	Early adolescent	- 440 youths - Age from 11-13 - about 48% F - 15% African	Longitudinal data of the Child Development Project; 2 waves	Hierarchical linear modeling	- Less parental monitoring was associated with more externalizing behavior problems at age 11. - Less positive parental involvement and more unsupervised time spent in the community were associated with increased in externalizing behavior across time.
Bolland et al., 2007	Examine what are the relative levels of risk behavior among African American, Caucasian, and mixed-race adolescents and how race moderate the relationship between hopelessness and risk behavior among adolescents.	13 most impoverished neighborhoods in the Mobile, Alabama Metropolitan Statistical Area	adolescents	- 13448 - M ages 12.6-13.6 - 46.7%-50.6% F - 93.1% African	A longitudinal design with 6 waves	Linear mixed model	Compared to Caucasian or mixed-race adolescents, African American adolescents are less likely to engage in risk behaviors, and that hopelessness has a less important impact on their behaviors.
Bubier et al. 2009	Examine how autonomic functioning moderates the relations between contextual factors and externalizing behavior.	- DNP	Inner-city children and their caregivers	- 57 children - M age for children =10.7 - 50% Female children and 84% bio mothers	A larger research program designed to follow contextually	t-test, regression analysis	- Baseline sympathetic functioning moderated the relations between neighborhood cohesion and externalizing behaviors. - Baseline sympathetic functioning moderated the relations between neighborhood harsh parental behaviors and externalizing behaviors.

				- 4% African American	at-risk children and caregivers over time; 2 waves		
Cooley - Quille et al. 2001	Investigate the emotional and behavioral impacts of exposure to community violence.	- DNP	Inner-city high school students	- 185 students; - M age =15.4 years; - 42% F; - 90% African American)	Cross-sectional survey	t-test, Chi square test, ANCOVA, MANCOVA, correlation, Regression analysis	- Youth with high levels of community violence exposure reported more fears, anxiety, internalizing behavior, and negative life experiences. - No depression and externalizing behavior were observed between high versus low exposure. - Male youth reported higher levels of community violence. - Youth exposed to high levels of community violence had lower baseline heart rates than those with low exposure through watching a montage of media violence. - Community violence exposure predicted posttraumatic stress and separation anxiety symptoms.
Crum et al., 1998	Examine the impact of educational attainment, school dropout and early school adaptation on the development of alcohol abuse and dependence in adulthood.	Poor black community in Chicago's southside	a sample consisted of first graders in 1966-77 were interviewed at 1992-93.	- 953 - ages 32-33 - 52.2%F - 100% African	A 25-year prospective study	Logistic regression model	- Early predictions of an alcohol use disorder in adulthood included early reports of underachievement in the first grade, dropping out of high school, whether the family set definite rules about school during adolescent, and how often the adolescent worked on homework with his/her family.
Dubow et al., 1997	Examine the contribution of life stressors, neighborhood disadvantage, and resources to inner-city children's adjustment	- a midsize Midwestern city	Inner-city children (4th, 5th and 6th graders)	- 315 - M age=10.93 - 52% F - 46% African American	Cross-sectional Survey	Correlations; Hierarchical regression analysis	- Unique contributions of stress events and neighborhood disadvantage to predicting antisocial behavior. - Higher levels of self-worth and family support were related to lower levels of antisocial behavior. - Higher level of peer support was related to higher levels of antisocial behavior. - Family support buffered the relation between stressful events and antisocial behavior. - Peer support exacerbated the effect of stressors on behavioral maladjustment.
Dubow et al. 2001	Assess the contributions of variables to positive expectation for the future	- a midsize Midwestern city	Inner-city children	- 95 - grader 6 through 8 - 59% F - 27% African American; 13% Hispanic.	Pregnancy prevention intervention study; two time points	Correlations; Hierarchical regression analysis	- Higher levels of positive expectations for the future were related to lower levels of problem behaviors and peer negative influences, as well as higher levels of school involvement, internal resources, and social support. - Higher levels of Time 1 problem behaviors and peer negative influences predicted decreases over 9 months in positive expectations for the future. - Higher levels of family support and problem-solving efficacy predicted increases in positive expectation.
Edlynn et al. 2008	Examine types of coping as either protective or vulnerability factors for	inner-city public	inner-city school sixth graders	- 240 - DNP - 60% F	A part of a larger study using	Hierarchical multiple	- Avoidant coping interacted with exposure to violence to predict reduction in anxiety. - Approach coping was unrelated to anxiety.

	youth exposed to community violence.	school in Chicago		- 100% African American	experience sampling method; at time 1.	regression analysis	
Florsheim et al. (1998)	Examine if and how differences in the function of single-mother and two-parent families relate to the occurrence of boys' behavioral problems.	Chicago Public school system.	Inner-city boys	- 195 families - M age was 12.5; Ages 10 - 15 - 0% girls; - 122 African American; 73 Latino families.	A cross-sectional study of inner-city minority boys;	Chi-square test, MANOVA, Hierarchical multiple regression analysis	- multiple family risk factors contribute to the occurrence of behavior problems. - Most family risk factors were generalizable to both single-mother and two-parent families. -Boys in single-mother were at greater risk for developing behavior problems than boys in two-parent families. - the risks associated with single mother were offset by structured family environment, effective disciplinary strategy, and positive involvement of a male family member. - no all differences in the functioning of single-mother and two-parent families were associated with problem behavior.
Gorman-Smith & Tolan, 1998	Examine the relations between exposure to violence, family relationship characteristics and parenting practices, and aggression and depression symptoms.	Economically disadvantaged inner-city neighborhoods in Chicago	inner-city boys from the fifth and seventh grade classrooms in 17 Chicago public schools.	- 245 boys and caregivers - DNP - 0% girls - 100% African-American and Latino	Data from a longitudinal study of Chicago Youth Development; 2 waves	Correlations; Hierarchical regression analysis	- Family relationship and parenting characteristics could not predict rates of exposure to violence. - Exposure to community violence was related to increases in aggressive behavior and depression over a 1-year.
Gorman-Smith, Tolan, & Huesmann, 1996	Examine the relationship between family influences and participation in violent and nonviolent delinquent behaviors.	Economically disadvantaged inner-city neighborhoods in Chicago	inner-city boys from the fifth and seventh grade classrooms in 17 Chicago public schools.	- 362 - 0% - 100% African American and Latino	Data from a longitudinal study of Chicago Youth Development; 1 wave	Chi-square test, Analysis of variance, correlations, Multivariate analysis of variance, factor analysis	- Families in the violent delinquent group reported poorer discipline, less cohesion and less involvement than the nonoffenders and nonviolent offender groups.
Gorman-Smith et al., 2004	Examine the risk of exposure to community violence in relation to violence perpetration and the role that family functioning plays in moderating the risk.	17 Chicago public school located in poor communities in Chicago	African American and Latino male youth living in inner-city neighborhoods	- 263 - Ages 11-15 at the first wave - 0% F - 100% African American and Latino	A longitudinal Chicago Youth Development study; six waves	Simultaneous linear model and logistic regression model	- Youth from struggling families (poor parenting practices and low levels of emotional cohesion) were more likely to be exposed to community violence. - There was a relation between violence exposure and violence perpetration. - Youth exposed to higher community violence but living in well-functioned families perpetrated less violence than similarly exposed youth from less well-functioning families.

Hammack et al., 2004	Assess whether social support factors as moderators for the relationship between community violence exposure and internalizing symptoms over time.	Six public school in inner-city Chicago	Inner-city public school African American six graders	- 196 - DNP - DNP - 100% African American	A longitudinal data with the use of surveys and experience sampling method; 2 waves	Correlations, Hierarchical multiple regression analyses	- Social support moderated the relation between the risk factors and outcomes. - Protective-stabilizing effects occurred more for witnessing violence, whereas promotive-reactive patterns occurred more for victimization.
Harris et al. 2017	Assess bidirectional relationships among supportive parenting, negative parenting, and deviance.	High-poverty neighborhoods in the city of Mobile and the neighboring town of Prichard, Alabama	Poor, inner-city African American youth	- 5, 325 - age 11-19 - 48.5% females - 100% African American	A Mobile Youth Survey over 4 years; four waves	Cross-lagged path analysis	- Significant bidirectional paths among parenting process (knowledge and permissiveness) and deviance over time.
Hoglund et al., 2015	Examine directional associations between parent involvement in schooling and child adjustment.	18 inner-city elementary schools located in a large metropolitan city in northeastern United States	A low-income, racially/ethnically diverse children (3th and 4th graders) and their parents	- 941 children - M age for children=8.16, and M age for parents=35.28 - 50,1% girls and 83.9% mothers. - 39.6% Black/African American, 47.6% Hispanic/Latino	A 3-year school-randomized evaluation of a universal, school-wide social-emotional and academic learning program; 3 waves	Discrete-time autoregressive, cross-lagged regression models	- Parent showed higher prospective levels of homework assistance and home-school conferencing but lower levels of school-based support. - Academic competence and aggressive behaviors consistently mediately the effects of economic hardship on prospective parent involvement.
Jones et al., 2002	Examine whether maternal optimism is related to positive parenting and child adjustment and whether it contributes beyond maternal depressive symptoms to our understanding.	Inner-city New Orleans	African American single mothers and one of their children	- 141 pairs - M age for mother=35.85, M age for child=11.60 - 49% girls - 100% African American	A longitudinal data; two waves	Correlations and hierarchical regression analysis	- Maternal optimism was associated with positive parenting and this association was only partially mediated by maternal depressive symptoms. - Maternal optimism was not associated with child psychosocial adjustment, but positive parenting was associated with lower levels of both internalizing and externalizing difficulties.
Jones et al., 2008	Examine the association between parenting behaviors and major child outcomes.	DNP	Inner-city African American mothers and their school age children	- 196 pairs - M age for child=8.86, M age for mother =32.5 - 54% girls - 100% African	A secondary longitudinal data from the Family Health Project; 2 waves	Hierarchical regression Analysis	- Maternal warmth was a stronger predictor of decreases in child aggressive behavior than of decreases in depressive symptoms. - Maternal warmth was a stronger predictor of decreases in depressive behavior than was maternal supervision.

Kliewer & Kung 1998	Examine family moderators of the relation between everyday stressors and behavior problems.	Moderate- to high-violence areas of Richmond, Virginia.	Inner-city children and mothers	- 99 pairs - M age for child=10.7, ages 8-12; M age for mother = 35.37. - 59.50% girls - 96% African American	A part of a larger study assessing the effects of community violence on school-age youth.	Correlational analysis, hierarchical multiple regression analysis	- Higher levels of cohesion and routines attenuated the relation between hassles and both internalizing and externalizing problem behaviors. - High family conflict exacerbated the risk for adjustment difficulties. - For externalizing behavior, higher levels of family adaptability protected children from the impact of daily hassles. - Social support from the mother did not moderate the hassle-adjustment association.
kliewer & Kung 1998	Explore protective factors that moderate relations between community violence exposure and subsequent internalizing and externalizing adjustment problems.	high-violence areas of a mid-sized southeastern city	African American female caregivers and one of their children	- 101 pairs - M age for child=11.14, age 9-13 - 45% girls, 89% mothers. - 100% African	A two times survey; 2 waves	Regression analysis	- Child emotion regulation skill, felt acceptance from caregiver, observed quality of caregiver-child interaction, and caregiver regulation of emotion each were protective. - But the pattern of protection differed across level of the child's ecology and from of adjustment.
Krenichyn et al., 2001	Examine parent as moderator for relations between children's exposure to violence and child outcome.	8 public housing developments clustered in New York City's East Harlem neighborhood	Inner-city children and parents or caregivers	- 40 pairs - Child age 7-12. - 47.5% girls, 100% F for parents or caregivers - 60% African	Cross-sectional survey	Stepwise regression analysis, a series of simultaneous regression analysis	- Community violence exposure related to distress, posttraumatic symptomology, and incompetence. - Harsh parenting related to aggression, distress, incompetence, and higher heart rates. - Parenting moderated but did not mediate the effects of violence on competence. - High violence and harsh parenting predicted lower level of systolic and diastolic blood pressure.
Lagana 2004	examine protective factors (peer support, adult support, family cohesion, family adaptability, satisfaction with family cohesion, and satisfaction with family adaptability) for inner-city adolescent at risk of school dropout.	an Inner-city high school in Baltimore.	Inner-city adolescents at risk of school dropout	- 194 - DNP - DNP - 100% African	A cross-sectional survey.	Discriminant function analysis	Family cohesion, adult support, and peer support were predictors of group membership (low risk, medium risk, and high risk).
Leadbeater & Bishop, 1994	Examine predictors of behavior problems in preschool children of adolescent mothers.	DNP	Preschool children of Inner-city Afro-American and Puerto Rican Adolescent mothers	- 120 pairs - Mean adolescent mother=17.1 (age 13-19) - 100% F - 56.6% Afro-American	- A longitudinal data; five times	Correlations and hierarchical regression analysis	- Significant correlations were found between child behavior scores and maternal depressive symptoms, social supports, and life stress. - Maternal depressive symptoms, residence with the adolescent's mother, and perceived emotional support from friends contributed most to child behavior problems. - African American mothers of male children reported more behavioral problems.

Madden-Derdich et al., 2002	Explore youths' and parents' perceptions of family interaction process as well as the broader social and cultural factors that influence family functioning.	Department for youth treatment and rehabilitation.	A multiethnic sample of inner-city families with delinquent youth.	- 61 male youth and 33 parents - M age for youth=15.76 (age 13-18), M age for parents ranged from 39.37-68.5 - 0% girls, 27 mothers - 54% Hispanic, 10% African	In-depth interviews	Qualitative data analyses	- Family interaction processes (communication and conflict resolution patterns, parent-child relationship quality, and parenting practices) was related to problematic and delinquent behavior in youths. - Parents were more focused on altering the child's behavior, but children emphasized the need to alter interaction processes and behaviors within the immediate family system (e.g., conflict, parent-child relationships, alcohol and drug use). - Youth participants identified family-related issues (poor communication, interpersonal conflict, a lack of parental concerns, and drug use) as the primary factors that precluded positive changed, but parents were most likely to identify child-related behaviors and characteristics as preventing positive change.
McKay et al., 2003	Examine relations between at-school parental involvement and at-home involvement and contextual variables as mediators for the relationship between at-home and at-school parent involvement.	an inner-city community of a large Mid-western city characterized by poverty and low-rise federally subsidized housing	Parents of Inner-city African American youth who attended an inner-city Kindergarten through 8th grade.	- 161 parents and 18 teachers - DNP - DNP - 100% African parents and 11 African teachers	Cross-sectional Survey	Bivariate correlational analysis, multiple regression, MANOVA	- Parental reports of racism awareness and contact with school staff were correlated with parent reports of at-home and at-school involvement. - Parent reports of social support were related to at-home involvement only. - Parents reported more formal contacts with school staff and higher levels of racism awareness, religiosity and African American cultural pride, relative to teacher reports. - Teachers and parents agreed on school climate and parental levels of at-home and at-school involvement.
McKay et al., 2005	Identify the mental health needs of urban youth, examine the relationship between child mental health needs and trauma exposure, and examine the mental health service involvement of these children.	An inner-city child mental health clinic	Inner-city youth	- 95 - ages 3-17 - 40% F - 87.4% African	A single-group, cross-sectional study	Bivariate correlations, multiple regression model	- Youth presented with multiple mental health issues related to individual functioning and interaction with family. - Trauma exposure was significantly correlated with the number of mental health issues. - Trauma exposure was significantly explained by family-level mental health issues and stressors and age of the child. - low rates of ongoing service involvement despite multiple, complex presenting mental health issues and significant levels of trauma exposure.
Mersky et al., 2009	Examine associations between individual, family and extrafamilial factors and the likelihood of subsequent childhood and adolescent maltreatment.	Inner-city Chicago	minority children from low-income families.	- 1411 - Ages 6-17 - 50.2% - 93.1% Black,	Longitudinal study	Probit regressions	- Maternal age at the child's birth was a robust predictor of maltreatment outcomes. - Receipt of public assistance and single-parent family status were associated with neglect. - Parent participation in school was negatively associated with most maltreatment outcomes. - Participation in Chicago Child-Parent Center program was negatively associated with maltreatment.
Myers et al., 1992	Examine the contributions of maternal psychological distress, family stress load,	the predominantly black and	Inner-city Black primary-	- 411 pairs - M age=6.3 (ages 6-8), M age	A longitudinal study of a culturally	Zero-order correlations,	- Maternal psychological distress and high family stress load were associated with high child behavior problems. - Family coping strategies offered no protection against risk,

	maternal and family risk factors, and family coping strategies in predicting behavior problems.	Hispanic inner-city community of South-central Los Angeles	grade children and mothers	for mother=30.26 (ages 20-54) - 54.74 girls, 100% mothers - 100% Black	adapted parent-training program; 3 waves	hierarchical regressions	while coping with life difficulties by reframing them was detrimental to child behavioral adjustment. - Active help-seeking strategies (i.e., family mobilization, acquiring social support) served to moderate the effects of maternal psychological distress and family risk attributes for boys, but exacerbated the effects dysfunctional maternal social and psychiatric histories for girls.
O'Donnell et al., 2009	Examine relationships between parenting status and multiple forms of violence perpetration	3 high-poverty middle schools in New York city	Inner-city young adults in high-poverty environments.	- 990 - Mean ages 23-23.4 - DNP - About 75% Non-Hispanic Black, About 15% Hispanic	A cross-sectional study using second wave of a longitudinal data (Reach for Health study)	Bivariate analysis and logistic regression analysis	- Parenting did not reduce young adults' perpetration of violence. - Among young men, parenting was associated with violence toward themselves but not with violence toward partners or others. - Among young women, violence perpetration did not differ by parenting status. - Community violence was associated with violence toward others for both genders. - For young men, community violence was associated with violence toward partners.
Outley et al., 2002	Gain insight into how parenting strategies affect African-American children's leisure experiences.	Third Ward of Houston, Texas.	African-American children in the socially isolated urban neighborhoods	- 43 - ages 10-12 - DNP - 100% African	An interviewing survey with purposive sampling over a 14-month period	Qualitative data analyses	- Four themes regarding parenting strategies: utilization of kinship networks, serving as arrangers of leisure activities, isolation and confinement, and chaperonage. - These parenting strategies allowed children to participate in mainstream leisure activities, despite risks presenting in their neighborhood. - Parental restrictions on children's social interactions with peers and others perceived to be undesirable curtailed the range of leisure for some children.
Salzinger et al., 2006	Explore how family and household context, parenting, peer relations, and children's characteristics contribute to risk for exposure to community violence for early adolescents.	32 school districts in New York City	Early adolescents living in high-risk neighborhoods.	- 667 - Ages 11-14 - 49.78% F - 65% Hispanic, 32% Black.	A longitudinal design; two waves	Structural model	- Family and household context, negative parenting, deviant behavior of friends, and the children's own behavioral characteristics and cognition contributed to the children's risk for exposure 1 year later. - Deviant behavior of friends and the children' s own behavior and cognition were found to mediate the effects of stressful family and household context and negative parenting on later risk for exposure.
Salzinger et al., 2008	Examine the role of aggression in adaptation to family and community violence.	32 school districts in New York City	Early adolescents living in high-risk neighborhoods.	- 667 - Ages 11-14 - 49.78% F - 65% Hispanic, 32% Black.	A longitudinal design; 3 waves.	Linear regression model	- The association between Year 1 exposure to family and community violence and Year 2 aggression was mediated by aggression occurring contemporaneously with Year 1 exposure. - Cognitive justification of aggression and friend's delinquency made small independent contributions to prediction of Year 2 aggression, delinquency, and externalizing behavior. - Year 2 aggression mediated the association between Year 1 community violence victimization and Year 3 negative adaptation (internalizing problems, anxiety, and depression).. - Year 2 aggression mediated the negative association between

							Year 1 witnessing community violence and Year 3 positive adaptation (self-esteem). - Cognitive justification of aggression and friends' delinquency made independent contributions to Year 3 negative adaption.
Sheidow et al., 2001	Investigate the relation between neighborhood and violence exposure and between family functioning and risk for exposure to violence.	Poor, urban communities in Chicago	Inner-city African American and Latino males	- 249 - ages 13-17 - 0% F - 66% African American and 34% Latino	A secondary data from A longitudinal Chicago Youth Development Study	ANCOVA	- The interaction between family functioning and neighborhood type accounted for increased exposure to violence.
Smokowski et al., 2004	Examine longitudinal relationships among childhood risk and protective factors and late adolescents' outcomes.	the most impoverished areas in Chicago	Impoverished inner-city youth from birth to young adulthood	- 1539 - Birth to age 17 - 93% African, 7% Latino or other	A Chicago Longitudinal Study	Multivariate negative binomial and logistic regression analyses	- Cumulative family risk from birth to age 12 predicted increases in juvenile court petitions and decreases in high school or GED completion. - Early childhood intervention in preschool had the widest ranging protective effects on academic, social, and mental health outcomes. - The probability of high school or GED completion was significantly increased by preschool intervention, by parent(s) participating in the child's early elementary school s, by satisfactory elementary school grades, and by the child's ability to be task oriented. - Preschool intervention, peer social skills, early classroom adjustment, and shy or anxious behavior in middle school were protective factors against adolescent depression while being female and having higher grades in early elementary school were associated with higher rates of adolescent depression.
Spano et al. 2006	Examine the impact of timing of violence exposure on violent behavior.	12 high poverty inner-city neighborhoods in Mobile, Alabama	Inner-city African American youth	- 360-1294 - Ages 9-19 - DNR - 100% African	A longitudinal study called the Mobile Youth Survey; five waves	Poisson regression	More proximal exposure to violence has a larger impact on violent behavior.
Tolan et al., 2002	Evaluate patterns of coping in relation to psychopathology symptoms.	Lower socioeconomic neighborhoods of two large cities in the Midwest	Inner-city youth	- 372 - ages 12-15 - 46.59% F - 67% African, 24.4% Hispanic	A longitudinal data; two waves	Factor analysis, cluster analysis, general linear models	- Coping styles were related to demographic characteristics and stress levels. - Controlling for demographic characteristics and stress levels, coping style related to internalizing and externalizing symptom levels. - Age, ethnicity, and gender did not interact with coping in predicting symptoms.
Vazsonyi et al., 2006	Examine the protective effects of parenting processes on adolescent adjustment (health-	In the high-poverty, urban neighborhoo	HIgh0risk, inner-city, poor African	- 2867 - Ages 10-19 - 48.9% F - 100% African	A longitudinal Mobile Youth Survey; three waves	Multigroup SEM	- Parenting processes played a crucial role in this dangerous developmental milieu. - No difference of these effects across groups.

	compromising and violent behaviors)	ds in the Mobile metropolitan area	American youth				
Weist et al., 2001	Examine demographic variables and risk factors to predict exposure to community violence.	Inner-city Baltimore	High school students referred for mental health care	- 217 - DNP - 51.61% F - 75.12% African	A 2-year survey	Correlations and hierarchical regression models	- parental substance use, number of people in the home, out-of-home placements, grades repeated, arrest history, and total life stress were more predictors of violence exposure than demographic characteristics. - Life stress was the most consistent predictor of violence exposure.
Youngstrom (2003)	Examine relationships between violence exposure, protective factors and behavioral problems.	Clinical sites	Inner-city youth	- 320 - M age=14.7, ages 10-18 - 48.8% F - 72.4% lack	Cross-sectional data	Correlation, regression analysis, hierarchical regression model	- All forms of violence exposure were corelated with internalizing and externalizing behavioral problems for males and females. - Violence exposure predicted behavioral problems after controlling for the effects of other risk, demographic and protective factors. - Family support and self-concept moderated the influence of life stress and cumulative risk on behavioral problems, but they did not moderate violence exposure.

Notes: A - study purpose, sample descriptions, and findings are extracted directly and with minor editorial modification from original reports.
B - Findings column summarizes study findings directly related to this study.
C - DNR = Did not report.

Table 2. 2

Intervention Programs Table for Inner-City Children and Youth

Source	**Intervention Program**	**- Study Design - Population**	**Intervention**	**- Sample size - Gender (% F) - Race (Total) - Age**	**Comparison**	**- Sample size - Gender (% F) - Race (Total) - Age**	**Post-test and/or Follow up**	**Data Analysis**	**Findings**
August et al. (2003)	Early Riser "Skills for Success" program for aggressive children	- RCT - Aggressive children living in culturally diverse inner-city neighborhoods	One group attending CORE+FLEX models; one group attending Core-only model	- 107 for core-only, and 111 for core+flex - M age = 6.32 for core-only, and M age = 6.30 for other - 44% F for core-only, and 41% for other - 82% F African for core-only, and 86% for the other	No intervention group	- 109 for control - M age = 6.29 - 45% F - 80% African	N/A	t-test, ANOVA, mixed regression model	- Both programs children showed gains on measures of school adjustment and social competence. - The most aggressive children attending program showed reduction in disruptive behavior. - Program parents reported reduced levels of stress.
Botvin et al., 1997	School-based drug abuse prevention	- pre-post test - Inner-city minority youth in urban schools in New York	Attending 15-session psychosocial prevention program, or Attending program normally provided in the control schools	- 721 for treatment and group groups - M age = 12.6 (11-15) - 53% F - 25.8% African-American, 69.6% Hispanic	See intervention	see intervention	post test with same sample	General linear model	- Students who received the psychosocial (CBT) intervention had lower normative expectations concerning the various drugs (cigarettes, alcohol, marijuana, cocaine, and other drugs) than student in control group. - CBT approach was effective on several behavioral measures of current drug use.
Campbell et al., 2005	Philadelphia Inclusion Network Training program to improve the quality of child care for all children over a 5-year time span	- pre-post test - program staff	Caregivers participated in 1 of 15 courses combined with 3 onsite-consultation visits and assignment	- 183 staffs for first beginnings group 169 staffs for preschool group - DNP - DNP - DNP	N/A	N/A	Post-test with same sample	t-test	- Quality of care of care increased in infant-toddler and preschool classrooms. - Caregivers' interactions with children were characterized as neither punitive nor detached.

Dacey et al., 1993	Instruction in Self Control for reducing dropout rate (Boston College Project)	- pre-post test - Inner city Middle school eighth graders in Boston	Attending 12 classes	- 151 - ages 12-15 - 38.41% F - 26.49% African	N/A	N/A	two years after completion of these lessons.	Chi Square test	The dropout rate of participants was found to be 14% less than the average rate of 23% for Boston's tenth graders.
Dubow et al. 2001	Pregnancy prevention intervention study	- two-times assessment - Inner-city children	Attending the program twice a week during the year and covered topics such as self-esteem, decision making, goal setting, and growth and development of love and intimacy.	- 95 - grader 6 through 8 - 59% F - 27% African American; 13% Hispanic.	N/A	N/A	Post-test with same sample	Correlations; Hierarchical regression analysis	- Higher levels of positive expectations for the future were related to lower levels of problem behaviors and peer negative influences, as well as higher levels of school involvement, internal resources, and social support. - Higher levels of Time 1 problem behaviors and peer negative influences predicted decreases over 9 months in positive expectations for the future. - Higher levels of family support and problem-solving efficacy predicted increases in positive expectation.
Ginsburg et al., 2012	Treating anxiety disorders in Inner-city schools	- RCT - Inner-city school youth	Attending cognitive-behavioral treatment delivered by novice CBT clinicians	- 17 - M age = 11.12 - 70.6% F - 87.5% African	usual care	- 15 - M age = 9.33 - 53.3% F - 86.7% African	One-month follow-up with same sample	ANCOVA, logistic regression	- Youth showed improvement over times -
Hayward tal., 2011	The Educating Kids Against Gun Violence (EKG)	- Pre and post test - Indianapolis urban inner-city youth	Watch short video clips and interactive presentations	- 130 - Ages 10-19 - 34% - 59% African	N/A	N/A	Post-test with same sample	Wilcoxon signed-rank test	The program had positive short-term impacts on youth knowledge of legal and medical consequences and attitudes regarding gun violence.
Hines et al., 1998	SANKOFA, a culturally-specific program designed to reduce the prevalence of violent behaviors and related injuries and deaths	- Quasi-experimental, repeated measure research design. - Inner-city adolescents	Violence prevention graining	- 309 - ages 15-21 - 30% F - 83% African, 8% Latino/Hispanic	N/A	N/A	Post-test with same sample	Repeated measure MANOVA, discriminant function	- Participants improved significantly in self-control of aggressive impulse, perpetrated harm, witness to violence across time. - Obtained reduction in violent behavior with intervention sample is at least partly attributable to self-control, belief in ability to avoid violence, and frequency of carrying weapons. Plath et al.,

	among African American teens.								
Lever et al., 2004	Futures program: a school-based drop-out prevention program	- Control trial - high-risk inner-city youth	Obtained four or more times services from mental health clinician	- 106 - 9th grader - DNP - DNP	no treatment	- 165 -- 9th grader - DNP - DNP	N/A	MANOVAs	The program achieved success in obtaining drop-out rates lower than the average drop-out rates for their respective schools.
Sclare et al., 2015	CBT workshops for anxiety and depression in inner-city youth	- Pre-post test - inner-city youth	Attending 6-hour CBT workshop	- 31 - M age - 16.7 - 64% F - Predominantly black and minority ethnic groups	N/A	N/A	Post-test with same sample size	paired sample t-tests	Improvement were observed in self-reported anxiety, depression, and self-esteem at 12-week follow up.
Sklarew et al., 2002	A school-based mourning project - a preventive intervention in the cycle of inner-city violence	- Pre-post test - inner-city school children with multiple losses and trauma	Attending the intervention	DNP	N/A	N/A	DNP	DNP	Program promoted mourning work and indicated the effectiveness of intervention
Stevens 1999	Growing Up: Learning to Make Choices - a culturally sensitive intervention curriculum for pregnancy prevention.	- DNP - at-risk black adolescent females in Boston	Attending a 10-week culturally sensitive intensive curriculum	- DNP - 11-14 - 100% - 100% Black	DNP	DNP	DNP	DNP	This study mainly describes the collaborative research process.
Tolan & McKay (1996)	A family intervention program for preventing antisocial behavior in inner-city children.	- DNP - inner-city children with antisocial behavior	Attending a 22-week family intervention program	- 327 - grader 2, 3 & 5 - 50.2% - 40.9% African, 37.6% Latino	DNP	DNP	DNP	DNP	This is a program description.

Warren et al., 2006	Families and schools together (FAST) - a group treatment includes parental participation, and Family Education (FAME), an intervention that parents received a set of child-rearing manuals.	- Randomized Treatment Trial - Inner-city elementary school students with aggressive and delinquent behaviors and families	Attending FAST and Attending Fame	- DNP - Grader 1 through 4 - 56% F - 45% African, 38% Latino	See intervention	See intervention	one-year follow-up	Localized regression	- The mode tis those children assigned to FAST less well. - Children who participated in FAME significantly better than those who participated in FAST.
Weissberg et al., 1981	A social-problem-solving training program	- Pre-post test with control design - Suburban and inner-city third-grade children	Attending a 52-lesson training program	- 122, 89 suburban and 33 urban children - DNP - DNP - DNP	No intervention	- 121, 82 suburban and 38 urban children - DNP - DNP - DNP	post design	MANOVA, ANOVA Factorial design, Correlations	- Program children improved more than controls on several cognitive skills including problem identification, alternative-solution thinking, and consequential thinking as well as on behavioral problem-solving performance. - The intervention positively affected the adjustment of suburban but not urban youngsters.
Werch et al., 1996	a brief, school-based intervention for preventing alcohol use	- RCT - sixth-seventh, and eighth grade students in Jacksonville, Florida	Were given a self-instructional module and corresponding audiotape, and consultation	- 52 - M age = 13.8 - 26% F - 46% Black	Minimal intervention	- 52 - M age = 13.7 - 30% F - 48% Black	Post-test and follow-up	Chi-square test, ANCOVA	- Intervention students reported less alcohol consumption at follow-up than comparison students.
Werch et al., 2001	Start Taking Alcohol Risks Seriously (STARS) for families: a stage-based alcohol preventive intervention	- RCT - Inner-city middle school students in Jacksonville, Florida	Attending STARS for family program	- 650 for total sample - M age = 12.08 - 50% F - 85% African	Minimal intervention	See intervention	post test	Chi-square test, t test, MANOVAs	- Posttest data showed fewer neighborhood intervention students initiated alcohol use, used alcohol during the past seven-day and thirty-day periods, drank heavily during the past thirty days, and drank over any period of time, compared to control students. - Those with past alcohol consequences who received the

									intervention had less intentions to use alcohol and less frequent use of alcohol.
Zhang et al., 2018	Mother-son Health Promotion Project: a behavioral intervention for increasing mother-son communication about sexual risk reduction	- RCT - Inner-city African American mothers and sons in Philadelphia, PA	Attending a HIV/ST infection risk-reduction intervention	- 252 pairs - M age for mom = 37.7, M age for son = 13.0 - mom and son - 92.9% African American mother and 92.0% African American son	Attending an attention-matched health-promotion control intervention	- 273 pairs - M age for mom = 37.0, M age for son = 12.9 - mom and son - 93.7% African American mother and 93.0% African American son	follow-up postintervention	Generalized estimating equations	- Mothers and son in the intervention group were more likely to communicate about sexual health. - Intervention efficacy was found to weaken over time.

Table 2. 3

Summary of characteristics of research targeting inner-city children

	Survey Studies	Intervention Studies
Publication Year	N=55	N=20
- 2010-2019	3	6
- 2000-2009	37	7
- 1990-1999	15	7
Method	N=55	N=20
- Qualitative method	3	0
- Quantitative method	52	15
- Program Description	0	5
Research Design	N=42	N/A
- Cross-sectional survey	17	N/A
- Longitudinal survey	25	N/A
Main Statistical Analyses	N=52	N=15
- Multilevel Model or Hierarchical Linear Model or Linear Mixed Model	5	1
- Multiple or Hierarchical Regression Model	30	3
- Logistical Regression Model	6	2
- SEM or Path Model	4	0
- ANOVA, T-test, Chi-Square, non-parameter tests, or others	7	10
Gender	N=55	N=15
- Girl-only sample	3	1
- Boy-only sample	7	1
Outcome Variables	N=55	N=15
- Depression	11	1
- Internalizing (including depression)	26	2
- Externalizing	38	12
- Academic performance (school dropout)	4	2
Predictors	N=55	N=15
- Community	32	N/A
- School	1	N/A
- Family	19	N/A
- Parenting	14	0

Table 2. 4

SAFE Children Program Research Outcomes

Citation Info (Author, Year)	Summary of Key Points (include quotes if direct quoting and page numbers)
Fowler et al. 2014	1. The initial intervention for inner-city children entering the first grade produced the positive developmental trajectories for impulsivity and hyperactivity, demonstrating the potential for ADHD prevention in at-risk children. 2. The booster intervention had no additional effect on the change of trajectory in ADHD indicators.
Gorman-Smith et al. 2002	1. The study identified three patterns of involvement in the SAFE Children project: joiners, responders, and minimal responders. 2. Ethnicity, marital status, parental antisocial behavior, economic and loss stressors, monitoring, and child's depression and hyperactivity were significant early predictors of risk for delinquency and drug use among 175 African American and Latino first-grade children and discriminators of three patterns of involvement.
Gorman-Smith et al. 2007	School and Families Educating Children program description
Henry et al. 2012	Technique report
Kim et al. 2014	1. African American students tend to be disadvantaged by both family and neighborhood level factors as compared to Hispanic students. 2. Having a father in the household reduced the risk of having behavioral problems and repeating one or more grades. 3. Fundamental social factors determine a child's family structure and neighborhood environment and a child's school achievement and development. 4. Any household adverse event were associated with the increased chance of repeating a grade. 5. Children living in households with parental substance use or negative involvement with law enforcement may exhibit more behavioral problems. 6. Children attending high performing schools were more likely to have higher math and reading scores. 7. Interventions aiming to improve the quality of school may mediate the negative effects of individual and neighborhood disadvantages on children's school performance.
Kim et al. 2018	1. Address covarying nature of neighborhood, household context, and children's behavioral problems. 2. The within-group fixed effects of time-varying variables model indicated that the level of child's aggression was influenced more by household and neighborhood stable characteristics. 3. The model indicated no significant relationship between having a father in the household and child's aggression. 4. However, the hybrid model with between- and within-group difference in father's absence indicated that the between-individual difference was significantly associated with child's aggression.
Lissuzzo 2005	1. Study 107 low-income, ethnic minority families. 2. There is an association between parental relationship and overall family functioning. Strain between adult caregivers had significant negative relationship to all but one of the parenting and family relationship characteristics.
Miller et al., 2019	1. Neighbor- hood impoverishment, neighborhood social processes, and parental monitoring/supervision were associated with childhood aggression 2 years later. 2. Children residing in neighborhoods with substantial poverty are at greater risk of developing aggressive behavior. 3. Despite the protective benefits of neighborhood social processes and high-quality parenting, neighborhood economic deprivation continues to elevate risk of developing aggressive behavior.
Tolan et al. 2004	1. surveyed 424 families. 2. Linear-growth trends through 6 months after intervention indicated an overall effect of increased academic performance and better parental involvement in school. 3. High-risk families had additional benefits for parental monitoring, child-problem behaviors, and children's social competence. 4. High-risk youth showed improvement in problem behaviors and social competence.
Tolan et al. 2009	The booster led to a relative improvement in child aggression and concentration in school for 196 families, with additional benefit for high-risk groups in academic achievement, behavior, and family organization.

Table 2. 5

Summary of characteristics of research relevant to SAFE children project

	Relevant Studies
Main Statistical Analyses	
- Multilevel Model or Hierarchical Linear Model or Linear Mixed Model	5
- Growth Mixture Modeling	1
- Logistical Regression Model	1
- SEM or Path Model	1
- Discriminant Function Analysis	1
Outcome Variables	
- Depression	0
- Internalizing	0
- Externalizing (including ADHD)	7
- Academic performance (including school dropout)	3
Predictors	
- Community	3
- School	1
- Family	6
- Parenting	4

Appendix C

Chapter 3 Tables

Table 3. 1

Data points with relevant variables included in the data analysis

Studies 1-2			**Waves**						
Constructs - Definition	**Variables**	**Measurement**	**1**	**2**	**4**	**5**	**6**	**8**	**9**
Outcome variable									
Child depression – characterized by a series of symptoms in children.	Child depression	Parent report of child depression using a three-item subscale: including irritability, a lack of energy, and depressed mood.	1	1	1	1	1	1	1
Predictor variables									
Family risk factors - refers to poverty, parental depression, and poor family dynamics.	Parental depression	Parent report of parental depression using BDI	1	1	1	1	1	1	1
	Quality of family relationship	Parent report of family relationship using a combined scale including family cohesion, communication, and support	1	1	1	1	1	1	1
	Family income	Parent report of family annual income	1	-	-	-	-	-	-
	Whether to receive food assistance	Parent report of the use of food stamps	1	-	-	-	-	-	-
School climate – refers to the quality of school climate.	School climate	Parent report of school climate	1	1	1	1	1	1	1
Neighborhood conditions - refers to the residents' neighborhood environment.	Problems of neighborhood	Parent report of extent of neighborhood problems	1	1	1	1	1	1	1
Positive parenting - refers to the process of parental participation in promoting child outcomes.	Positive parenting	Parent report of extent of parental involvement and warmth	1	1	1	1	1	1	1

Appendix D

Chapter 4 Tables and Figures

Table 4.1. 1

Demographics information of the sample at Waves 1-5 (n=424)

Variables	N (%) at Wave 1	Chi-square test for treatment status at Wav
Intervention status		N/A
- Control	199 (46.9%)	
- Treatment	225 (53.1%)	
Child gender		p2 (1) = 1.777, p = .183
- Female	217 (51.2%)	
- Male	207 (48.8%)	
Race/ethnicity		p2 (2) = 5.069, p = .079
- African American	180 (42.5%)	
- Mexican American	201 (47.6%)	
- Others (other Hispanic and Anglo-White)	41 (9.7%)	
Mother education at wave 1		p2 (1) = .177, p = .674
- Didn't finish high school	230 (54.9%)	
- Finish high school or more	189 (45.1%)	
Family income at wave 1		p2 (2) = 4.055, p = .132
- Less than $10,000	149 (35.6%)	
- $10,000 - $30,000	211 (50.4%)	
- $30,000 - $50,000	59 (14.1%)	
Use of food stamp at wave 1		p2 (1) = 2.402, p = .121
- No	263 (62%)	
- Yes	156 (36.8%)	

	Time 1 (wave 1)		Time 2 (wave 2)		Time 3 (wave 4)		Time 4 (wave 5)		t-test for treatment stati
	M	SD	M	SD	M	SD	M	SD	at Wave 1
Child depression	4.09	1.14	4.20	1.07	4.22	1.15	4.14	1.09	T (416) = -1.362, p = .17
Positive parenting	4.30	.53	4.29	.48	4.37	.44	4.35	.44	t (395) = .938, p = .349
Family relationship	1.72	.41	1.66	.35	1.74	.44	1.71	.35	t (416) = .345, p = .731
Parental depression	.13	.05	.11	.22	.16	.27	.13	.27	t (416) = -.338, p = .736
School climate	2.73	1.13	2.02	.67	2.18	.67	2.15	.66	T (416) = -1.213, p = .22
Neighborhood conditions	2.57	.67	2.67	.63	2.69	.68	2.58	.70	t (412) = .5552, p = .581

Table 4.1. 2

Bivariate correlations between child depression and major predictor variables at Waves 1-5 (n=424)

Variables	Reliability				Pearson correlations between predictors and child depression			
	Time 1 (wave 1)	Time 2 (wave 2)	Time 3 (wave 4)	Time 4 (wave 5)	Time 1 (wave 1)	Time 2 (wave 2)	Time 3 (wave 4)	Time 4 (wave 5)
Child depression	.666c	.698c	.719c	.702c	N/A	N/A	N/A	N/A
Positive parenting	.834	.824	.807	.808				
W1					-.06	.16**	.03	.03
W2					-.05	.09	-.09	-.03
W4					.06	-.03	-.09	-.07
W5					-.04	-.05	-.04	-.23***
Family relationship	.738	.707	.731	.751				
W1					.14**	.02	.11*	.02
W2					.07	.29***	.14**	.23***
W4					.02	.11*	.29***	.16**
W5					.01	.04	.15**	.28***
Parental depression	.853	.880	.887	.914				
W1					.30***	.05	.14**	.02
W2					-.02	.17**	.11*	.06
W4					.13*	-.03	.27***	.23***
W5					.08	.21	.17**	.22***
School climate	.950	.905	.878	.871				
W1					-.01	-.22***	-.18***	-.19***
W2					.13*	.10	.06	.05
W4					.06	.16**	.03	.01
W5					.04	.12*	.03	.12*
Neighborhood condition	.848	.860	.878	.889				
W1					.08	.06	.09	.00
W2					-.05	.03	.02	.03
W4					-.02	.04	.06	-.01
W5					.05	-.02	.04	.02

Note: + p<.10; *p<.05; ** p<.01; ***p < .001. c means composite reliability; other values of reliability without c come from internal reliability.

Table 4.1. 3

Multilevel analysis for child depression for treatment status at Waves 1-5 (n=424)

Model Parameters		Model 1: Empty means, random intercept model			Model 2a: Fixed linear time, random intercept model			Model 2b: Random linear time model			Model 3a: Fixed Quadtime, random linear time model		
		Est	***SE***	***P <***	***Est***	***SE***	***P <***	***Est***	***SE***	***P <***	***Est***	***SE***	***P <***
Model for the Means													
β_0	Intercept	4.16	.03	.001	4.13	.05	<.001	4.13	.05	<.001	4.09	.06	<.001
	Repeated measures effects												
β_{18}	Time				.02	.02	.42	.02	.03	<.46	.17	.08	<.05
β_{19}	Time*Time										-.05	.02	<.05
Model for the Variance													
U_0	Random intercept variance	.22	.04	.001	.22	.04	.001	.38	.08	<.001	.39	.08	<.001
	i Pseudo-R^2				.01%						0		
U_1	Linear time slope variance							.07	.02		.07	.02	<.001
	i Pseudo-R^2							66.64%		<.00	0		
U_{01}	Intercept-linear time slope covariance							-.10	.04	1	-.10	.04	<.005
	i Pseudo-R^2	1.08	.04	.001	1.08	.04	.001	.96.	.05	<.01	.95	.05	<.001
e_{ti}	Repeated measure				.05%			11.27%			.58%		
	i Pseudo-R^2				.01%			.04%		<.00	.22%		
	Total R^2									1			
Model fit													
	Number of parameters	3			4			6			7		
	-2LL	4852.4			4851.8			4838.5			4834.5		
	AIC	4858.4			4859.8			4850.5			4848.5		
	BIC	4870.6			4876.0			4874.8			4876.8		

Note: + p<.10; *p<.05;** p<.01; ***p < .001.

Table 4.1. 4

Multilevel analysis for predictors of child depression at Waves 1-5 (n=424)

Model Parameters		Model 4: Unconditional growth model			Model 5: Adding between-person predictors			Model 6a: Adding within-person predictors			Model 6b: Adding interactions			Model 7: Final Model		
		Est	*SE*	*P <*	*Est*	*SE*	*P <*	*Est*	*SE*	*P <*	*Est*	*SE*	*P <*	*Est*	*SE*	*P <*
Model for the Means																
β_0	Intercept	4.10	.06	.001	4.34	.17	.001	4.20	,08	.001	4.21	.08	.001	4.30	.18	.001
	Repeated measures effects															
β_{18}	Time	.17	.08	<.05	.16	.08	<.05	.19	.08	.05	.18	.08	.05	.18	.08	.05
β_{19}	Time*Time	-.05	.02	<.05	-.05	.02	<.05	-.06	.03	.05	-.05	.03	.05	-.05	.03	.05
	Time-invariant factors															
	Treatment status															
β_6	Control	-.03	.07	.64	-.05	.07	.48	-.03	.07	.64	.-.03	.07	.65	-.04	.07	.59
	Child Sex (Ref.=male)															
β_7	Female				-.01	.07	.92							-.01	.07	.98
	Ethnic (Ref.=others)															
β_8	African American				-.09	.12	.47							-.07	.12	.58
β_9	Mexican American				-.36	.12	.003							-.33	.12	.01
	Mother education at wave 1															
β_{10}	Didn't finish high school				-.06	.08	.12							-.08	.08	.34
	Family income at wave 1															
β_{12}	Less than $10,000				.23	.12	.06							.26	.12	.05
β_{13}	$10,000 - $30,000				.05	.10	.60							.08	.10	.44
	Use of food stamp at wave 1															
β_{11}	No				-.14	.09	.12							-.12	.09	.18
	Time-invariant factors															
β_5	Parent depression							1.00	.15	.001	1.01	.15	.001	.99	.15	.001
β_4	Positive Parenting							-.22	.08	.01	-.23	.13	.08	-.23	.08	.005
β_3	Family relationship (cohesion)							-.19	.06	.005	-.19	.06	.005	-.05	.06	.44
β_2	School climate							.27	.07	.001	.27	.07	.001	.13	.08	.10
β_1	Neighborhood conditions							.05	.06	.35	.05	.06	.38	.05	.06	.34
	Interactions															
β_{17}	PP * parent depression										.44	.52	.40			
β_{16}	PP * family relationship										.01	.15	.93			
β_{15}	PP * school climate										.02	.19	.92			
β_{14}	PP * neighborhood condition										.10	.18	.57			
Model for the Variance																
U_0	Random intercept variance	.39	.08	<.001	.35	.08	.001	.43	.08	.001	.44	.09	.001	.39	.08	.001
	ΔPseudo-R^2	.25			8.18%			0			0			10.91		
U_1	Linear time slope variance	%	.02	<.001	.07	.02	.001	.06	.02	.001	.06	.02	.002	%	.02	.001
	ΔPseudo-R^2	.07			0			13.59			1.73%			.06		
U_{01}	Intercept-linear time slope	0	.04	<.01	-.11	.04	.003	%	.04	.003	-.11	.04	.003	0	.04	.002
	covariance	-.10						-.11						-.11		
	ΔPseudo-R^2															
e_{ti}	Repeated measure		.05	<.001	.95	.05	.001		.05	.001	.90	.05	.001		.05	.001
	ΔPseudo-R^2	.95			.01%			.90			.02%			.90		
	Total R^2	.01			5.02%			5.21%			4.46%			.14%		
		%						4.42%						8.47%		
		.24														
		%														
Model fit																
	Number of parameters	8			15			13			17			20		
	-2LL	4834.3			4740.0			4619.7			4618.5			4540.8		
	AIC	4850.3			4770.0			4645.7			4652.5			4580.8		
	BIC	4882.6			4845.5			4698.3			4721.3			4661.4		

Note: + p<.10; *p<.05; ** p<.01; ***p < .001.

Figure 4.1. 1. Child Depression and Predictors Change at Waves 1 to 5**.**

Note: These variables were only measured at Waves 1, 2, 4, and 5.

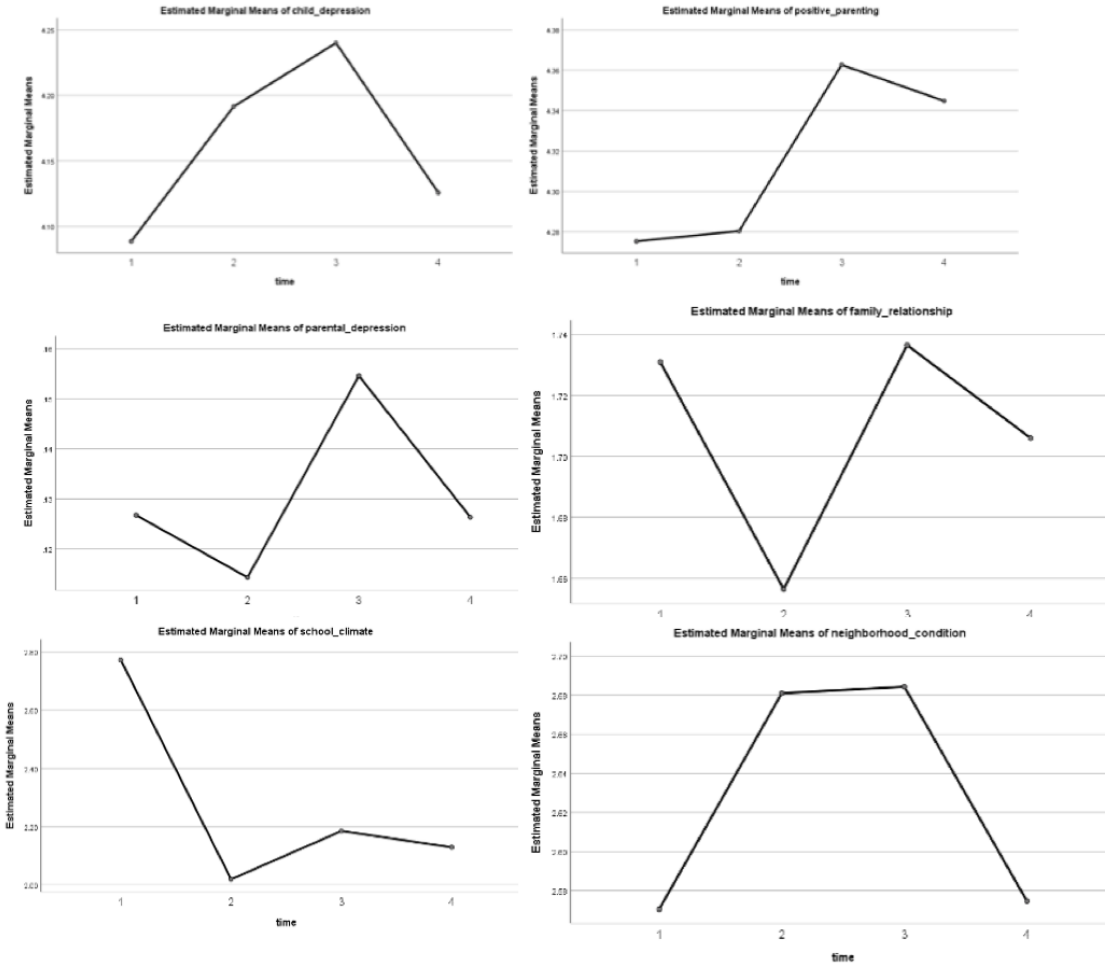


Figure 4.1. 2. Mean Child Depression for Treatment Status at Waves 1 to 5.

Note: Child depression was only measured at Wave 1, 2, 4, and 5.

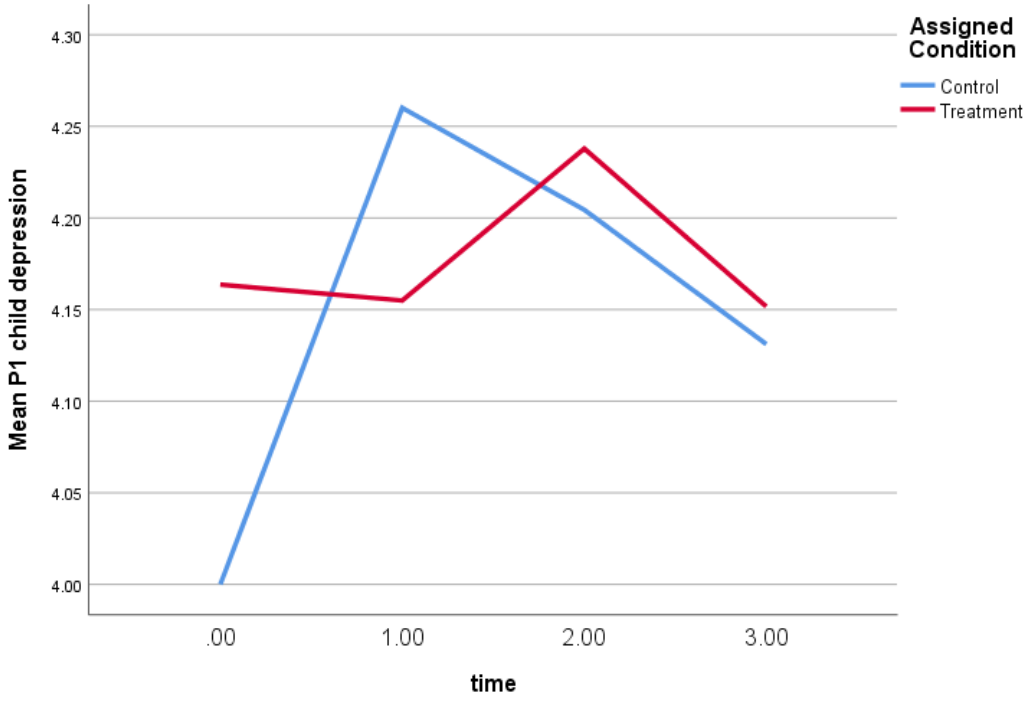
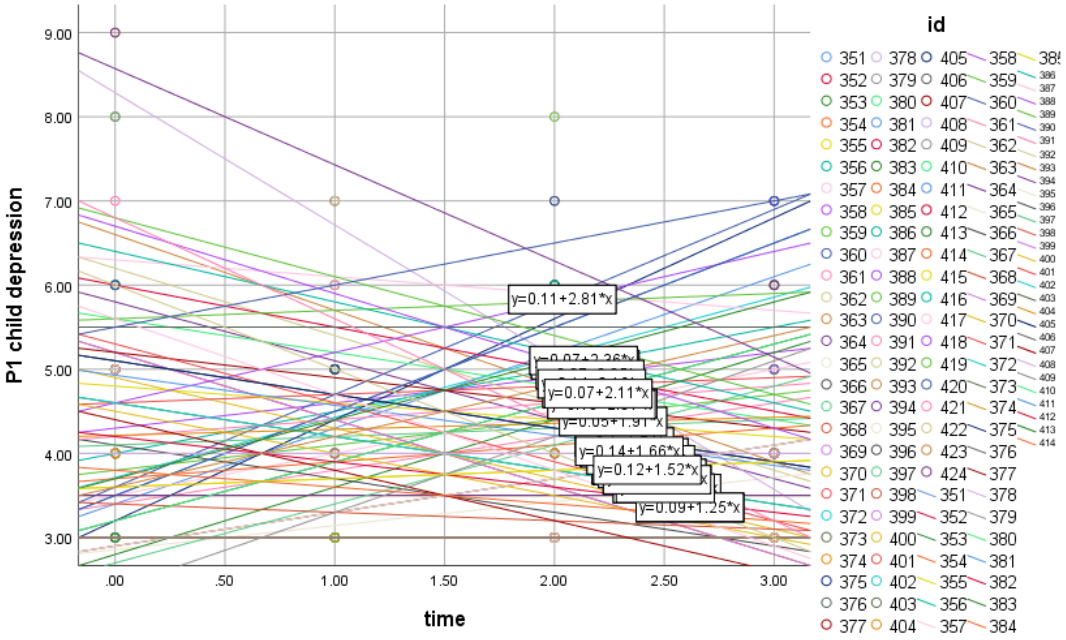


Figure 4.1. 3 Individual Linear Depression Growth Trajectories & Linear Average Depression Growth Trend at Wave 1 to 5.



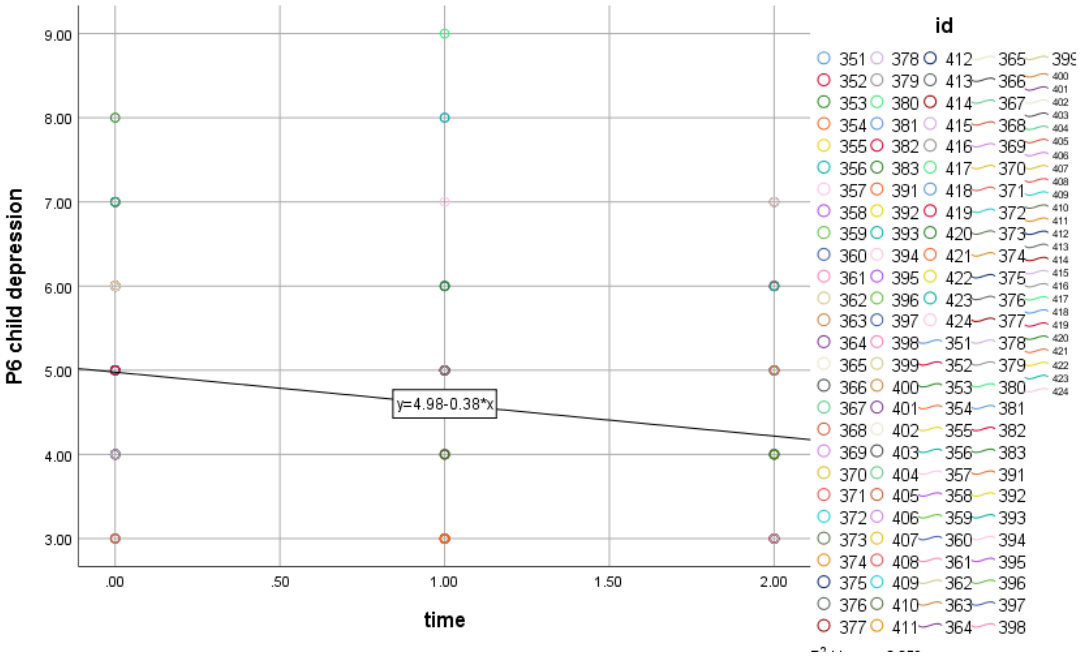

P6 child depression
9.00
8.00
7.00
6.00
5.00
4.00
3.00
.00
.50
1.00
1.50
2.00
time
y=4.98-0.38*x
id

Table 4.2. 1

Demographics information of the sample at Waves 6-9 (n=363)

Variables	**N (%) at Wave 6**						**Chi-square test for treatment status at Wave 6**
Intervention status							N/A
- Control	164 (45.2%)						
- Treatment	97 (26.7%)						
- Booster	102 (28.1%)						
Child gender							p2 (2) = 1.779, p = .411
- Female	195 (53.7%)						
- Male	168 (46.3%)						
Race/ethnicity							p2 (4) = 5307, p = .257
- African American	151 (41.6%)						
- Mexican American	178 (49%)						
- Others (other Hispanic and Anglo-White)	34 (9.4%)						
Mother education at wave 6							p2 (3) = .890, p = .641
- Didn‘t finish high school	56 (20.5%)						
- Finish high school or more	217 (79.5%)						
Family income at wave 6							p2 (4) = 5.848, p = .211
- Less than $10,000	48 (23.1%)						
- $10,000 - $30,000	112 (53.8%)						
- $30,000 - $50,000	48 (11.3%)						
Use of food stamp at wave 6							p2 (2) = .977, p = .613
- No	231 (68.1%)						
- Yes	108 (31.9%)						
Variables	**Time 1 (wave 6)**		**Time 2 (wave 8)**		**Time 4 (wave 9)**		**ANOVA test for treatment status at Wave 6**
	M	**SD**	**M**	**SD**	**M**	**SD**	
Child depression	4.27	1.16	4.20	1.23	4.07	1.13	F (2, 336) = .700, p = .497
Positive parenting	4.31	.45	4.27	.50	4.34	.45	F (2, 329) = 1.754, p = .175
Family relationship	1.69	.41	1.67	.39	1.65	.38	F (2, 336) = .543, p = .582
Parental depression	.23	.30	.21	.29	.19	.27	F (2, 336) = .430, p = .651
School climate	2.14	.62	2.18	.62	2.13	.60	F (2, 336) = 2.785, p = .63

Table 4.2. 2

Bivariate correlations between child depression and major predictor variables at Waves 6-9 (n=363)

	Reliability			Pearson correlations between predictors and child depression		
	Time 5 (wave 6)	**Time 6 (wave 8)**	**Time 7 (wave 9)**	**Time 5 (wave 6)**	**Time 6 (wave 8)**	**Time 7 (wave 9)**
Child depression	.724c	.733c	.740c	N/A	N/A	N/A
Positive parenting	.802	.838	.818			
W6				-.14*	-.07	-.09
W8				-.17**	-.16**	-.27***
W9				-.09	-.12*	-.24***
Family relationship	.805	.804	.803			
W6				.20***	.10	.17**
W8				.21***	.18**	.25***
W9				.21***	.16**	.21***
Parental depression	.874	.875	.877			
W6				.24***	.08	.15*
W8				.23***	.26****	.25***
W9				.28***	.31***	.30***
School climate	.834	.855	.842			
W6				.09	.18**	.05
W8				.09	.23***	.16**
W9				.13*	.13*	.11*
Neighborhood condition	.899	.910	.918			
W6				.09	.07	.09
W8				.05	.12*	.21***
W9				.07	.07	.17**

Note: *p<.05; ** p<.01; ***p < .001.

c means composite reliability; other values of reliability without c come from internal reliability.

Table 4.2. 3

Multilevel analysis for child depression for treatment status over time at Waves 6-9 (n=424)

Model Parameters		**Model 1: Empty means, random intercept model**			**Model 2: Fixed linear time, random intercept model**		
		Est	***SE***	***P <***	***Est***	***SE***	***P <***
Model for the Means							
γ_{00}	Intercept	4.18	.05	.001	4.28	.06	.001
	Repeated measures effects				-.10	.03	.003
γ_{10}	Time						
γ_{20}	Time*Time						
Model for the Variance							
U_0	Random intercept variance	.61	.07	.001	.61	.07	.001
	ΔPseudo-R^2				0		
e_{ti}	Repeated measure	.77	.04	.001	.76	.04	.001
	ΔPseudo-R^2				1.31%		
	Total R^2				.28%		
Model fit							
	Number of parameters	3			4		
	-2LL	3005.5			2996.6		
	AIC	3011.5			3004.6		
	BIC	3023.7			3020.8		

Note: + p<.10; *p<.05;** p<.01; ***p < .001.

Table 4.2. 4

Multilevel analysis for predictors of child depression at Waves 6-9 (n=424)

Model Parameters		Model 3: Unconditional growth model			Model 4: Adding between-person predictors			Model 5a: Adding within-person predictors			Model 5b: Adding interactions			Model 6: Final Model		
		Est	*SE*	*P <*	*Est*	*SE*	*P <*	*Est*	*SE*	*P <*	*Est*	*SE*	*P <*	*Est*	*SE*	*P <*
Model for the Means																
β_0	Intercept	4.13	.10	.001	4.39	.18	.001	4.08	.11	.001	4.07	.11	.001	4.37	.18	.001
	Repeated measures effects															
β_{15}	Time	-.10	.03	.003	-.10	.03	.005	-.08	.03	.05	-.08	.03	.05	-.08	.03	.05
	Time-invariant factors															
	Treatment status (Ref.=trx)															
β_6	Control	-.07	.12	.54	-.08	.12	.49	-.07	.12	.56	-.07	.12	.56	-.08	.12	.52
β_7	Booster	-.26	.13	.06	-.26	.13	.05	-.24	.13	.07	-.24	.13	.07	-.24	.13	.06
	Child Sex (Ref.=male)															
β_8	Female				-.03	.10	.73							-.02	.10	.84
	Ethnic (Ref.=others)															
β_9	African American				-.02	.17	.92							-.05	.17	.78
β_{10}	Mexican American				-.50	.17	.005							-.51	.17	.003
	Time-invariant factors															
β_5	Parent depression							.38	.16	.05	.38	.16	.05	.38	.16	.05
β_4	Positive Parenting							-.19	.10	.06	-.08	.14	.58	-.19	.10	.07
β_3	Family relationship (cohesion)							.06	.09	.49	.07	.09	.45	.04	.09	.66
β_2	School climate							-.04	.12	.77	-.04	.12	.78	-.01	.12	.93
β_1	Neighborhood conditions							.06	.07	.42	.06	.07	.40	.06	.07	.41
	Interactions															
β_{14}	PP * parent depression										-1.01	.63	.11			
β_{13}	PP * family relationship										-.29	.22	.18			
β_{12}	PP * school climate										.27	.43	.53			
β_{11}	PP * neighborhood condition										.11	.30	.72			
Model for the Variance																
U_0	Random intercept variance	.60	.07	.001	.55	.06	.001	.58	.07	.001	.58	.07	.001	.53	.06	.001
	ΔPseudo-R^2	1.72%			9.48%			3.47%			0			9.12%		
e_{ti}	Repeated measure	.76	.04	.001	.76	.04	.001	.73	.04	.001	.73	.04	.001	.73	.04	.001
	ΔPseudo-R^2	0			.04%			3.69%			.75%			.10%		
	Total R^2	1.28%			4.20%			1.94%			2.18%			5.97%		
Model fit																
	Number of parameters	6			9			11			15			14		
	-2LL	2992.5			2968.1			2868.0			2863.4			2844.4		
	AIC	3004.5			2986.2			2890.0			2893.4			2872.4		
	BIC	3028.8			3022.5			2932.8			2951.8			2926.9		

Note: + p<.10; *p<.05; ** p<.01; ***p < .001.

Figure 4.2. 1. Child Depression and Predictors Change at Waves 6 to 9.

Note: These variables were only measured at Waves 6, 8, and 9.

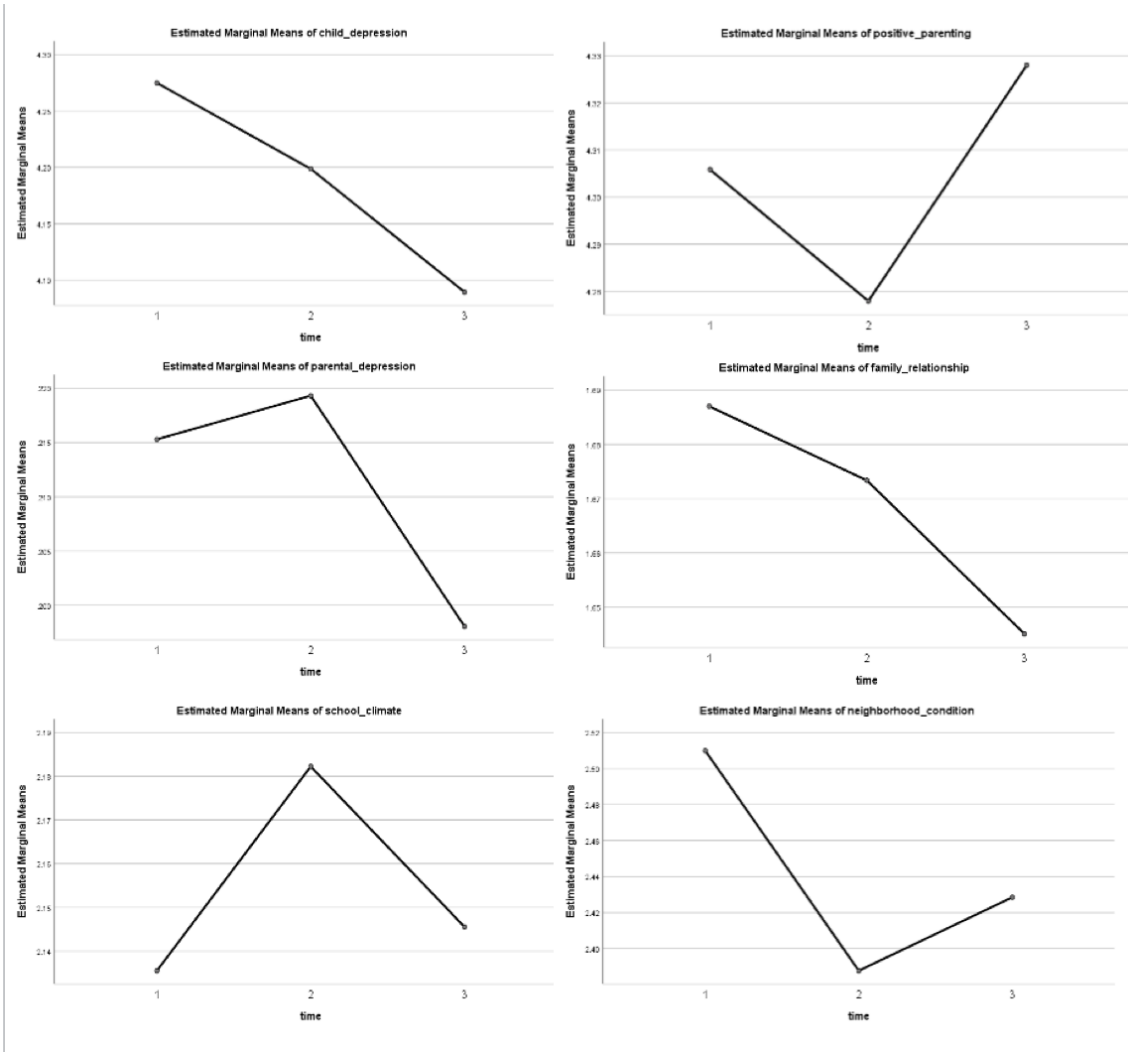
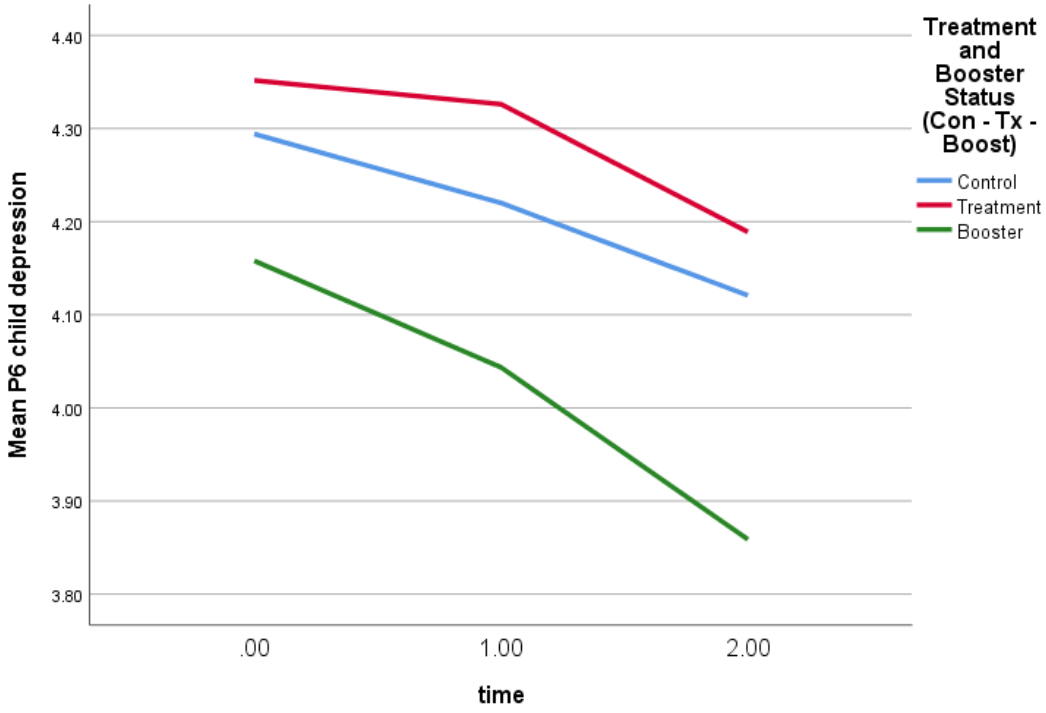


Figure 4.2. 2. Mean Child Depression for Treatment Status at Waves 6 to 9.

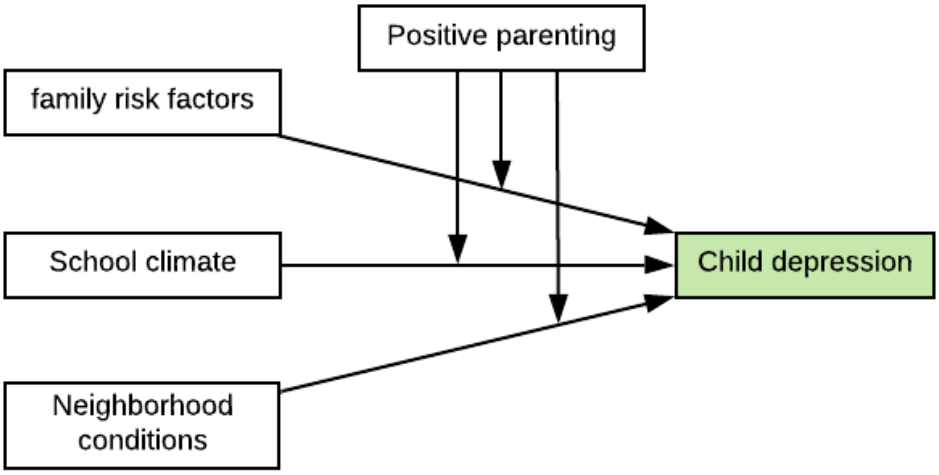
Note: Child depression was only measured at Wave 6, 8, and 9.



Appendix E

Theoretical Framework

Figure 1. *Process Model of Exploring the Determinants of Depression in Children.*



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- Child Trauma Intervention Research
- Health Disparities and Protective Factors in Mental Health,
- Youth Mentoring and Community-Based Participatory Research
- Indigenous Social Work Practice

PRACTICE INTERESTS

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- Parenting Counseling and training

- Grief counseling
- Children with Trauma/PTSD, ADHD, Depression, and Anxiety
- Immigrant Populations and Adjustment Disorder

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Social Group Work	*2011 Fall, 2012 Fall, 2014 Spring, 2015 Spring*
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Counseling	*2012/ 2013 Spring, 2013 Fall, 2014 Spring*
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Social Work with Elders	*2012 Fall*
Social Work Writing	*2013 Fall*
Social Work Practice	*2013 Spring*
Introduction to Social Work	*2014 Fall*
Gender and Social Work	*2014 Fall*
Professional English	*2014 Fall*
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Mentored undergraduates' theses	*2012 to 2015*

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- *Build social work training programs and design training curriculums.*
- *Develop intervention-based research projects.*

Program Director (Part-time): Yangcheng Social Work Service Center [广州市洋城社会工作服务中心], Guangzhou, China (Feb 2013- Aug. 2014)

- *Administered Wenchong Sub-District Family-integrated Service Centre. Supported team leaders in project designing, implementation, monitoring and evaluation, and partnership building. Developed and maintained a good working relationship with partners and other relevant institutions or individuals. Supported social workers to provide social services with high standards and ensure the efficiency of using social resources through training programs and communications.*

Co-director (Part-time): Shangyi Social Work Service Center, Zhangjiang [湛江市尚义社会工作服务中心] , China (Dec. 2012- Aug. 2014)

- *Supported to establish Shangyi social work organization and applied for social work service projects for Children and Women. Administered institution's social work projects for rural area remaining women and children, immigrant youth, and supported social workers to implement and monitor projects effectively. Built and sustained a good working relationship with partners.*

Social Worker (Full-time): Puhui Social Service Center [东莞市普惠社会工作服务中心], Dongguan, China (May 2010-May 2011)

- *Offered services for fragile families through casework and community work. Lead a team of 15 social workers to assist risky families in the rural community, Obtained resources to ensure project efficiency and quality, and enhance team knowledge.*

INTERNSHIP ACTIVITIES

Co-Facilitator, The Center for Family and Community Wellbeing, University of Louisville, KY, USA (Jan 2020 -current)

- Co-facilitate a psycho-education group: Mind matters – overcoming adversity and building resilience

Counselor, Americana Community Center, Louisville, KY, USA (Sep 2019 – current)

- Providing psychotherapy and relationship counseling services to immigrant children, adults, couples, and families

Social Worker, Centerstone of Kentucky, USA (May 2019 – Jul. 2019)

- Providing therapy services to traumatized children and parents who abused or neglected their children.

Intern Family Therapist, Child Place Inc., Indiana, USA (Aug. 2018 – Apr. 2019)

- Providing therapy services to residents at the cottages and outpatients under the supervision of a licensed family therapist.

Social Worker Intern, Eight Village Sub-District Judicial Office, Beijing, China (3/2009-4/2009).

- *Engaged in mediating interpersonal disputes and studied the knowledge of community-based correction in prisoners.*

School Social Worker Intern, Hua'ao Middle School, Beijing, China (11/2006-6/2008)

- *Offered programs for children to meet their development needs.*
- *Delivered counseling services for children with adjustment issues.*
- *Provided life education courses and problem-solving workshops.*

PUBLICATIONS

Journal Articles:

Sterrett-Hong, E. M., Birkett, M., Kuhns, L., **Zhang, D.**, & Mustanski, B. (2020). The Impact of Closeness to Non-Parental Adults in Social Networks on Substance Use among Young Men Who Have Sex with Men. *Journal of Homosexuality*, 1-18.

Zhang, D. (2012). The Novice Teacher's Teaching Reflection Based on Empowerment Theory [新手老师的教学札记："赋权增能"取向的教学反思]. China: *Zhanjiang Normal University Teaching Supervision, pp35-37.*

Zhang, D. (2008). Social Work – the Answer to My Life [生命的回报]. China: *Social Work, 8, p49.*

Book Chapters and Research Reports

Zhang, D., Ai, Z., & Fu, J. (2019). Assessment Report of Community Problems and Needs in Qiaonan Sub-District [广州市番禺区桥南街社区/居民需求调研技术报告], Panyu District, Guangzhou, *China*.

Zhang, D. & Ai, Z. (2018). Research Report of Community Needs: A Survey of Residents and Third Sector [番禺区社区需求调查分析报告]. Civil Affairs Bureau, Panyu District Government, Guangdong, China.

Zhang, D. & Ai, Z. (2015). Chapter 6 The Operation of Social Work Agency [第六章 社会工作机构的运作]. In Guo (Eds), *The Operation and Management of Social Work Agency* <社会工作机构运作与管理>. China: Peking University Press.

Zhang, D. & Ai, Z. (2015). Chapter 7 Human Resource Management of Social Work Agency [第七章 社会工作机构人才队伍建设]. In Guo (Eds), *The Operation and Management of Social Work Agency* <社会工作机构运作与管理>. China: Peking University Press.

Zheng, K. & **Zhang, D.** (2014). A Research Report on Chinese Parents' Involvement with their Child's Using Social Media [青少年使用社交媒体 与亲职教育研究],

Guangdong Committee of the Communist Youth League of China and Guangdong Federation of Social Sciences, *China.*

Peer-Review Manuscripts under review

Wang, X., **Zhang, D.*,** Ding, H., Luo, T., Li, Q. (under review). Effectiveness of Training on Social and Career Skills Among Adults with Intellectual Disabilities –A Pilot Study of Career Development and Transition Service Program in Guangzhou [承认智力障碍者职业转衔服务初探]. *Disability Research*. (In Chinese)

Zhang, D., Ai, Z., Fu, J., & Sterrett-Hong, E. (under review). Predictors of Parental Involvement in Child Education Among Chinese Families - the Role of Parental Factors and Mediator role of Perceptions of Positive Parenting [中国家庭影响父母教育参与的父母因素及积极教养观念因素的中介作用]. *Psychological Development and Education*. (In Chinese)

Completed Manuscripts to be Submitted

Sterrett-Hong, E., **Zhang, D., et al.** Community-Based Mentoring in High-Risk Neighborhoods: Considerations for Integrating a Community Based Participatory Research Framework [高风险社区社区为本的辅导-整合性的社区参与研究框架].

Zhang, D. Parent and child depression in inner-city children: exploring the mediation effects of family relationship.

Zhang, D., Sar, B., Sterrett-Hong, E. & Ballard-Kang, J. Associations between mother and father involvement in the lives of their older adolescents: the mediating effect of child-parent and couple relationships. *Family Process*.

Zhang, D., Sar, B., Sterrett-Hong, E. The Ethical Challenges of Implementing the Government Purchase of Service: The Case of the Community Family-Integrated Service Center in China [政府购买服务的伦理挑战-以广州社区家庭综合服务中心为例]. *Ethics and Social Welfare.*

Zhang, D. & Sterrett-Hong, E. A Literature Review of Parent Involvement in Child Education Among Chinese Immigrant Families: Bicultural Considerations and Research Implications [华裔移民家庭父母参与子女教育的文献综述：双文化因素及研究意义]. *Review of Educational Research.*

Manuscripts in Preparation

Zhang, D. & Sar, B. (To be submitted). Prevalence of Stress Symptoms and Relevant Predictor Factors – A Study of Traumatized Children and Youth [应激障碍的发

生率及相关的预测因素-一项创伤儿童青少年的研究]. *Journal of Traumatic Stress.*

Zhang, D. & Sterrett-Hong, E. (In preparation). Identification of Appropriate Screening Items for Depressive Symptoms in Chinese Children [儿童抑郁症量表发展-项目反应理论的应用]. *European Journal of Psychological Assessment.*

Zhang, D. & Sterrett-Hong, E. (In preparation). An Exploratory Study of Positive Parenting and Parent Involvement in Primary School Children's Education in China [关于小学生父母积极教养和教育参与的探索性研究]. *Journal of Child and Family Studies.*

Zhang, D. & Sterrett-Hong, E. (In preparation). Mediating the Relationship Between Child-Father Relationship and Father Involvement: Effects of Mother Involvement and Family Relations [亲子关系与父亲参与的中介作用-母亲参与与家庭关系的影响]. *Family Process.*

Zhang, D. Sterrett-Hong, & Wu, Q. (To be submitted). Social Worker Perspective: Exploring the Indigenous Social Work Practice in the Chinese Context [社会工作者视角-探索中国情境下本土化社会工作实践]. *Asia Pacific Journal of Social Work and Development.*

GRANTS

Co-Investigator: A Study of Promoting Recovery and Resilience in Traumatized Children and Social Work Interventions [遭受创伤困境儿童复原力的社会工作干预研究], funded (200,000RMB) by The National Social Science Fund of China, with Dr. Zhangshen Ai (professor).

Co-Principal Investigator: Children with Incarcerated Parents: Challenges and Resilience [佛山市南海区服刑/刑事人员子女：挑战与抗逆力], funded (30,000RMB) by Foshan Committee of the Communist Youth League of China, Guangdong, China, with Dr. Zhangshen Ai (professor) (Nov. 2019 – Apr. 2020).

Co-Principal Investigator: Assessment of Community Problems and Needs: A Mixed Methods [广州市番禺区桥南街社区/居民需求调研], funded (30,000RMB) by Qiaonan Sub-District Administrative Office, Panyu District, Guangdong, China, with Dr. Zhangshen Ai (professor) (Apr. 2019 – Sep. 2019).

Co-Principal Investigator: A Study of Community Needs To be Perceived from Residents and Third Sector [创建社区共建共治共享格局番禺区社区需求调查], funded (15,000RMB) by Civil Affairs Bureau, Panyu District Government, Guangdong, China, with Dr. Zhangshen Ai (professor) (Oct. 2018 – Dec. 2018).

Co-Investigator: A Study on Chinese Parents' Involvement with their Child's Using Social Media [青少年使用社交媒体 与亲职教育研究], Funded (8,000RMB) by Guangdong Committee of the Communist Youth League of China and

Guangdong Federation of Social Sciences, China (Aug. 2013 – Aug. 2014).

Co-investigator (April 2008 - April 2009**)**: Intervention Research on Social Group Work Approach Applied to University Freshmen [团体工作介入大学新生班级凝聚力的研究], funded (500RMB) by Capital Normal University, China.

Principal Investigator (April 2007 - April 2008**)**: A study on Immigrant Children Lacking Parental Involvement in Beijing [北京市打工子弟学校学生失管问题研究与社会工作的介入], funded (500RMB) by Capital Normal University, China.

ACADEMIC CONFERENCE PRESENTATIONS

Zhang, D., Tian B., & Sun, F. (accepted). The Psychological Impact of Social Connectedness and Difficulties that Global Populations Encounter in the COVID-19 Pandemic – Testing a Moderated Mediation Model. *The 25th Annual Conference Society for the Social Work and Researc*h (proposal #4492).

Zhang, D., & Sterrett-Hong, E. (Oral talk). An Exploratory Study of Positive Parenting and Parent Involvement in Children's Education in China. *The 24th Annual Conference Society for the Social Work and Researc*h, Washington, DC, January 17, 2020 (proposal #38817).

Sterrett-Hong, E., & **Zhang, D.** (E-poster). Fathers' Reasons for Having Children, Developmentally Attuned Cognitive Stimulation, and Young Children's Psychosocial Functioning in Mainland China. *The 24th Annual Conference Society for the Social Work and Research*, Washington, DC, January 18, 2020 (proposal #38766).

Zhang, D., Sterrett-Hong, E., & Qiuping Wu (Oral talk). Exploring the Indigenous Social Work Practice in the Chinese Context. *Council on Social Work Education 2019 Annual Program Meeting*, Denver, CO, October 27, 2019 (proposal # 40990).

Zhang, D. (Oral talk). Measuring the Positive Parenting Scale Using Item Response Theory. *Graduate Student Regional Research Conference at the University of Louisville*, KY, U.S., February 28, 2019.

Zhang, D. & Hao, Q (Oral Talk). Child Education and Family Social Services in China [中国子女教育与家庭服务]. *Ministry of Education Chunhui Cup Innovation and Entrepreneurship Conference, Guangzhou*, Guangdong, China, December 28, 2017.

ACADEMIC EXPERIENCE

Research Assistant (Sep 2018 – Aug. 2020): Positive Non-Parental Adults and Mentors and Their Role in Reducing Youth Health Disparities Program, University of Louisville, supervised by Dr. Emma Sterrett-Hong, Associate Professor.

Research Assistant (Oct 2015 – Aug. 2020): Research on Promoting Recovery and Resilience of Traumatized Children and Youth (IRB no: 13.0326), University of Louisville, supervised by Dr. Bibhuti Sar, Professor.

Principal Investigator (Aug. 2016 – 2019): A Quantitative Study of Chinese

Immigrant Parents' Involvement in Their Child's Education: Predictors of Parental Stress, Acculturation, Self-Efficacy, and Social Support (IRB no: 16.0744), University of Louisville, supervised by Dr. Adrian Archuleta, Assistant Professor.

Co-investigator (June. 2015 – May 2017): A Mixed Study on Chinese Fathers' Involvement with Their Children, collaborating with Dr. Qiuli Hao, Assistant Professor, University of Cincinnati, U.S.

INVITED LECTURES/TRAINING

Zhang, D. (April 25, 2020). Trainer: "Complex Case Analysis and Case Management." Capital Normal University and Chaoyue Social Work Research and Services Center, Beijing.

Zhang, D. (Sep 2019 - Current). Trainer: "Family Therapy: Concepts and Interventions [家庭治疗：概念与干预]." Yangcheng Social Work Service Center, Guangzhou, Guangdong, China.

Zhang, D. (Aug 2019). "Managed Care and Case Management [照顾服务与个案管理]." Qiannan Sub-District Family-Integrated Service Center; Wenchong Sub-District Family-Integrated Service Center, Guangzhou, Guangdong, China.

Zhang, D. (Mar. 2015). "Teamwork Skills for Female Village Officers [女村官的团队管理]." Women Forum at Zhanjiang Women's Union, Zhanjiang, Guangdong, China.

Zhang, D. (2014, Oct.- 2015, Jan.) "Parenting Support and Education Group [父母教养支持与教育小组]." Presented at Wenchong Street Integrated-family Service Center, Guangzhou, Guangdong, China.

CERTIFICATES & PROFESSIONAL TRAINING

2020 New Writer Training, Family Process Institute, U.S. (Sep. 24 20 – Sep. 25, 2020)

2020 Summer Class Social Governance and Social Work, Fudan University, China & Washington University in St. Louis, U.S. (July 20 – July 31, 2020)

Approved Certification in Technology Assisted Services with Six Hours of Ethics (Mar. 27 - 28, 2020)

CFT Program Cultural Competence Trainings (once per semester from 2018 Fall to 2020 Spring)

- Topic 1: Peer Consultation Group: Working with Transgender Clients
- Topic 2: Working with Families in Low-Income, Urban Communities
- Topic 3: Working with Chinese Families
- Topic 4: Working with Latinx Families
- Topic 5: Working with Rural and Military Families

11 Hours NBCC Approved Certification in Trauma-Focused Cognitive Behavioral Therapy (May 2, 2019)

Dr. Becky Antle: **The Prevention and Relationship Enhancement Program (PREP) Training**, University of Louisville, KY (Mar. 23, 2019, six hours)

Dr. Lesley Harris: **The Job Talk - Preparing, applying, and interviewing for Faculty Position**, University of Louisville, KY (Nov. 16, 2018; Jan 10, 2020)

PLAN Workshop: Power Literature Search, University of Louisville, KY (Oct. 29, 2018)

Dr. Karen Kayser: **Reviewing Manuscripts for Journals - A Workshop for PhD Students in Social Work**, University of Louisville, KY (Sep. 7, 2017)

Dr. Tracy A. Revenson: **Reviewing Manuscripts for Journals - A Workshop for Graduate Students and Early Career Professionals**, University of Louisville, KY (March 11, 2016)

Doctorate Foundation Course, University of Louisville, KY (June – July 2015).

HIPAA Training Course for Researchers, Louisville, KY (Sep. – Oct. 2015).

Guangzhou Association of Social Work: **Social Work Agency Management Leadership Course** in Guangzhou, China (May-June 2013).

Lingnan Normal University: **Teaching Training**, in Zhanjiang, China (July – Aug. 2011).

Capital Normal University**: International Symposium on Community-based Correction Work and Forensic Social Work**, in Beijing, China (Oct. 15-17, 2010).

Dongguang Association of Social Work**: Service Skills Course for Novice Social Workers** in Dongguan, China (May 2010).

Social Work Students Seminar on Net-Addiction, in Hong Kong, China (July 2008).

Using Music Therapy in Social Work Practice, Beijing, China (Oct.–Nov. 2007).

The 2nd Forum on Life Education of Chinese Teenagers, Beijing, China (Dec. 2006).

2006 International Forum on Community-based Correction Social Work Research, in Beijing, China (Oct. 29-31, 2006).

PROFESSIONAL CREDENTIALS

Licensed National Social Worker [中级社工师], China (Sep. 2012)

Licensed Lecturer in Higher Education Institution [高校教师资格证], China (July 2012)

MEMBERSHIPS and AFFILIATIONS

2019-present **Member**, American Association for Marriage and Family Therapy (AAMFT)

2019-present **Member**, Council on Social Work Education (CSWE)

2015-present **Member**, Society for Social Work and Research (SSWR)

SKILLS

Applied Statistical Models: Non-parameter analysis, AN(C)OVO, Regression analysis, Generalized linear regression, Linear mixed models (Multilevel Analysis), Structural equation modeling, Cluster analysis, Exploratory and confirmatory factor analysis, item response theory and Item differential functioning, Power analysis and effect Size.

Qualitative Approaches: Grounded theory and Case study.

Data Analysis Tools: SPSS, AMOS, SAS, and R language, RQDA, and DeDoose.

HONORS & AWARDS

Banner Bearer for December Commencement, University of Louisville, KY, USA (2020)

Graduate Dean's Citation Award, University of Louisville, KY, USA (2020)

New Writers Fellowship, The Family Process Institute, USA (2020.2)

Graduate Research Assistantship, University of Louisville, KY, USA (2015 July-2020 June)

2020 SSWR Doctoral Student Travel Award ($500), Society for Social Work and Research

2019 Graduate Travel Award ($350), University of Louisville Graduate Student Council

2019 Graduate Travel Award ($450), Kent School of Social Work, University of Louisville

Kent MSSW Scholarship ($4,187.12), Kent School of Social Work, University of Louisville (2019 Fall – 2020 Spring)

Couple Family Therapy Program Summer Semester Scholarship ($1,000), Kent School of Social Work, University of Louisville (2019 Summer)

Maude Ainslie Scholarship ($4,020.48), Kent School of Social Work, University of Louisville (2018 Fall – 2019 Spring)

Couple Family Therapy Program Summer Semester Scholarship ($1,000), Kent School of Social Work, University of Louisville (2018 Summer)

2016 Graduate Travel Award ($200), University of Louisville Graduate Student Council

2016 Graduate Travel Award ($500), Kent School of Social Work, University of Louisville

The 3rd-class teaching award, Zhanjiang Normal University, Zhanjiang, China (2010)

Outstanding social worker, Dongguan Association of Social Workers, Dongguan, China (2010)

Outstanding undergraduate student, Capital Normal University, Beijing, China (2009)

First-class University Scholarship, Capital Normal University, Beijing, China (2009)

National Scholarship, Ministry of Education, Beijing, China (2008)

Second-class University Scholarship, Capital Normal University, Beijing, China (2007)

Second-class University Scholarship, Capital Normal University, Beijing, China (2006)

VOLUNTEER ACTIVITIES

Counselor volunteer at Ministry of Education Central China Normal University Psychological Assistance Hotline Services (4/2020 – 8/2020)

Volunteer at CSWE 65th APM Conference in Denver, U.S., (10/25/2019)

Volunteer at 2019 KY MFT All in One Conference in Louisville, U.S., (10/17/2019 – 10/18/2019)

Volunteer, Walnut Street Church Chinese Fellowship, Louisville, U.S. (Sep. 2016-present)

- Teaching the Chinese language to kids and youth.

Volunteer at SSWR 20th Annual Conference in Washing D.C., U.S. (1/2016)

Volunteer in "Gender Day" Event at The Chinese University of Hong Kong, China (1/2010-3/2010)

- *Performed interviews with gender activists to learn their stories.*

PROFESSIONAL REFERENCES

Dr. Bibhuti Sar, PhD, MSW

Professor and Director of PhD Program of Social Work,
Kent School of Social work, University of Louisville
Relationship: Mentor
Tel.: (502) 852-3932
Email: b.k.sar@louisville.edu
Address: Patterson Hall 110, S 3rd st. Louisville, KY 40208

Dr. Emma Sterrett-Hong, PhD, LMFT

Associate Professor and Director of Couple and Family Therapy Program,
Kent School of Social Work, University of Louisville
Relationship: Mentor and Supervisor
Tel.: (502) 852-0388
Email: emma.sterrett@louisville.edu
Address: Burhans Hall 134, 310 Whittington Pkwy, Louisville, KY 40222

Dr. Sunshine Rote, PhD

Associate Professor
Kent School of Social Work, University of Louisville
Relationship: Teaching Mentor
Tel.: (502) 852-2309
Email: smrote01@louisville.edu
Address: Oppenheimer Hall 208, 2217 S 3rd street, Louisville, KY 40208