**The Role of Relational Permanence in
Positive Outcomes among
African American Adolescents in Foster Care**


by


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## DEDICATION

This dissertation is dedicated to my mother Patricia Brown Williams who sacrificed so much for me, but was not able to be here to see me finally cross the finish line. Without your love, support, sense of humor, and never dying optimism I would not be where I am today. I love you Ma and thank you for instilling in me that the sky is the limit. I also dedicate this dissertation to my lifelong best friend Charmaine Robertson. Without your constant, never ending support, especially after the passing of my mom, there is no way I would be here today. There were so many times looking back over my life that if it were not for you, I would not be where I am today in more ways than one. Thank you for never giving up on me. I thank my husband Wesley Butler for keeping me encouraged throughout this process and always reminding me to focus on the details. I thank my mom-in-love Dionne Butler for stepping up to the plate after the birth of our son Jacob Andrew Butler. From the little things (how to properly bathe a newborn) to the big things (taking care of little Jacob while I write) I couldn't have done this without you. Thank you to the countless family members, friends, and colleagues who have provided support throughout this process. I wouldn't be here without you either. I am blessed to have each and every one of you in my life.

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# TABLE OF CONTENTS

# LIST OF TABLES

# LIST OF APPENDICES

APPENDIX

**ABSTRACT**

This doctoral dissertation focuses on the role relational permanence plays in fostering positive outcomes for African American adolescents in foster care. Relational permanence is defined as having an ongoing caring and supportive relationship with a variety of social support actors in the context of the foster care system. The guiding framework for this project is attachment theory. The first study addresses the prevalence of relational permanence, the change of relational permanence over time, and the predictors of relational permanence. The second study determines whether relational permanence predicts positive outcomes and, for those who have a positive change in relational permanence, whether positive change predicts higher school achievement, higher psychological well-being, and lower delinquency.

Data were drawn from the African American subsample ($N = 534$) of the Child and Adolescent Needs Assessment (CANS) and Illinois Department of Children and Family Services (IDCFS) Integrated Assessment. The study spanned the time between the first and second assessment of the CANS while youth were still in foster care. The average amount of time between assessments was eight months.

Findings indicate that African American adolescents in foster care had relational permanence. There was not significant change over time in relational permanence. Maltreatment type had the largest influence on predicting relational permanence at Time 2 longitudinally. Experiencing neglect in combination with any form of abuse was correlated with less relational permanence. Interpersonal skills was also correlated with less relational

permanence at Time 2, though this finding was no longer significant controlling for relational permanence at Time 1. In the second study, relational permanence was positively correlated with psychological well-being, specifically, the lower the relational permanence, the lower the psychological well-being.  Relational permanence and delinquency were negatively correlated such that a lower level of relational permanence was associated with the decreased likelihood of lower delinquency.  Maintaining one's level of relational permanence over time was significantly associated with lower levels of psychological well-being and lower delinquency.  There was no significant relationship between relational permanence and school achievement.  Implications for practice and policy regarding the importance of child well-being indicators among African American adolescents in foster care are discussed.

# CHAPTER I
## General Introduction

The definition of permanence in the foster care system is complex. It often leaves researchers, practitioners, and lawmakers struggling to understand the multi-dimensionality of the concept (Avery, 2010). Birth parents, youth in care, and adoptive parents are also often uncertain of its meaning and its impact on their lives (Freundlich, Avery, Munson, & Gerstenzang, 2006). Permanence in foster care often refers strictly to legal or residential permanence. Legal permanence is achieved when a youth is returned to the custody of their parents, when adoption occurs, or when there is a transfer of legal guardianship or custody to another adult (Barth, Wulczyn, & Crea, 2004). However, several recent studies have found relational permanence—having a long-term relationship based on mutual care and support—to be an important yet often overlooked area of permanence that has major implications for positive outcomes among foster care youth (Graham, Schellinger, & Vaughn, 2015; Hass & Graydon, 2009; Nesmith & Christophersen, 2014). Relational permanence is often identified among adolescents transitioning to adulthood in the foster care system as the most important factor in leading a productive life after care (Gonzalez, 2015). The goal of this dissertation is to advance understanding of the concept of relational permanence. This dissertation also seeks to assess the predictors and potential impact of relational permanence on the lives of African American adolescents in care and transitioning to adulthood in the foster care system.

## Definition of Relational Permanence

In this dissertation, relational permanence is defined as having an ongoing caring and supportive relationship with parents or parental figures, extended family members, and/or friends in the context of the foster care system. There are varying levels of relational permanence and each level may play a different role in the developmental processes and outcomes of adolescents in foster care. The conceptual framework of relational permanence is drawn largely from Samuels' (2008) work with young adults with foster care backgrounds. The importance of social relationships in the lives of older youth in the foster care system has received wide review, although most of this work has not specifically used the term "relational permanence." The concept has been described in studies using a variety of terms as general as "social support" (Collins, Spencer, & Ward, 2010) and "Emotional Effectiveness Education" (Nesmith & Christophersen, 2014). In the current dissertation, relational permanence is defined as having a continually supportive, warm relationship marked by mutual trust and respect with adult non-parental family figures, peer companions, child welfare professionals, and/or a best friend in the context of the foster care system (Stott & Gustavsson, 2010).

## Definition of Legal and Physical Permanence

Relational permanence can be contrasted with legal and physical permanence. Legal permanence refers only to the custody arrangement of a child in foster care, while physical or residential permanence refers to the residential situation of the child (Mallon & Hess, 2005). For example, a child might be legally adopted by a foster parent after a six month placement. If the

child continues to have a supportive relationship with a school coach or mentor, this child has legal, physical, and relational permanence. In contrast, if a child is placed in a foster home for six months but is not adopted, the child has physical permanence but not legal permanence. If the child maintains contact with a school coach or mentor, this child also has relational permanence. In yet another example, if a child is placed in a new foster home, but is not adapting well to the foster parents and is likely to be moved again, this child does not have physical or legal permanence. Furthermore, if the child does not maintain any long-term relationships with anyone, this child does not have relational permanence, either. A primary goal of the foster care system is to pursue legal permanence. However, legal permanence may come at the expense of relational and physical permanence (Stott & Gustavsson, 2010). The current dissertation investigates the role of relational permanence in the lives of foster care youth.

The literature on relational permanence is rapidly growing. This literature spans a variety of issues such as defining the concept of relational permanence (Freundlich, Avery, Munson, & Gerstenzang, 2006; Samuels, 2008; Samuels, 2009), developing scales to measure the concept (Semanchin, Jones, & LaLiberte, 2013), and assessing the correlation between relational permanence and youth outcomes (Cushing, Samuels, & Kerman, 2014). However, few of these studies offer an in-depth theoretical analysis regarding the importance of relational permanence. Also, few of these studies detail the impacts specifically for African American adolescents transitioning to adulthood. The current dissertation addresses these significant gaps in the literature.

**Research Questions**

The current dissertation is comprised of two related studies. The dissertation presents a theoretical analysis of the concept of relational permanence drawing largely from the attachment literature. The first study, descriptive in nature, addresses three research questions:

1. What is the prevalence of relational permanence among African American adolescents in the foster care system?

2. Does relational permanence change over time among African American adolescents in the foster care system?

3. What are the predictors of relational permanence among African American adolescents in the foster care system?

The second study seeks to determine if relational permanence is correlated with positive outcomes for African American adolescents in foster care by investigating the following questions:

1. Does relational permanence predict positive outcomes among African American adolescents in the foster care system?

2. Does a positive change in relational permanence predict positive outcomes among African American adolescents in the foster care system?

Attachment theory and research informs my perspectives about the importance of relational permanence for positive development in adolescents in the foster care system. In the following sections I present a discussion of the attachment literature, an overview of the child welfare system, and analyses of the unique developmental challenges of adolescence and the transition to adulthood. Attention is also given to the challenges that adolescents in foster care face, as well as, the specific challenges that confront African American foster care youth.

Finally, I present the hypotheses and the proposed plans for each of two distinct dissertation studies.

The fields of child welfare and developmental psychology often have differing perspectives on positive youth development (Harden, 2004). The field of child welfare has historically focused on physical safety and legal permanency without an emphasis on child well-being or the importance of social relationships in positive youth development (Walsh, 2015). In contrast, the field of developmental psychology has historically focused on the impact of parenting and utilizing caregiver resources to optimize child functioning (Bornstein & Bradley, 2014). In this dissertation the tenets of both fields are integrated in an effort to advance our understanding of the role of relational permanence in the lives of African American youth in the foster care system in light of the unique needs of this segment of the population.

## Attachment Theory and Research

### Definition of attachment

Attachment theory was first introduced by John Bowlby (1969). Attachment bonds develop when a strong affective relationship is established between an infant and a primary caregiver. This relationship is generally formed with the mother, but secondary attachment bonds can be established with other supportive individuals in the infant's life such as the infant's father, siblings, or extended family. Bowlby (1973, 1988) reasoned that attachment bonds increase the likelihood of physical and psychological contact with the primary caregiver. This in turn increases the likelihood of survival for the relatively helpless infant.

### Attachment styles

Interest in Bowlby's theory led researchers Ainsworth, Blehar, Waters, and Wall (1978) to identify three attachment styles based on infants' behavior after experiencing "The Ainsworth Strange Situation." In this situation, infants (12-months old, on average) were observed in the presence and absence of their primary caregiver. Researchers identified three categories of attachment based on infants' behavior after reunion with their primary caregiver: secure attachment, anxious/ambivalent attachment, and anxious/avoidant attachment. Infants with a secure attachment (55% to 65%) sought comfort from their caregiver after separation. These infants were calmed easily and quickly resumed other activities such as playing or exploring the room after separation. Infants with anxious/ambivalent attachment (10% to 15%) had a mixed reaction to their caregiver after separation. These infants remained agitated and failed to resume normal activities after reunification. Infants with anxious/avoidant attachment (20% to 25%) generally avoided or disregarded their caregiver after separation and engaged in behaviors which may have distracted from internal feelings of distress.

After analyzing the parenting behaviors associated with each attachment style, researchers discovered that certain attachment styles were correlated with certain parenting behaviors. Infants with a secure attachment were more likely to have a caregiver who was consistent and nurturing throughout the infant's development. Infants with an anxious/ambivalent attachment were more likely to have a caregiver who was attentive but also intrusive. Infants with an anxious/avoidant attachment were more likely to have an inattentive and unresponsive caregiver.

Later, researchers Main and Solomon (1986) identified a fourth attachment style: disoriented/disorganized attachment. Infants with this attachment (15% to 20%) demonstrated a variety of emotions after separation. At times they were happy to be reunified with their

caregiver.  At other times they demonstrated avoidance or anger at the caregiver for being

absent.  Generally, there was no organization in the response to their caregiver after

reunification.  Researchers found that infants with a disoriented/disorganized attachment were

more likely to have a caregiver who was neglectful and/or abusive.  In later work, researchers

categorized this attachment style—along with the anxious/ambivalent and anxious/avoidant

styles—as an "insecure" attachment style (compared with the secure attachment style; Smith,

2011).

Bowlby had a theory about what led infants to develop different attachment styles based

on caregiving behaviors (1973, 1988). He theorized that the attachment relationship an infant

develops with their caregiver creates an internal working model that impacts the infant at every

future stage of development.  Through interactions with the caregiver, the infant develops

specific internal working models about the self and others.  Beliefs around what to expect from

relationships and whether the self is worthy of care and attention are developed through the

formation of attachment bonds in infancy (Ainsworth et al., 1978).  For example, if a caregiver is

emotionally available and supportive, the infant is likely to develop an internal working model

that promotes expectations of warmth and availability and the belief that one is worthy of care

from others (Fonagy et al., 1995).  This infant is likely to develop a secure attachment.

Conversely, if an infant experiences a caregiver who is cold and generally unresponsive to their

needs, the infant is likely to develop an internal working model that promotes expectations of

coldness and unresponsiveness from others and the belief that one is unworthy of care.  This

infant is more likely to develop an insecure attachment.  Researchers contend that any situation

in which an individual, at any age later in life, seeks and experiences emotional support and

makes presumptions about how others should respond to this need, is impacted by one's infant attachment style (Rholes & Simpson, 2004).

**Impact of attachment across the lifespan**

The attachment literature is guided by a general expectation that secure attachment predicts positive developmental outcomes later in life. In his review of the literature, Thompson (2008) found that infants who maintained a secure attachment over time were more likely than their insecure counterparts to develop successful close relationships, pro-social personality qualities, emotional self-regulation, positive self-regard, and competent social problem-solving skills. He also found that infants with secure attachment were more likely to have benign attributions for peer motivations in ambiguous situations and were less lonely than their insecure counterparts.

One might assume from a review of the literature that if an infant is not securely attached by 12 months, their cognitive and relational development is set in stone. On the contrary, however, there is evidence that the internal working model in relation to attachment is still open to change at an early age. Belsky and Fearon (2002) examined the stability of early infant attachment to determine whether subsequent maternal sensitivity played a role in later child development outcomes. As expected, they found infants who were securely attached at 15 months and continued to experience high maternal sensitivity at 24 months scored the highest on a broad range of social and cognitive measures at 24 months. Also as expected, insecurely attached infants who subsequently experienced low maternal sensitivity scored the lowest on social and cognitive measures at 24 months. However, insecurely attached infants at 15 months who later experienced high maternal sensitivity at 24 months outperformed securely attached infants who later experienced low maternal sensitivity. Those infants who at first developed

8

insecure attachments may have been at an initial disadvantage, but with warm and supportive caring, they were ultimately able to develop secure attachments.

**Multiple attachment figures**

Attachment relationships are not confined to child-caregiver relationships. In longitudinal studies of adolescent and adult attachment, there is empirical evidence that attachment relationships exist outside of the infant-caregiver bond. Furthermore, empirical evidence also indicates that any of these attachment relationships are open to change throughout the lifespan. Laible, Carlo, and Raffaelli (2000) administered surveys to adolescents to determine the extent to which emotional relationships between parents and peers played a role in positive adolescent adjustment. The self-report measures examined how emotional relationships with peers impacted adolescents' sympathy, academic efficacy, aggression, anxiety, and depression. Adolescents who scored high on attachment to parents as well as to peers scored the highest on overall adjustment. Those who scored low on attachment with both groups fared the worst on overall adjustment. Interestingly, adolescents who scored high on peer attachment but low on parent attachment were better adjusted than those who scored high on parent attachment but low on peer attachment. This study not only suggests that peers can become attachment figures for adolescents, but that peers may be more influential on adolescents than parents.

The work of Laible et al. (2000) also supports the importance of multiple attachment figures, outside of just the caregiver-child relationship, in promoting healthy adolescent development. It can be argued that any significant relationship in an individual's life may result in a new attachment. If the relationship is positive, a secure attachment may form. If the relationship is negative, an insecure attachment may form. The ability to form new attachment relationships, whether positive or negative, is particularly important during adolescence because

the development of friendships, romantic partnerships (Rholes & Simpson, 2004), mentoring relationships (Rhodes, Spencer, Keller, Liang, & Noam, 2006), teacher relationships (Commodari, 2013), and other new relationships become key at this developmental stage.

Further empirical evidence from adolescent and adult attachment studies has also shown that attachment styles can and do change over time. Although attachment security is primarily set in infancy, what happens in infancy loses its power to predict adjustment in adolescence as other factors that shape personality and psychological functioning become more salient. These factors include peer influence, school environment, neighborhood characteristics, and genetic characteristics (Haworth Wright, Luciano, Martin, de Geus, Van Beijsterveldt, & Plomin, 2010). Furthermore, change is particularly likely when an individual experiences a high number of negative life events (Waters, Merrick, Treboux, Crowell, & Albersheirn, 2000; Weinfield, Sroufe, & Egeland, 2000; Weinfield, Whaley, & Egeland, 2004) or a nurturing environment much different from their original upbringing (Smith, 2011). Sroufe, Egeland, Carlson, and Collins (2005) argue that any major change in social support or life stressors may impact one's attachment style and subsequent relationships with others. Research that supports this assertion is discussed in the following section.

**Change in attachment across the lifespan: Context matters**

In one of the first longitudinal follow ups to the original Ainsworth Strange Situation task developed to identify attachment styles based on caregiving behaviors in 1978, Waters et al. (2000) contacted 50 participants who completed the Ainsworth Strange Situation task at 12 months to assess whether their attachment style remained the same in their early twenties. Using the Berkley Adult Attachment Interview, researchers found that 72% of participants received the same attachment classification in early adulthood as in infancy. Researchers concluded that

under ordinary circumstances, attachment styles generally remain constant over time. However, they found that attachment styles tended to change when negative life events changed caregiver behavior. Fifty-six percent of participants whose mothers reported negative life events changed attachment classifications between infancy and their early twenties. Negative life events included: a) loss of a parent, b) parental divorce, c) life threatening illness of parent or child (e.g., diabetes, cancer, heart attack), d) parental psychiatric disorder, and e) physical or sexual abuse by a family member. In this study, most of the attachment classification changes were from secure to insecure attachment. However, one participant's parents responded with consistent and sensitive care when the participant was diagnosed with a lifelong illness in childhood. This participant's attachment style changed from insecure to secure. Furthermore, eight participants experienced significant stressful life events, yet retained their infant attachment style. Nine participants reported no such life events yet changed their attachment style. These results led researchers to conclude that attachment security can be stable across significant portions of the lifespan, yet remain open to change in light of both negative and positive life experiences.

One major critique of this study is the lack of racial and socioeconomic diversity in the sample. Every participant in the study was White and from a middle-class background. The authors noted that having a middle class sample was advantageous for a variety of reasons; they contended that the educational background, social support structures, and general life stability of participants made it easier to locate infants 20 years later and contributed to much of the stability witnessed over time. However, this study's findings cannot be generalized to other populations such as people of color or those with a different socioeconomic background, who may experience more chaotic life environments than the study participants.

However, longitudinal research does exist which examines attachment security in a more diverse sample in terms of race and socioeconomic status. Weinfield et al. (2000) conducted a study of 57 adults who completed the Ainsworth Strange Situation task in infancy and were interviewed at age 19 using the Berkeley Adult Attachment Interview. The sample was intentionally selected to understand the attachment processes among those living in poverty and at high risk for poor developmental outcomes. In terms of racial distribution, 61% of the sample was White, 16% was Black, and 23% was from a mixed racial background. In terms of socioeconomic status, mothers in the study were young, mostly single, and had family incomes at or below the poverty level. In addition, their pregnancies were not planned, and 40% of mothers had not graduated high school.

Weinfield et al. findings were much different than those based on Waters et al.'s exclusively White, middle-class sample. First, 91.2% of the sample experienced negative life events consisting of being born to a single mother, parental divorce, life threatening illness of parent or child, serious parental drug or alcohol problem, childhood physical or sexual abuse, and/or death of a parent or other custodial attachment figure. Second, the predominant attachment style found in infancy among this sample was the insecure attachment style, as opposed to the secure attachment style predominant among the White, middle-class sample. Finally, the researchers found no evidence of significant continuity between infant and adult attachment styles in this sample. Results indicated that child maltreatment, maternal depression, and family functioning in adolescence played major roles in the discontinuity of attachment styles. Child maltreatment was much more likely to occur for participants with an insecure-to-insecure attachment over time. Maternal depression, on the other hand, significantly influenced participants who moved from attachment security to insecurity. Not all attachment changes were

negative, however.  Positive family functioning played a major role in participants moving from insecure to secure attachment across time.  Ultimately, researchers believe that the high incidence of negative life events and the resulting chaotic caregiving environment for this population strongly impacted the high rate of change in attachment security over time.

In further support, Weinfield et al. (2004) examined another diverse sample of 267 women to assess continuity of attachment styles throughout development.  All of the 267 mothers were living in poverty, they were young (Median = 20, range = 12–34), and 82% of their pregnancies were unplanned.  Most were single, and many had not graduated high school. The racial breakdown of the sample was 80% European American, 13% African American, and 7% Hispanic or Native American.  At age 19, 169 child participants were interviewed to assess the continuity of their attachment style with the addition of the disorganized attachment style classification, which was not yet developed in previous longitudinal studies.  Researchers found little continuity in organized attachment from infancy to late adolescence in this high-risk sample, as well.  The discontinuity of attachment style has also been found disproportionately in White, middle class samples who experienced parental divorce (Lewis, Feiring, & Rosenthal, 2000).  Attachment theory is especially applicable to youth in foster care given the high incidence of negative life events these youth experience.

**Utilizing attachment theory to inform relational permanence in foster care**

The application of attachment theory can be useful in understanding the developmental processes of children in the foster care system. These developmental insights can be used to inform child development outcomes and improve child welfare practice and policy. Development of the personality, character, and socio-emotional well-being of children is often tied to the relationship-based experiences children have throughout their lives (Fairchild, 2006).

Though my dissertation does not directly examine Bowlby and Ainsworth's formal attachment classifications, it does test hypotheses that are grounded in the main tenants of Bowlby and Ainsworth's work.

Children and adolescents in foster care are at risk of experiencing numerous negative life events (neglect, abuse, parental incarceration, etc.) that result in their contact with the system. It is reasonable to assume that foster children's internal working models are likely altered to reflect the negative life events they experience. It is also likely that these experiences may lead to the development of insecure attachments. Researchers have found that many foster care youth experience difficulty forming healthy relationships. This is presumably due to chaotic life circumstances and inadequate parenting from biological parents (Harden, 2004).

The current literature supports the claim that relationship bonds of foster care youth can and do change over time depending on a variety of factors. Studies have found that adolescents in foster care are able to form secure attachments with foster parents, even when their relational attachment to their biological parents remains insecure (Joseph, O'Connor, Briskman, Maughan, & Scott, 2014). It is for this reason that having relational permanence outside of the biological parent relationship may play such a critical role in the lives of foster care youth. Some researchers even recommend that *the* central focus of child welfare services should be the establishment or repair of positive child-parent or child-surrogate relationships (Lawler, Shaver, & Goodman, 2011). The bottom line is that children and adolescents in the foster care system need someone to have a positive, long term relationship with while in care and afterwards. This individual could be a biological parent, foster parent, friend, teacher, mentor, coach, or therapist.

The foster care system can take steps to address the relational needs of those in its care. As many children and youth in foster care receive services for mental health care (Craven & Lee,

2006), mental health services may also be important in promoting relational permanence for foster care youth. Travis, Bliwise, Binder, & Horne-Moyer (2001) found certain types of therapy, such as time-limited dynamic psychotherapy, can be beneficial in changing attachment patterns. The relationship developed between the client and therapist can improve an individual's attachment with other important people in the person's life. Therapy is only one area that may be correlated with improved attachment of foster youth.

An estimated 22% to 70% of foster care placements disrupt in a given year (Blakey, Leathers, Lawler, Washington, Natschke, Strand, & Walton, 2012). Constant change in the lives of foster care youth, such as when a child undergoes several foster home placements with little emotional or psychological support, may result in negative developmental outcomes. Alternatively, stronger relationship bonds may form if children are placed in the care of consistent and supportive foster care parents and receive appropriate mental health services. This dissertation examines whether the continuity of relationships occurs in foster care, whether it changes significantly over time, what predicts to relational permanence, and the correlation between relational permanence and positive outcomes for African American adolescents in foster care.

In the next section, I present a detailed overview of the child welfare system, followed by an exploration of the unique developmental tasks of adolescence and the transition to adulthood respectively. I then present an exploration of the transition to adulthood specifically for youth in foster care, and end the section with a discussion of the unique needs of African American adolescents who are transitioning to adulthood in the context of the foster care system. The role that relational permanence may play in their development is explored throughout this literature review.

**Context of Child Welfare**

The child welfare system is a public agency responsible for the safety, permanency, and well-being of infants, children, and adolescents in its care. Child welfare workers determine whether parents or other caregivers are adequately providing for the basic needs of youth in their care (Mallon & Hess, 2005). When someone in the community believes a child is being abused or neglected, a child welfare hotline call is often made and a child welfare worker visits the home of the child to determine if abuse or neglect is taking place. If the child welfare worker determines that the child's needs are being met and/or no abuse is taking place in the home, then the child welfare report is not substantiated and the child remains in the home without further intervention. However, if the child welfare worker determines the child's needs are not being met and or abuse is taking place in the home, then the child welfare report is substantiated. A substantiated report of child maltreatment occurs when a child welfare worker determines that a parent or permanent caregiver is responsible for the neglect, abuse or otherwise inadequate care of a child or adolescent (Kirst-Ashman, 2010). Further action is required when a child welfare report is substantiated.

Neglect is defined as the failure to provide any child proper or necessary nourishment including food or care that addresses needs related to any mental or physical impairments. Abuse is defined as physical injury, sexual molestation, or impairment of the emotional health of the child by a parent, immediate family member, or caregiver (Children and Family Services Act, 2016). The Child Welfare Information Gateway (2014) offers more detailed definitions of each type of child maltreatment:

- **Neglect** occurs when a parent or caretaker fails to provide for the needed food, clothing, shelter, medical care, or supervision of a child, which threatens the child's health, safety, and well-being. In some states, failure to educate a child and withholding medical or mental health treatment is also considered neglect.

- **Physical abuse** occurs when any non-accidental physical injury happens to a child. This can include striking, kicking, burning, biting, or any physical impairment to a child. In this definition, physical abuse occurs whether physical injury is present or absent.

- **Sexual abuse** occurs when any inappropriate sexual behavior transpires with a child including child prostitution, child pornography, or using a child for any sexual purposes.

- **Emotional abuse** occurs when injury in the psychological capacity causes changes in behavior, emotional response, or cognitions of a child resulting in anxiety, depression, withdrawal, or aggressive behavior.

Neglect is by far the most common form of child maltreatment (Sedlak, Mettenburg, Basena, Petta, McPherson, Greene, & Li, 2010). Parental substance abuse and child abandonment are also considered forms of child abuse and neglect. Contact with the child welfare system also occurs in cases of parental incarceration (Andersen & Wildeman, 2014) or lack of access to mental health services for the child (Bringewatt & Gershoff, 2010).

As mentioned above, when any allegation of child maltreatment is substantiated, or in the case of parental incarceration or substance abuse, the state is mandated to provide services through the child welfare system (Depanfilis, 2005). In-home services are provided when it is determined that a child can safely remain in the home while receiving services to improve the

parent's level of care. In-home services assist families in solving the problems that caused abuse or neglect through intensive home-based services such as family crisis services or family-centered services. When it is determined that the child or adolescent is not safe to remain in the home, the state provides out-of-home services. These services are typically referred to collectively as *foster care* and include, but are not limited to kinship care, family foster care, therapeutic and medical foster care, group homes, supervised independent living programs, and residential treatment centers (Mallon & Hess, 2005). When a child receives out-of-home services, their parent must take special steps to ensure that they have remedied the original abuse or neglect and are able to be reunited with their child (Fuller, 2005). In cases where returning the child to the primary caregiver would not be in the best interest of the child, it is determined that reunification cannot be achieved. (This is often when the termination of parental rights occurs.) In this case, the child has several different permanency options. These options include: a permanent placement with relatives, adoption, long-term foster care, guardianship, or emancipation (Mallon & Hess, 2005).

Adolescents who are not able to return to their primary caregivers because of the termination of parental rights and/or are unable to find permanent homes are emancipated from the foster care system or "age out" into adulthood without achieving permanency with an adult figure who is responsible for their care (Institute of Medicine and The National Research Council, 2014). In some states, youth can remain in foster care until their twenty-first birthday, but in most states, youth cannot remain in care past their eighteenth birthday (National Resource Center for Youth Development, 2014). As of January 2013, 18 states offered extended foster care beyond the age of 18 (Casey Family programs, 2016). Many youth in foster care have no

choice about when they are emancipated from the foster care system; state policy determines when they are considered adults (Courtney & Heuring, 2005).

In 2014, there were 415,129 children in foster care in the United States, with 18,934 of them with the case plan goal of emancipation (US Department of Health and Human Services, 2015). The challenges these youth face are formidable. Adolescents in the foster care system not only have to deal with the instability that often plagues foster care youth in the form of disrupted social ties with family members, multiple placement moves, and high caseworker turnover (Jones, 2014), but they also must navigate these issues while dealing with the normative developmental challenges of adolescence. Experiencing adolescence in any context is challenging. However, within the context of the foster care system, this developmental transition is even more daunting. In the next section, an overview of the unique developmental tasks of adolescence is presented, followed by a discussion of the unique risks for African American adolescents in foster care.

## Unique Developmental Tasks of Adolescence

Adolescence is the time period between childhood and adulthood when youth experience rapid changes in physical, cognitive, emotional, and social development (Collins & Steinberg, 2006). The period of adolescence is a social construct, because the beginning and ending of adolescence is determined by societal criteria rather than any developmentally relevant measures (Kett, 2003; Towbin & Showalter, 2008). There are major problems in defining the beginning of adolescence as synonymous with the onset of puberty. Being able to physically reproduce does not mean that a person possesses the long-term decision making skills that are expected in adulthood. Also, the timing of puberty differs by race and sex.

Euling and colleagues (2008) found that African American boys and girls on average experience puberty earlier than European American boys and girls.  African American girls are more likely to experience breast development, pubic hair development and menarche earlier than Mexican American and European American girls.  African American boys are more likely to experience an earlier onset of genital and pubic hair development than European American boys.

In addition to racial differences, there are gender differences in the timing of puberty. Towbin & Showalter (2008) reviewed the literature on gender differences and consistently found that females begin puberty, on average, two years earlier than males and continue to mature more quickly across adolescence.  The onset of puberty begins earlier for girls and continues to differ by race.  Biro and colleagues (2012) found the median onset of breast development to be 8.8 years, 9.3 years, 9.7 years, and 9.7 years for African American, Hispanic, White-Non Hispanic, and Asian girls.  Choosing one age to indicate the onset of puberty does not take into consideration the variations in pubertal timing (Susman & Dorn, 2009).  Depending on an individual's race and sex, the average age of puberty varies widely. To choose one objective age for the onset of adolescence does not take the above information into consideration.

In a similar manner, the ending of adolescence and the transition to adulthood are also dependent upon which societal marker is being considered.  A person may be considered an adult at age 18, when they are able to vote or register for military service, or at age 21, when they are legally permitted to drink.  Car rentals come with restrictions and added fees until the driver is 25 years of age, so is that considered "true" adulthood? Or maybe 26 is the age when a person is considered an adult, as this is when the Affordable Care Act says that parents may no longer include their children on the parents' health insurance.  Based on these age differences, it is clear

not only that societal expectations towards achieving adulthood vary, but that they are pushing the end of adolescence later and later into the lifespan (Furstenberg, 2010).

While there may be contention about the objective beginning and end of adolescence, there is considerable consensus on the importance of the unique developmental tasks of this stage of life. Adolescence is a time of major transitions in a person's biological, cognitive, emotional, and social domains during which youth have a newly developed independence to explore the world without parental supervision (Compas & Reeslund, 2009). Adolescents are also in the process of navigating their social world by establishing autonomy from parents, spending increasing amounts of unsupervised time with peers, and exploring questions of identity and sexuality for the first time (Brown & Larson, 2009). This new found independence may lead to a plethora of opportunities that can lead to increased risks. For example, rapid hormonal changes in adolescence, brought on by puberty, oftentimes affect arousal and motivation before self-regulatory processes are fully developed (Brynes, 2002). Specifically, these hormones increase arousal and emotionality. This increase in arousal and emotionality, coupled with a delay in self-regulatory processing, has a major impact on the perception and evaluation of risk and reward in adolescence (Steinberg, 2005). Risk-taking during adolescence ultimately gives the individual a greater reward at the neurobiological level, compared to risk-taking during adulthood, which therefore helps to explain increased risk-taking in adolescence as compared to adulthood.

Though adolescence is often characterized as the impetus for increased emotionality leading to increased risk, these characterizations often overlook the possibility of strong emotionality in a positive direction. For instance, the strong emotionality of adolescence can ignite adolescents' passions for prosocial community efforts such as being actively involved in the community, caring for the sick, or conducting political advocacy for issues deemed important

(Dahl, 2004).  Youth in the general population often have ample opportunities to explore these normative developmental issues within the context of stable home environments.  Youth in the foster care system do not have this privilege.

**The Transition to Adulthood**

The age at which adolescents achieve many of the traditional social markers of adulthood such as leaving home, completing school, marrying, and having children has increased compared to previous generations (Arnett, 2007). As cited by Jones (2014), according to the  US census, youth in the general population leave home around age 23 and often return after a failed attempt at living independently (Furstenberg, 2010; Williams, 2005).  In the mid-2000s, the average age children in the general population finally departed from home for independence was 28 (Clark & Davis, 2005; Mouw, 2004).  As a result, youth in the general population receive increased levels of support from parents years after what has traditionally been considered the end of adolescence.  This increased support now continues well into youths' 20s and even 30s (Settersten, Furstenberg, & Rumbaut, 2008).

In addition to social markers, there are neurobiological markers of the transition to adulthood.  Studies indicate that the prefrontal cortex of the brain, primarily responsible for the executive functioning that underlies much of cognitive development, does not fully mature until the mid-30s.  This leaves those during the transition to adulthood at a distinct disadvantage in regards to risk taking and decision making, factors that can have long lasting implications (Institute of Medicine and The National Research Council, 2014).

The social and biological developments occurring during this period are substantial for all adolescents transitioning to adulthood.  The timing of these developmental processes is a major

disadvantage to those youth who do not have consistent family support (Furstenberg, 2010).

Unfortunately, children and youth in foster care do not have the same level of support as those in

the general population as they prepare for the transition to adulthood (Avery & Freundlich,

2009), leaving them at high risk for a variety of negative developmental outcomes.

## Adolescents Transitioning to Adulthood in Foster Care

Before they ever transition into adulthood, youth in foster care are faced with a wide

variety of challenges that affect their development as adolescents. First, the mere removal from

the biological family home and placement into a foster care setting disrupts a child's social

network, often leading to the loss of family, peer, and neighborhood supports (Jones, 2014).

Second, numerous placement changes make it difficult to develop new and lasting sources of

social support (James, Landsverk, & Slyman, 2004) and increases psychological distress

(Vranceanu, Hobfoll, & Johnson, 2007).  Friendships often must end abruptly and

boyfriend/girlfriend relationships are terminated without the ability to say goodbye.  If youth

have part-time jobs, they must quit.  All of these social disruptions create a significant barrier to

the youth's developing a sense of belonging and control, and a sense that their desires and

experiences are important to others (Stott & Gustavsson, 2010).  Johansson and Hojer (2012)

found that among adolescents in foster care, those who were emancipated leave care without the

social, cultural, and economic capital of their parents.  These adolescents transitioned to

adulthood alone because they lacked the formal and informal support systems that parents in the

general population provide their children to assist them with a positive transition to adulthood.

Being separated from essential sources of support while dealing with normative developmental

challenges poses formidable challenges to positive development.

In addition to social ties, education is another important context for adolescents in developing identity, forming friendship, and handling increasing academic expectations (Eccles, Midgley, Wigfield, Buchanan, & MacIver, 1993). Education is a particularly difficult hurdle for foster care youth, as each placement move can disrupt continuity in their education and school-based relationships (Jones, 2014). In one study, while frequent school changes did not lead to lower academic progress among foster care youth they did lead to increased reports of school behavior problems (Sullivan, Jones, & Mathiesen, 2010). Increased behavior problems may contribute to the low rates of high school graduation among foster youth. High school and post-secondary graduation rates are consistently lower among foster care youth than in the general population (Graham, Schellinger, & Vaughn, 2015). Only 39% to 65% of youth in care earn a high school or Graduate Equivalency Diploma before aging out of the system (Barth, Courtney, Berrick, & Albert, 2004; Courtney & Dworsky, 2005; Pecora et al., 2005). Although the causal direction between some of these studies is unclear, it is important to note that education is yet another domain in which foster care youth fare worse than the general population.

Many foster care youth also face a myriad of problems, including food insecurity, homelessness, lack of access to health and mental health services, unplanned pregnancies, unemployment, and involvement with the criminal justice system during and after their time in care (Courtney et al., 2011). Adolescents in the child welfare system are much more likely to also be involved in the juvenile justice, mental health, and substance abuse systems (Shook et al., 2011). Multiple service involvements between the child welfare and juvenile justice systems are especially prevalent. Ryan and Testa (2005) found that substantiated victims of child maltreatment were approximately 47% more likely to have a delinquency petition compared to the general population.

After facing all of these obstacles to adolescent development, adolescents who finally age out of foster care often experience an abrupt end to adolescence. Many forms of instrumental support (housing or financial assistance) and emotional support (advice, guidance, and comfort) end when they no longer receive assistance from the child welfare system (Avery & Freundlich, 2009; Wills & Shinar, 2000). Therefore, it is no surprise that foster care youth are repeatedly demonstrated to be disadvantaged when compared to same-aged peers in the general population (Osgood, Foster, & Courtney, 2010).

Many argue that the negative outcomes for youth in foster care are due to the expectation that emancipated adolescents move abruptly into adulthood without the emotional and financial resources youth in the general population receive (Avery & Freundlich, 2009; Geenen & Powers, 2007; Jones, 2014). For reasons discussed below, these negative outcomes are particularly salient for African American youth who transition to adulthood in the context of the foster care system.

### African American Adolescents in Foster Care

African Americans represent 12% of the population of children under the age of 18 (Colby & Ortman, 2015), yet constitute 24% of the population of children in foster care (US Department of Health and Human Services, 2014). Contrast these figures with the percentages for Whites: White youth represent 62% of children in the United States under the age of 18 (Colby & Ortman, 2015), but they comprised only 42% of those in foster care (US Department of Health and Human Services, 2014). These figures demonstrate the ongoing overrepresentation of Black youth in foster care and have direct implications for the overrepresentation of older African American youth and adults in other allied service systems

such as juvenile justice and adult corrections (Ryan, Herz, Hernandez, & Marshall, 2007).

Originally excluded from the child welfare system due to racial discrimination (Smith & Devore,

2004), Black youth have long had higher rates of foster care placement than White youth (for

review see Billingsley & Giovannoni, 1972).  There is contentious debate as to why these racial

disparities persist.

Roberts (2014) asserts that racial disparities in child protection services are due to racial

inequities, which show themselves through racial bias in the identification of which children are

being maltreated and subsequently placed into foster care.  By conducting an analysis of child

welfare policy at the national level regarding its implications for African American families,

Roberts (2002) concluded that child welfare services primarily punish predominately Black

families in poverty rather than addressing the underlying manifestations of poverty that

disproportionately affects these families.  Though national child welfare policy gives the

appearance of having in mind the best interest of all children, Roberts contests that these social

services were originally established primarily to serve White children and have done little to

adapt to the needs of Black children and families.  She further argues that the criminal justice

system and foster care system work together to perpetuate social and racial inequities, as an

increasing number of the African American women who have been incarcerated as a result of the

"war on drugs" are mothers (Roberts, 2012).  Once incarcerated, these women lose the ability to

care for their children and oftentimes have their parental rights terminated as a direct result of

being imprisoned (Halperin & Harris, 2004).  According to Roberts (2002), child welfare policy

in conjunction with criminal justice policy has led to the destruction of the Black family.

Bartholet, Wulczyn, Barth, and Lederman (2011), on the other hand, believe that racial

bias is not the cause of the disproportionate number of African American children in the foster

care system.  Rather, there is a disproportionate need for foster care services among African American families as opposed to a disproportionate response. The child welfare system is working exactly as it was intended, Bartholet (1999) contended.  According to the Fourth National Incidence Study of Child Abuse and Neglect (NIS-4) the rates of maltreatment among Black children was significantly higher than those for White or Hispanic children. These differences occurred at nearly every level of maltreatment and particularly those concerning neglect, and physical abuse (Sedlak et al, 2010).  Bartholet (2009) asserts that there is no evidence that child welfare decision-making is systematically biased to remove African American children from their biological homes.  Rather, Black parents are more likely to be represented in groups at high risk for maltreatment and who disproportionately face extreme poverty, unemployment, substance abuse problems, and mental health problems.

Drake, Jolley, Lanier, Fluke, Barth, and Johnson-Reid (2011) agree that racial disproportionality in Black children is attributed to higher risk of child maltreatment rather than reporting bias.  They examined poverty data taken from the 2008 U.S. Census, NIS-4 estimates, and mortality and birth infant health outcomes to examine whether the theories of racial bias or disproportionate risk better explain racial disproportionality among Black and Hispanic children compared to White children.  The authors found that racial bias in reporting was less of a contributor to racial disproportionality than disproportionate risk for child maltreatment associated with poverty among Black children.  Latino children were more likely to experience protective moderating factors between poverty and poor outcomes (also known as the "Hispanic Paradox") which led to similar levels of health outcomes as compared to White children despite having poverty rates closer to those of Black children.

Furthermore, other contend that kinship placements and same race placements based solely on the continuity of Black culture are in fact a hindrance to the development of Black children, as these placements are often given fewer resources than traditional foster home placements (for review see Andersen & Fallesen, 2015). Kinship care has also been found to increase the likelihood of juvenile justice involvement among Black adolescents (Ryan, Hong, Herz & Hernandez, 2010). Bartholet et al. (2011) argues that focusing on the larger structural issues that cause poverty, joblessness, failing schools, and crime would be more advantageous than focusing on racial bias as a contributor to African American children's overrepresentation in foster care.

It is difficult to tease out which factors are responsible for foster care overrepresentation, as poverty and child welfare involvement are often conflated. For example, children and adolescents living in concentrated poverty are more likely to come from female-headed households, neighborhoods with high crime rates, and families living in public housing. All of these conditions are likely to increase the rate of child welfare involvement. Furthermore, these conditions have an impact on parenting behaviors, which lead to poorer health and developmental outcomes for the children (Hines, Lemon, Wyatt, & Merdinger, 2004).

Even after considering the different contexts in which children are raised, one could reasonably argue that structural racism and discrimination contribute to the overrepresentation of Black families in foster care. Racial disparities continue to exist even after an adolescent exits the child welfare system. Harris, Jackson, O'Brien, and Pecora (2009) conducted follow-up surveys among foster care alumni served by Casey Family programs between 1966 and 1998. The authors report that compared to White foster care alumni, Black foster care alumni were less likely to have incomes at or above the poverty line, less likely to have household incomes at

three times the poverty line, and less likely to own their own home or apartment. The racial disparities in the general population between Blacks and Whites in regards to wealth, poverty, and income during the transition to adulthood are well documented in the literature (Hardaway & McLoyd, 2009). These differences are likely to be exaggerated for those within the foster care system.

This dissertation focuses solely on African American adolescents because of their overrepresentation in the child welfare system and the unique challenges they face in their transition to adulthood. Specifically, my studies focus on the well-being of this underserved population. As the child welfare system is responsible for the safety, permanency, and well-being of the children and adolescents in its care, a focus on developing well-being is necessary. However, the child welfare system has historically focused the majority of its resources on establishing safety and permanency for those under its care, with few resources directed toward fostering children's well-being (Altshuler & Gleeson, 1999). In recent years, the child welfare system has finally begun to examine well-being in relation to foster care youth outcomes (Walsh, 2015). The current dissertation seeks to add to this research by identifying factors that play a role in supporting positive developmental outcomes, with the hope of enabling the foster care system to become more solutions-focused rather than only risk-adverse.

**Overview of Chapters**

This dissertation is comprised of two distinct studies, both of which make use of the African American subsample of the Child and Adolescent Needs Assessment (CANS) to test hypotheses grounded in attachment theory. The study spans the time between the CANS assessment 1 (Time 1) and assessment 2 (Time 2) when youth were in the foster care system. In

each study I examine different cross-sectional and longitudinal aspects of relational permanence in relation to the unique context of African American adolescents in the foster care system.

In Study 1 (Chapter 2), I examine the prevalence of relational permanence at the time of the first assessment. Youth come into foster care for a variety of deleterious reasons as reviewed above. It is important to establish whether relational permanence exists at all among this population. In Study 1, I also test the capacity for change in relational permanence between Time 1 and Time 2. Negative life experiences of adolescents in foster care impact youth relationships and alter their internal working models regarding their expectations of others (Atwool, 2006). The change in their expectations of others can be in the positive direction if foster care is more stable than their biological home or negative direction if foster care creates more instability in their lives. Either way, it is important to establish whether significant change in relational permanence occurs as a result of contact with the foster care system. Finally, I examine the predictors of relational permanence at Time 2. Maltreatment type, interpersonal skills, school achievement, caregiver financial and social assets, number of placement moves, and time spent in care are evaluated as predictors of relational permanence at the time of the second assessment.

In Study 2 (Chapter 3), I examine the correlation between relational permanence and positive outcomes for adolescents in foster care. I specifically explore whether African American adolescents in foster care who have high levels of relational permanence at Time 1 have higher school achievement, higher psychological well-being, and lower delinquency at Time 2. For those individuals who do have a positive change in relational permanence between Time 1 and Time 2, I examine whether that positive change is associated with higher school

achievement, higher psychological well-being, and lower delinquency at Time 2 compared to those who maintain their level of relational permanence.

To conclude, I discuss in Chapter 4 how both studies contribute to the broader literature on child development and child welfare practice and policy, with a particular focus on the importance of child well-being in relation to foster care youth outcomes. Suggestions for future research are presented.

**CHAPTER II**

Identifying Factors that Predict to Relational Permanence Among African American Adolescents

in Foster Care (Study 1)


**Introduction**

This study explores whether relational permanence plays a major role in the

developmental processes of African American adolescents in the foster care system.  Given the

many systemic and developmental risks mentioned in the previous chapter, identifying the

prevalence, potential change in, and predictors of relational permanence is important as relational

permanence may play a role in fostering positive developmental outcomes.  Understanding the

processes that allow youth to navigate this developmental period without encountering

significant psychological or health problems has major practical implications for at-risk youth

(Compas & Reeslund, 2009). This chapter focuses on three issues pertaining to relational

permanence among African American adolescents in the foster care system, specifically, its

prevalence, capacity for change, and predictors.

Children and adolescents come into contact with the foster care system for a variety of

deleterious reasons (Mallon & Hess, 2005). As reviewed in the previous chapter, these reasons

often involve abuse and neglect, but can also include issues such as parental incarceration and

the mental health needs of the child.  Though there is overlap between children in foster care

(who are often impoverished) and children living in poverty without foster care contact, there are

still unique differences between the two populations. Children in foster care have higher rates of chronic health problems, emotional problems, and developmental problems when compared to similarly low-income children not in foster care (Hansen, Mawjee, Barton, Metcalf, & Joye, 2004).

Given the variety of reasons why youth come into care, it is important to establish whether relational permanence exists at the time of entry into the foster care system. It is possible that the experiences of abuse and neglect at the hands of primary caregivers leave long-lasting negative impressions. For instance, youth may no longer be able to form durable relationships as a result of their abuse and neglect. On the other hand, it is possible that youth are able to form lasting relationships with others outside of their primary caregiver who can provide supportive relationships based on trust and respect (Joseph et al., 2014; Samuels, 2008). Collins, Spencer, and Ward (2010) found that youth who transitioned from foster care have many different sources of social support. However, of the studies done on this topic, few have focused specifically on the identification of relational permanence for African American youth within foster care. This study closes that gap in the literature.

Changes in attachment styles and/or relationships can be influenced by any major life stressor (Sroufe et al., 2005). As a result of their contact with the foster care system, adolescents in this study have already had at least two negative life events occur in rapid secession. First, they experienced substantiated abuse and/or neglect from their primary caregiver. Second, they were removed from their homes and placed into care. Beyond these initial negative life events, older youth in foster care often have unique experiences that put them at greater risk for negative developmental outcomes (Lockwood, Friedman, & Christian, 2015). For instance, older youth in foster care often experience multiple placement moves (D'Andrade, 2005). Each move comes

with adaptations to new caregivers, new caregiving styles, new schools, new neighbors, and new communities.  It is reasonable to assume that these changes, caused by residential instability, change the type of relational bonds youth have with others (Waters et al., 2000; Weinfield et al., 2000; Waters et al., 2004) and alter their internal working models regarding their expectations of others (Atwool, 2006).  Given the theoretical and empirical literature, I examine whether relational permanence changes over time between Time 1 and Time 2 with consideration for the unique context of the foster care system.

The third goal of Study 1 is to identify the predictors of relational permanence for African American adolescents in the foster care system.  The predictors of relational permanence are measured at Time 1 at the individual, caregiver, and system levels.  The purpose of measuring predictors at different levels is to examine, in a multilevel manner, positive adaptation in the face of risk—an important step in understanding the mechanisms involved in adaptive development (Masten, 2007).  Relational permanence is measured at Time 2.  Study 1 tests six hypotheses about predictors of relational permanence.  These hypotheses and their respective rationales are presented below.

**Hypothesis 1**

Cushing and colleagues (2014) found that former foster care youth who experienced sexual abuse were less likely to have relational permanence at age 22 compared to those who experienced physical abuse and neglect.  Former foster care youth who experienced neglect alone were more likely to have relational permanence at age 22 compared to those who experienced physical abuse and sexual abuse.  The latter difference, however, only approached statistical significance.  Physical abuse was unrelated to relational permanence, and emotional abuse was not included in the analyses.  These findings suggest that the type of maltreatment

foster care youth experience may be related to the level of relational permanence that is developed later on. It is possible that the experience of abuse leaves lasting impressions that make it difficult to establish lasting relationships with others. By comparison, youth who experience neglect may be more likely to form lasting relationships because their maltreatment is related more to poverty than to physical violence at the hands of a caregiver. It is also possible that those who experience abuse are able to form lasting relationships with others outside of their primary caregiving role in some instances but not in others (Joseph et al., 2014; Samuels, 2008). However, most research has looked strictly at relational permanence outcomes with caregivers; few studies have examined whether the type of maltreatment a child experiences plays a role in the continuity of social relationships. Based on Cushing and colleagues' (2014) research that former foster care youth who experienced neglect alone were more likely to have relational permanence later on, I hypothesized that the experience of neglect alone would be correlated with higher levels of relational permanence at Time 2 compared to the experience of neglect in combination with any type of abuse.

**Hypothesis 2**

Social networks act as a medium for building social capital, facilitating the flow of information and potentially providing resources which may lead to functional and concrete supports (Snow & Mann-Feder, 2013). Pettit, Erath, Lansford, Dodge, and Bastes (2011) report that children who reported having high social skills at age 12 had significantly higher levels of social capital at age 22. Graham, Schellinger, and Vaughn (2015) interviewed transition-aged foster care youth and those who worked closely with them such as county caseworkers and representatives from various organizations serving foster youth. They note that foster care youth benefitted from having strong sources of social support because they had the opportunity to

35

cultivate interpersonal skills during the course of these social relationships. Many youth in foster care lack the interpersonal skills needed to build social relationships, which impedes their ability to develop and maintain social relationships. It is important to establish whether the level of interpersonal skills a youth has at Time 1 is correlated to their level of relational permanence at Time 2. Social capital has been linked to several positive life outcomes such as occupational viability, individual health, and psychological well-being (Baker, 2000). Given the findings of Pettit et al (2011) that children who reported having high social skills at age 12 had significantly higher levels of social capital at age 22, I hypothesized that higher levels of interpersonal skills at Time 1 would predict higher levels of relational permanence at Time 2.

**Hypothesis 3**

Miller Dyce (2015) asserts that among African American youth involved in the foster care system, the school system acts as a major socializing agent. It provides adolescents the opportunity to develop peer relationships and extended social networks filled with teachers, coaches, and other mentors. She goes on to state that many African American adolescents in the foster care system, particularly males, often have poor academic achievement. However, those with high academic achievement possessed several positive characteristics including the need of affiliation with others. Miller Dyce (2015) concluded that further research needs to be conducted to identify and measure the impact of high academic achievement for African American adolescents who are part of the foster care system. This is especially the case when high academic achievement may act as a proxy for social capital, impulse control, and intellect given the positive interactions with peers, teachers, and administrators. Taking into account Miller Dyce's (2015) findings that high academic achievement may be correlated with the need to

36

affiliate with others, I hypothesized that higher levels of school achievement at Time 1 will be

correlated with higher relational permanence at Time 2.


**Hypothesis 4**

Based on their review of the literature, Conger, Conger, and Martin (2010) concluded that

parental investment is a pathway through which higher socioeconomic status (SES) and greater

economic resources produce positive child development outcomes. High SES is often an

indicator of parental investment and related to positive child development outcomes.  Positive

outcomes in the authors' review of the literature included cognitive competence, social

competence, school success, attachment to parents, and low levels of internalizing and

externalizing behaviors.  Johansson and Hojer (2012) confirm that among adolescents in foster

care, those who are emancipated leave care without the social, cultural, and economic capital of

their parents.  These adolescents transition to adulthood alone because they lack the formal and

informal support systems that parents in the general population provide their children to assist

them with a positive transition to adulthood.  The association between low levels of financial

resources and negative developmental outcomes is also documented for African American

families (Conger, Wallace, Sun, Simons, McLoyd, Brody, 2002).  African American adolescents

in foster care who transition to adulthood have a unique developmental context for the reasons

mentioned in the previous chapter.  It is important to know whether having caregivers with

financial and social assets is correlated to the development of relational permanence for African

American adolescents in foster care, as well.  Taking into consideration the findings of Conger et

al (2010) that a higher SES is correlated with positive child developmental outcomes, I

hypothesized that higher levels of financial and social assets among caregivers at Time 1 would predict higher relational permanence at Time 2.

**Hypothesis 5**

Perry (2006) noted that each foster placement move disrupted youths' most important social relationships. He reports that the number of placement moves was inversely related to the number of individuals that youth had in their social network. Vig, Chinitz, and Shulman (2005) contend that each foster care placement typically created problems in the continuity of services. This lack of services may result in unmet needs among foster care youth. Though child welfare professionals may be simply following their agency's policies when moving a child in care, they may be disrupting the continuity of relationships formed at the youths' previous placement, which can then create anxiety that limits youths' ability to form and maintain relationships (Stott & Gustavsson, 2010). As youth continue to move, they become distrustful of relationships and emotionally distance themselves from others (Hyde & Kammerer, 2009). According to attachment theory, each placement may disrupt the youths' working model regarding the likelihood that caretakers will continue to be present in the youth's life and can threaten their ability to create future attachments (Harden, 2004). In view of this theoretical and empirical work, it was hypothesized that youth with a low number of placement moves at Time 1 would have higher relational permanence at Time 2 compared to those with a high number of placement moves.

**Hypothesis 6**

Few studies have examined whether less time spent in foster care during childhood is associated with more positive outcomes later in life. Adolescents in foster care often fare worse than younger children because they are more likely to stay in care for longer periods of time

38

(Lockwood et al., 2015). Goemans, van Geel, and Vedder (2015) recently conducted a meta-analysis of developmental outcomes for foster care youth over the past three decades. They found that because of foster care youths' histories of trauma and insecure attachment, longer stays in foster care are unlikely to be correlated with improvements in developmental outcomes. In keeping with this finding, it was hypothesized that less time spent in foster care would predict higher relational permanence at Time 2.

## Methods

### Participants

The sample was comprised of 534 African American adolescents in foster care who completed the Illinois Department of Children and Family Services (IDCFS) and Child and Adolescent Needs and Strengths (CANS) survey twice (termed "Time 1" and "Time 2") between 2007 and 2012 while still in care (see Table 2.1). All youth resided in Cook County, Illinois and were between the ages of 13 and 18 at Time 1. The mean age of the participants was 16 years old while the median was 17 years old. The majority of the sample were 17 (22%) or 18 (32%) years old. The sample consisted of 316 males (69% of the sample) and 218 females (31% of the sample). The average number of months between the CANS survey at Time 1 and Time 2 was eight months.

### Data

Data from the CANS assessment were used to test the research hypotheses. The CANS was developed by Northwestern University in collaboration with the National Child Traumatic Stress Network and IDCFS clinical staff. Though it is not a diagnostic tool, it offers clinically relevant data for service planning and decision making for children and adolescents in care

(Lyons, 2009). Beginning in 2005, data for the CANS are collected for all youth in the child welfare system (ages 0 to 18). The CANS data are collected from multiple sources and in multiple modalities, including the child, caregiver interviews, caregiver and teacher report tools, clinical observations of the child, and family and case record reviews. The discretion of the caseworker determines which source weighs most heavily in the collection of the data (Kisiel, Fehrenbach, Torgersen, Stolbach, McClelland, Griffin, & Burkman, 2014). For example, in the case of children less than 1 year old, caseworkers are more likely to use clinical observations of the child and review family case records to determine CANS criteria, whereas for adolescents, they might conduct an interview to determine the answers to the CANS assessment. As part of the Integrated Assessment process, the goal of the CANS is to provide better information about the functioning of children in foster care, child and family strengths, support systems, and service needs. The first assessment is taken within 45 days of entering IDCFS, to make recommendations for services and appropriate placement. Follow-up assessments are then administered three months after the first assessment and every six months thereafter (Smithgall, Jarpe-Ratner Yang, DeCoursey, Brooks, & George, 2008). The second assessment, or Time 2 in this study, is the follow-up assessment to the first assessment.

The CANS consists of 105 items—each of which may be reliably used alone in data analysis as compared to using a composite analysis (Anderson, Lyons, Giles, Price, & Estes, 2002)—across eight domains. These domains include trauma experiences, traumatic stress symptoms, child strengths, life domain functioning, acculturation, child behavioral/emotional needs, child risk behaviors, and caregiver needs and strengths. Two domains are age dependent. Children 5 years old and younger are assessed for early developmental needs. Youth 14 years old and older are assessed for independent living needs.

The CANS is scored by adding all the items within a particular domain (e.g., child strengths, life domain functioning). However, the CANS is not intended to offer an overall summary score across all domains (Kisiel, Blaustein, Fogler, Ellis, Saxe, 2009). The CANS is scored by a clinician who is trained and certified in its reliable use. Certification on the CANS requires completing a test case vignette with a reliability of .70 or higher. Interrater reliability is determined using a four-point scoring system based on the degree of strength or impairment and the degree of urgency for intervention.

For the current study, I recoded all variables so that an increase in the variable signifies a positive change in the variable. A detailed overview of the coding system used in this study is included below, in the measures section. I also linked the CANS data with the IDCFS Integrated Database (Illinois Department of Children and Family Services, 2003) in order to retrieve foster care placement information and other demographic variables specific to the foster care system such as the duration of time in a placement setting.

**Measures**

Measures in this study were taken from the CANS assessment and the IDCFS Integrated Database. All demographic variables, including age, maintained their original form. Gender is coded so that a value of "0" signifies male and a value of "1" signifies female.

All variables from the CANS were recoded so that an increase in each level signifies positive change within the variable. All measures in this study are measured at Time 1 except relationship permanence which is measured at Time 2, as the former variables are potential predictors for the later variable. Maltreatment type is coded so that a value of "0" signifies neglect and all forms of abuse including physical, sexual, and emotional abuse. A value of "1"

41

signifies neglect alone.  All other CANS variables are measured at the ordinal level of measurement.  Below is an in-depth description of each CANS variable used in this study:

- **Relationship Permanence** refers to the stability of significant relationships in the child or youth's life.  This likely includes family members but may also include other individuals. In the CANS assessment, a value of "1" signifies that the child does not have any stability in relationships; a value of "2" signifies that the child has had at least one stable relationship over his/her lifetime but has experienced other instability through factors such as divorce, moving, removal from home, and death; a value of "3" signifies that the child has had stable relationships but there is some concern about instability in the near future (one year) due to transitions, illness, or age.  A child who has a stable relationship with only one parent may be rated here; a value of "4" signifies that the child has very stable relationships. Family members, friends, and community have been stable for most of his/her life and are likely to remain so in the foreseeable future.  The child is involved with both parents.  In this study, a value of "1" signifies a youth with no stable relationships; a value of "2" signifies at least one stable relationship; a value of "3" signifies stable relationships; a value of "4" signifies very stable relationships.

- **Interpersonal Skills** refers to the social skills of the child or youth both with peers and adults.  In the CANS assessment, a value of "1" signifies a child with no known interpersonal strengths. The child currently does not have any friends nor has he/she had any friends in the past.  The child does not have positive relationships with adults; a value of "2" signifies a mild level of interpersonal strengths.  The child has some social skills that facilitate positive relationships

42

with peers and adults but may not have any current relationships, but has a history of making and maintaining healthy friendships with others; a value of "3" signifies a moderate level of interpersonal strengths. The child has formed positive interpersonal relationships with peers and/or other non-caregivers. The child may have one friend, if that friendship is a healthy "best friendship" model; a value of "4" signifies significant interpersonal skills. The child is seen as well-liked by others and has significant ability to form and maintain positive relationships with both peers and adults. The individual has multiple close friends and is friendly with others. In this study, a value of "1" signifies no interpersonal skills; a value of "2" signifies mild interpersonal skills; a value of "3" signifies moderate interpersonal skills; a value of "4" signifies significant interpersonal skills.

- **School Achievement** describes academic achievement and functioning. In the CANS assessment, a value of "1" signifies that the child is having severe achievement problems. He/she may be failing most subjects or is more than one year behind same age peers in school achievement; a value of "2" signifies that the child is having moderate problems with school achievement. He/she may be failing some subjects; a value of "3" signifies that the child is doing adequately in school, although some problems with achievement exist; a value of "4" signifies that the child is doing well in school. In this study, a value of "1" signifies severe school problems/more than a year behind; a value of "2" signifies moderate school problems/may be failing some subjects in school; a value of "3" signifies doing moderately well; a value of "4" signifies a child is doing well in school.

- **Caregiver Resources** refers to the financial and social assets (extended family) and resources that the caregiver can bring to bear in addressing the multiple needs of the child and family. In the CANS assessment, a value of "1" signifies that the caregiver(s) has severely limited resources that are available to assist in the care and treatment of the child; a value of "2" signifies that the caregiver(s) has limited resources (e.g. grandmother living in same town who is available sometimes to watch the child); a value of "3" signifies that the caregiver(s) has the necessary resources to help address the child's major and basic needs but those resources might be stretched; a value of "4" signifies that the caregiver(s) has sufficient resources so that there are few limitations on what can be provided for the child. In this study, a value of "1" signifies a caregiver(s) with severely limited resources; a value of "2" signifies a caregiver(s) with limited resources; a value of "3" signifies necessary resources that might be stretched; a value of "4" signifies a caregiver(s) with sufficient resources and few limitations.

- **Time Between Assessments** was calculated in months by subtracting the date of the CANS assessment at Time 2 from the date of the CANS assessment at Time 1.

Variables in the Integrated Assessment include number of placement changes and duration of time in care. All variables from the Integrated Assessment were coded so that an increase in each level signified positive change within the variable.

- **Number of Placement Changes** was dichotomized using the middle score in the distribution of scores (i.e., median) to divide the distribution into equal parts. The median was selected after using sensitivity analyses with various cutoffs and thresholds before determining that binary choice model using the median was the

best measure for this study. At Time 1, the median number of placement changes was nine. A value of "0" was given to youth with nine or more placement changes (designated "high number of placement changes"), whereas a value of "1" was given to all youth with between zero and eight placement changes (designated "low number of placement changes").

- **Duration of Time in Care** was dichotomized using the middle score in the distribution of scores (i.e., median) to divide the distribution into equal parts. Sensitivity analyses with various cutoffs and thresholds were used to determine the median was the best measure for this study. At Time 1, the median number of years in foster care was seven. A value of "0" was given to youth who had been in foster care for seven or more years (designated "more time in care"), whereas a value of "1" was given to youth who had been in foster care for zero to six years (designated "less time in care").

See Appendix A for a complete list of the original variables and items in Study 1.

**Analytic strategy**

Descriptive statistics were calculated for gender, age, maltreatment type, number of placements, number of placement changes, duration of time in care, and time between assessments (See Table 2.1). Frequencies were calculated to ascertain the prevalence of relational permanence at Time 1 and Time 2. Frequencies were also used to calculate the incidence of individual change in relational permanence from Time 1 to Time 2. Each adolescent's level of relational permanence at Time 1 was compared to his/her level of relational permanence at Time 2 to determine whether there was positive change, maintenance, or negative change (See Table 2.2). Positive change was determined if, at Time 2, the adolescent had

increased his level of relational permanence. For example, if at Time 1 the adolescent had no

stable relationships, but at Time 2 he had one stable relationship, he would have a positive

change in relational permanence. Maintenance was determined if, at Time 2, the adolescent's

level of relational permanence remained the same as it had been at Time 1. For example, if at

Time 1 the adolescent had very stable relationships and at Time 2 he continued to have very

stable relationships, then he is deemed as having maintained his level of relational permanence.

Negative change was determined if, between Time 1 and Time 2, the adolescent decreased his

level of relational permanence. For example, if at Time 1, the adolescent had very stable

relationships, but at Time 2 he had no stable relationships, then he is deemed as having

experienced negative change. Using the same procedure, a second descriptive analysis assessed

positive change, maintenance, and negative change, taking into account the starting level of the

adolescent's relational permanence at Time 1.

To determine whether change in relational permanence was statistically significant, a

paired t-test and a Wilcoxon signed rank test was conducted to examine change between the

level of relational permanence at Time 1 and relational permanence at Time 2. Rather than

attempting to examine the difference between every individual, a paired t-test allows for

examination of mean level change while a Wilcoxon signed-rank test allows for a median, rank

order level analysis of the entire sample. These analyses allows for the comparison of the

"before" foster care level of relational permanence on average at entry into the foster care system

and the "after" foster care level of relational permanence on average despite individual

differences. A paired t-test was conducted to explore the mean level change in the data between

Time 1 and Time 2 for relational permanence while a Wilcoxon signed-rank was also chosen

because it determines whether the rank order level of relational permanence at Time 1 is

significantly different from the rank order level of relational permanence at Time 2 for all participants. Mean level change and rank order change are examined in this study because there is a significant difference between the two. Mean level change measure the consistency of a population while rank order change examines the position within a group. By conducting analyses using both a paired t-test and Wilcoxon signed-rank test, both measures of change will be explored in this study.

Finally, to address the third goal of the study, I conducted an ordinal regression predicting relational permanence at Time 2. I chose an ordinal regression because most of the predictors, as well as the dependent variable, are ordinal level variables. Also, in order to address the specific hypotheses of this study an ordinal regression is best because it measures the degree of difference for each variable compared to a lower level of that variable.

Take for example the hypothesis that higher levels of interpersonal skills at Time 1 is correlated with higher levels of relational permanence at Time 2. The reference group in each category is the highest level indicator. For example, regarding interpersonal skills, the reference group is a value of "4" which signifies significant interpersonal skills compared to a value of "3" for moderate interpersonal skills, a value of "2" for mild interpersonal skills, and a value of "1" for no interpersonal skills. A multinomial regression is not appropriate in this case because the ordering of the categories is ignored in a multinomial regression. A logistic regression approach is not appropriate because there is valuable data that is lost when variables are dichotomized which may translate into a clinical difference for those who have different levels of each variable. For example, adolescents with significant interpersonal skills as compared to those with moderate or mild interpersonal skills at Time 1 may have a different likelihood of attaining relational permanence at Time 2. An ordinal regression is the best analysis to address these

issues taking the ordering of the variable into account as well as the degree of difference for each variable.

The findings of the ordinal regression are expressed using a hazard ratio. A hazard ratio less than 1 indicates the decreased likelihood of stability of relational permanence. If 1 is subtracted by the hazard ratio and multiplied by 100, the resultant is equal to the percentage change in the hazard of differing levels of relational permanence at Time 2 dependent on Time 1 predictors. A hazard ratio greater than 1 indicates the increased likelihood of stability of relational permanence. If 1 is subtracted by the hazard ratio and multiplied by 100, the resultant is equal to the percentage change in the hazard of differing levels of relational permanence at Time 2 dependent on Time 1 predictors.

Two ordinal regression analyses were conducted to identify the predictors of relational permanence at Time 2. The first ordinal regression model examines age, gender, maltreatment type, interpersonal skills at Time 1, school achievement at Time 1, caregiver financial and social resources at Time 1, a low number of placement moves, duration of time in care, and the time between assessments as predictors of relational permanence at Time 2. The second ordinal regression model examines the former predictors with the addition of relational permanence at Time 1 as a control variable. Including relational permanence at Time 1 into the model takes advantage of the longitudinal design of the study and allows for the analysis of change overtime rather than simply examining the level of relational permanence at Time 2. The addition of relational permanence at Time 1 provides a more effective argument for explaining potentially causal relationships and time ordered change in relational permanence over time. Both models are included and any differences will be explored in the discussion.

# Results

## Descriptive statistics

Table 2.1 gives an overview of the descriptive statistics in Study 1. In regards to maltreatment type, experiences of neglect are overwhelmingly common among youth in the sample. Those who experienced neglect alone comprised 13% of the sample. Those who experienced neglect in combination with any form of abuse (physical, sexual, and/or emotional) comprised 86% of the sample. (For a comprehensive list of each type of maltreatment experienced, see Appendix B). Regarding system level variables in this study, the average number of placements is 14 whereas the average number of placement changes is 13. The average duration of time in care was 8 years. The average observation period between Time 1 and Time 2 was 8 months.

Bivariate Pearson correlations between all key study variables are shown in Table 2.3. It is noteworthy that there is a moderately strong positive correlation (r = .40) between relational permanence at Time 1 and relational permanence at Time 2. There is a moderately positive correlation (r = .33) between relational permanence at Time 1 and interpersonal skills at Time 1. This finding makes intuitive sense as those with greater interpersonal skills are often more likely to be able to retain social relationships. Finally, interpersonal skills at Time 1 and school achievement at Time 1 are moderately correlated (r = .26) in the positive direction.

## Prevalence of relational permanence

The levels of relational permanence measured at Time 1 and Time 2 varied widely. At Time 1, 11% of adolescents had very stable relationships, 35% had stable relationships, 46% had at least one stable relationship, and 8% had no stable relationships. At Time 2, 13% of adolescents had very stable relationships, 32% had stable relationships, 47% had at least one

stable relationship, and 8% had no stable relationships (see Table 2.4). The distribution of both time points appears to be similar with slightly more youth having very stable relationships at Time 2. This pattern is consistent with the moderately strong positive correlation between relational permanence at Time 1 and relational permanence at Time 2.

**Change in Relational Permanence**

As shown in Table 2.5, most adolescents maintained their level of relational permanence over time and positive change was as likely as negative change. Between Time 1 and Time 2, 54% maintained their level of relational permanence, 24% of adolescents had a positive change in relational permanence, and 22% had a negative change in relational permanence. Table 2.6 presents types of change in relational permanence between Time 1 and Time 2, taking into account the level of relational permanence adolescents had at Time 1. Overall adolescents appear to maintain their level of relational permanence if they began with stable relationships or at least one stable relationship at Time 1. Those on the extreme ends of the variable, either very stable or no stability at Time 1, were more likely to change negatively or positively rather than have maintenance of relational permanence across time respectively. Specifically, among those with very stable relational permanence at Time 1, 42% maintained this status, whereas 58% experienced a negative change in relational permanence. Among those with stable relational permanence at Time 1, 49% maintained this status, 14% experienced a positive change, and 37% experienced a negative change in relational permanence. Among those with at least one stable relationship at Time 1, 63% maintained this status, 31% experienced a positive change, and 6% experienced a negative change in relational permanence. Among those with no stability at Time 1, 42% maintained this status, and 59% experienced a positive change in relational permanence.

At both the mean and median level, there is no statistically significant change in relational permanence between Time 1 and Time 2.  Youth on average had similar mean levels of relational permanence at both time points $t(530) = -.52$, $p =.59$ with a mean level of 2.50 for relational permanence at Time 1 and a mean level of 2.52 at Time 2  (see Table 2.7).  The median level for relational permanence at Time 1 and Time 2 were both 2.00 with no statistically significant change ($Z = -.47$, $p = .63$) (See Table 2.8).  The descriptive change over time results support this analysis. Though Table 2.5 shows 24% of youth with a positive change and 22% with a negative change, relational permanence did not change for the majority of youth (54%). In sum, although there is descriptive change over time for some individuals, as a group, there is no statistically significant change over time.

**Predictors of relational permanence**

Results from the first ordinal regression are shown in Table 2.9.  The table includes the coefficients and standard error for each independent variable as well as the hazard ratio, Exp (β). In this model, the hypotheses regarding maltreatment type and interpersonal skills are supported. Maltreatment type and interpersonal skills at Time 1 are important in predicting the hazard of relational permanence at Time 2.  Those who experienced neglect in combination with any form of abuse were 51% less likely to have relational permanence at Time 2 compared to those who experienced neglect alone, with an odds ratio of .49, 95% CI [.30, .79], Wald $\chi^2(1) =$ 8.42, $p <.01$.  Those with no interpersonal skills at Time 1 were significantly less likely to have relational permanence at Time 2 compared to those with significant interpersonal skills, with an odds ratio of .22, 95% CI [.06, .73], a statistically significant effect, Wald $\chi^2 (1) = 6.08$, p<.05. Adolescents with no interpersonal skills at Time 1 were 72% less likely to have relational permanence at Time 2 compared to youth with significant interpersonal skills at Time 1.  The

hypotheses regarding school achievement, caregiver resources and assets, number of placement changes, duration of time in care, and time between assessments were not supported. Age, gender, school achievement, caregiver resources and assets, number of placement changes, time in care, and time between assessments were unrelated to relational permanence at Time 2.

Results from the second ordinal regression are shown in Table 2.10. In this model, the hypothesis regarding maltreatment type is the only hypothesis supported. Maltreatment type is important in predicting the hazard of relational permanence at Time 2. Those who experienced neglect in combination with any form of abuse were 44% less likely to have relational permanence at Time 2 compared to those who experienced neglect alone with an odds ratio of .56, 95% CI [.34, .92], Wald $\chi^2(1) = 5.35$, $p < .05$. Additionally, regarding relational permanence at Time 1, those with no stable relationships at Time 1 were significantly less likely to have relational permanence at Time 2 compared to those with very stable relationships, with an odds ratio of .02, 95% CI [.01, .06], a statistically significant effect, Wald $\chi^2(1) = 61.95$, $p < .001$. Adolescents with no stable relationships at Time 1 were 98% less likely to have relational permanence at Time 2 compared to youth with very stable relationships at Time 1. Those with at least one stable relationship at Time 1 were significantly less likely to have relational permanence at Time 2 compared to those with very stable relationships, with an odds ratio of .12, 95% CI [.06, .24], a statistically significant effect, Wald $\chi^2(1) = 37.88$, $p < .001$. Adolescents with at least one stable relationship at Time 1 were 88% less likely to have relational permanence at Time 2 compared to youth with very stable relationships at Time 1. Those with stable relationships at Time 1 were significantly less likely to have relational permanence at Time 2 compared to those with very stable relationships, with an odds ratio of .29, 95% CI [.15, .57], a statistically significant effect, Wald $\chi^2(1) = 13.16$, $p < .001$. Adolescents with stable relationships

at Time 1 were 71% less likely to have relational permanence at Time 2 compared to youth with very stable relationships at Time 1. In the second ordinal regression, the hypotheses regarding interpersonal skills, school achievement, caregiver resources and assets, number of placement changes, duration of time in care, and time between assessments were not supported. Age, gender, school achievement, caregiver resources and assets, number of placement changes, time in care, and time between assessments were also unrelated to relational permanence at Time 2.

## Discussion

### Prevalence of relational permanence

It is evident that most African American adolescents in the foster care system do have some form of relational permanence at entry into the foster care system and at the time of the second assessment. There is also a wide variation of relational permanence at entry into the foster care system as well as at the time of the second assessment. The variation demonstrates that youth not only have relational permanence, but it also differs on a wide variety of factors, many of which are identified in this study's findings. These findings support the work of Harden (2004), who argues that even though foster youth have chaotic life circumstances (e.g., neglect, abuse, parental incarceration, etc.), they are still able to form lasting relationships with others.

Given the review of the attachment literature and the findings about the prevalence of relational permanence, one might wonder whether attachment theory is applicable to this population. Granted the previous literature on the discontinuity of attachment styles with more diverse samples in regards to racial and socioeconomic background and the prevalence of relational permanence found among the sample, it is a topic of research that would make for a

fascinating area for future directions. Whether attachment theory applies to this population is a difficult question to answer because this specific population is comprised of several rather unique groups. This is not a normative sample regarding child development standards by any measure. The population is comprised of African American adolescents in the foster care system where the majority of youth are in the process of transitioning to adulthood in the legal sense. In order to address the question of whether attachment literature applies to this specific population, one might want to delve into the separate groups that each of these individuals inhabits. One might explore whether attachment theory applies to a normative population of African American adolescents. Does attachment theory apply to those in the foster care system specifically? What about adolescents in the foster care system? What about attachment and those who are transitioning to adulthood? After these groups have been validated separately, then being able to compare this particular group with the other groups, one might be able to answer this question.

Relatedly, the question of whether children and youth in foster care are assumed to have insecure attachments is a question that can only be answered definitely by future research. However, demonstrated by the variety in the prevalence of relational permanence found among the sample, I would be inclined to say that a variety of attachment styles are likely to be found among those in the foster care system as youth come into contact with the system for a variety of different reasons. Not all are in the system because of neglect and abuse. Some come into contact with the foster care system because of parental incarceration. Others come into contact with the system because of a lack of mental health care. Given the diverse reasons that children and adolescents come into contact with the foster care system, the different types of services they may receive while in care, and the complexities of the social relationships youth have before

entering care and while still a part of the system, it is unlikely that all youth in foster care by definition are assumed to have insecure attachment.

Furthermore, if youth in foster care appear to have an insecure attachment, it is possible that attachment style may in fact be adaptive. Given that youth in the foster care system are most likely to come from homes where abuse and neglect takes place, perhaps being able to form a bond with someone other than a parent or primary caregiver increases the child's likelihood of survival in a parenting or home situation which is less conducive to positive youth development. What may look like an insecure attachment might also be adaptive for those children who are a part of large extended families as compared to those who are primarily raised in a nuclear family model. Children who grow up in large extended families may spend time at length apart from their primary caregiver but are socialized with the belief that many family members or other fictive kin can provide quality care and therefore are not concerned about the absence of the primary caregiver. There are several reasons why it is difficult to determine the validity and generalizability of attachment theory to this population as noted above. It is a fascinating area for future research directions.

**Change in relational permanence**

Though many youth show change in positive and negative levels of relational permanence at the individual level, there is no statistically significant difference in change over time in relational permanence between Time 1 and Time 2. The mean and median level of most youth's relational permanence is largely unchanged. Granted that the average amount of time between assessments in this study is only eight months, it is easy to understand why there was not a significant change in the level of relational permanence. Perhaps change in relational permanence does take place within the foster care system for African American adolescents, but

it takes longer than eight months for those changes to become perceptible.  These findings

support those of Goemans et al. (2015), who after three decades of longitudinal research on the

development of foster children, found that little overall improvement in adaptive functioning was

detected when the timespan of the study was less than one year.

**Predictors of relational permanence**

In the first ordinal regression model, the hypotheses regarding maltreatment type and

interpersonal skills at Time 1 are the only hypotheses supported in predicting relational

permanence at Time 2.  Adolescents who experience neglect in combination with any form of

abuse (physical, sexual, or emotional) are likely to have lower levels of relational permanence

than those who experience neglect alone. This finding supports those of Cushing et al. (2014)

who found that adolescents who experienced neglect were more likely to have relational

permanence with both birth parents and parental figures than adolescents who experienced

physical and sexual abuse.  Youth who experience neglect may be more likely to form lasting

relationships because their maltreatment is related more to poverty than physical violence at the

hands of a caregiver.

Youth with no interpersonal skills at Time 1 were significantly less likely to have

relational permanence at Time 2 compared to those with significant interpersonal skills.  This

finding supports those of previous researchers who linked interpersonal skills to higher levels of

social capital (Petitt et al., 2011).  Collectively, these findings have implications for individual

level characteristics and their impact on the attainment of relational permanence.

Though administrators and case workers cannot dictate which children experience what

type of abuse, they can support interventions and policies that promote the healthy development

of interpersonal skills.  As an example, Nesmith and Christophersen (2014) designed a program

to develop supportive, ongoing relationships within the social networks of foster care youth with adults already in their social circle. Before adolescents were emancipated from the system, the Creating Ongoing Relationships Effectively (CORE) model was used to cultivate a holistic skills-building approach while the youth were still in care. The CORE model focuses on building supportive relationships, youth empowerment, and trauma-informed practice. Adolescents, in conjunction with foster parents and social workers, learn the social skills to develop and maintain supportive relationships with others. Adolescents can then take these social skills and practice what they have learned at home with their foster parents and with others in the community. This is just one example of how social workers can practically use these findings to make an impact in the community.

Surprisingly, the hypotheses regarding school achievement, caregivers with financial and social assets, a low number of placement moves, and less time spent in care at Time 1 were not supported in predicting relational permanence at Time 2. This is not to say that these factors are not important in the developmental processes of youth in care; rather, more research needs to be conducted to understand what roles these factors may play in the developmental processes of youth in care.

In the second ordinal regression model, the hypothesis regarding maltreatment type is the only hypothesis supported in predicting relational permanence at Time 2. As stated earlier, the difference between the first and second model is that the second model is better able to capture the change over time in relational permanence, not simply the level of relational permanence at Time 2. In addition to supporting the findings of Cushing et al. (2014) that those who experienced neglect were more likely to have relational permanence than those who experienced physical and sexual abuse, this finding also has implications for administrators and caseworkers.

Knowing whether a youth has been abused or neglected at entry into the foster care system can guide caseworkers in their administration of services for youth during their time in care. Child welfare administrators can provide resources for youth dependent on the type of abuse or neglect they have received before entry into the system.

The hypotheses regarding interpersonal skills, school achievement, caregivers with financial and social assets, a low number of placement moves, and less time spent in care at Time 1 were not supported in predicting relational permanence at Time 2 in the second ordinal regression model. This is not to say that these factors are not important in the developmental processes of youth in care; rather, more research needs to be conducted to understand what roles these factors may play in the developmental processes of youth in care.

**Limitations and future directions**

The measurement of CANS items in this study is a major limitation. There are several dimensions within each item which makes the ultimate interpretation of each item difficult. For instance, encompassed within the original item of relationship permanence are aspects related to the number of social relationships, the duration of social relationships, and general concerns about instability. Case in point, a value of "2" on the original CANS assessment for relational permanence signifies a child has had at least one stable relationship over his/her lifetime but has experienced other instability through factors such as divorce, moving, removal from home, and death. A value of "3" on the original CANS assessment signifies a child has had stable relationships but there is some concern about instability in the near future (one year) due to transitions, illness, or age. Using this measurement, it would be difficult to categorize a child with only one stable relationship who does not have other potential areas of instability as described in the original item.

Furthermore, the measurement of relational permanence may have an undue influence on the change over time score. For example, in the original coding of relational permanence, a value of "1" signifies that the child does not have any stability in relationships while a value of "4" signifies that the child has very stable relationships. Family members, friends, and community have been stable for most of his/her life and are likely to remain so in the foreseeable future. The child is involved with both parents. In regards to change over time, it would therefore be effectively impossible for a child who at Time 1 stated they had no stable relationships to ever access the other end of the distribution no matter how many relationships they gained over time because in order for a youth to qualify to answer affirmatively with a "4" they would have to have stable relationships for most of his/her life. A measure that does not allow every individual access to the full distribution of answers regarding change over time is problematic. Issues related to measurement were a major limitation within the data for this study. If given the ability to change this measure moving forward, being able to separate out the number of social relationships that each youth currently has, whether these relationships were with adults, or fellow youth, the duration of each relationship, and the type of support received into different items would be imperative.

An additional limitation of this dataset is the short time span between assessments. The average observation period between assessments was only eight months. This may have been too brief a time period to observe change over time even if it were in the process of taking place. It would be beneficial to examine change over a longer period of time than was allowed by this study. Related to this limitation, it would also be beneficial to have more than two time points to study change over time. Having only two time points severely limited the type of analyses that were possible.

In regards to future directions, a study of the impact of gender on the prevalence, change over time, and predictors of relational permanence would be an important contribution to the literature. As mentioned in the introduction, there are several important developmental processes that operate differently as a result of the intersection of race and gender (Towbin & Showalter, 2008). It would be a significant contribution to the literature to explore how race, in combination with gender, impacts the relational permanence of adolescents in the foster care system. Examining the moderation of gender in regards to these outcomes would be an especially significant contribution to the literature.

Table 2.1

*Descriptive Statistics (n = 534)*

|  | n (%) | Mean | SD |
|---|---|---|---|
| **Gender** | | | |
| Male | 316 (59) | - | - |
| Female | 218 (41) | - | - |
| **Age at Time 1** | | 16 | 1 |
| 13 | 43 (8) | - | - |
| 14 | 46 (9) | - | - |
| 15 | 64 (12) | - | - |
| 16 | 92 (17) | - | - |
| 17 | 118 (22) | - | - |
| 18 | 171 (32) | - | - |
| **Maltreatment Type at Time 1** | | | |
| Neglect Alone | 71 (13) | - | - |
| Neglect & Any Form of Abuse Combined | 424 (86) | - | - |
| Number of Placements | 14 (12) | 14 | 12 |
| Number of Placement Changes | 13 (12) | 13 | 12 |
| Youth with less than 9 Placement Changes | 254 (48) | - | - |
| Duration of Time in Care in Years |  | 8 | 4 |
| Youth in Care for 6 Years or Less | 267 (50) | - | - |
| Time Between Assessments in Months |  | 8 | 9 |

*Table with all individual forms of abuse in Appendix B.

Table 2.2

*Description of Relational Permanence Change Over Time Variable*

|  | Assessment 1 |  | Assessment 2 |  | Change Over Time |
|---|---|---|---|---|---|
| 1 | Very Stable | → | Very Stable | → | Maintenance |
| 2 |  | → | Stable | → | Negative Change |
| 3 |  | → | Some Stability | → | Negative Change |
| 4 |  | → | No Stability | → | Negative Change |
|  |  |  |  |  |  |
| 5 | Stable | → | Very Stable | → | Positive Change |
| 6 |  | → | Stable | → | Maintenance |
| 7 |  | → | Some Stability | → | Negative Change |
| 8 |  | → | No Stability | → | Negative Change |
|  |  |  |  |  |  |
| 9 | Some Stability | → | Very Stable | → | Positive Change |
| 10 |  | → | Stable | → | Positive Change |
| 11 |  | → | Some Stability | → | Maintenance |
| 12 |  | → | No Stability | → | Negative Change |
|  |  |  |  |  |  |
| 13 | No Stability | → | Very Stable | → | Positive Change |
| 14 |  | → | Stable | → | Positive Change |
| 15 |  | → | Some Stability | → | Positive Change |
| 16 |  | → | No Stability | → | Maintenance |

Table 2.3

*Bivariate Correlations Between Key Variables in Study 1*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Relational Permanence (Time 1) | | | | | | | | | | |
| 2. Relational Permanence (Time 2) | .40*** | | | | | | | | | |
| 3. Interpersonal Skills (Time 1) | .33*** | .15** | | | | | | | | |
| 4. School Achievement (Time 1) | .13** | .02 | .26*** | | | | | | | |
| 5. Caregiver Resources (Time 1) | -.06 | .00 | .01 | .01 | | | | | | |
| 6. Num. of Place. Changes | -.03 | -.11* | -.11* | -.11* | -.04 | | | | | |
| 7. Low Num. of Place. Changes. | .03 | .11* | .08 | .08 | .05 | -.70*** | | | | |
| 8. Duration of Time in Care | -.11* | -.10* | -.12** | -.02 | -.01 | .28*** | -.27*** | | | |
| 9. Less Time in Care | .10* | .09* | .10* | .04 | .02 | -.25*** | .28*** | -.88*** | | |
| 10. Time Between Assessments | -.01 | -.01 | .09* | .12** | -.03 | -.01 | .03 | -.01 | .09* | |
| N | 532 | 533 | 533 | 521 | 533 | 533 | 533 | 533 | 533 | 533 |
| Mean | 2.50 | 2.52 | 2.73 | 2.83 | 3.16 | 12.9 | .48 | 7.7 | .50 | 6.72 |
| (SD) | (.79) | (.82) | (.74) | (.98) | (.98) | (11.6) | (.50) | (4.47) | (.50) | (9.29) |

***p<.001 **p<.01. *p<.05.

Table 2.4

*Prevalence of Relational Permanence (n =534)*

| | Assessment 1 | n (%) | Assessment 2 | n (%) |
|---|---|---|---|---|
| | Very Stable | 60 (11) | Very Stable | 71 (13) |
| | Stable | 185 (35) | Stable | 173 (32) |
| | At Least One Stable Relationship | 246 (46) | At Least One Stable Relationship | 249 (47) |
| | No Stability | 41 (8) | No Stability | 40 (8) |

Table 2.5

*Incidence of Individual Change in Relational Permanence from Time 1 to Time 2 (n =531)*

|  | Positive Change | 127 (24) |
|---|---|---|
|  | Maintenance | 287 (54) |
|  | Negative Change | 117 (22) |

Table 2.6

*Incidence of Individual Change in Relational Permanence from Time 1 to Time 2, Conditional*
*on Relational Permanence at Time 1 (n =531)*

| Relational Permanence Change Over Time | n (%) |
|---|---|
| | |
| Very Stable Time 1 | |
| Maintenance | 25 (42) |
| Negative Change | 35 (58) |
| | |
| Stable Time 1 | |
| Maintenance | 91 (49) |
| Positive Change | 26 (14) |
| Negative Change | 68 (37) |
| | |
| At Least One Relationship Time 1 | |
| Maintenance | 154 (63) |
| Positive Change | 77 (31) |
| Negative Change | 14 (6) |
| | |
| No Stability Time 1 | |
| Maintenance | 17 (42) |
| Positive Change | 24 (59) |

Table 2.7

*Paired T-Test for Relational Permanence Change Over Time (n = 531)*

| Variables | n | Mean | SD | t | df | p |
|---|---|---|---|---|---|---|
| Relational Permanence T1 | 531 | 2.50 | .79 | -.52 | 530 | .59 |
| Relational Permanence T2 | 531 | 2.52 | .82 | | | |

Table 2.8

*Wilcoxon Signed Ranks Test for Relational Permanence Change Over Time (n = 533)*

Descriptive Statistics

| Variables | n | Mean | SD | Min | Max | 25th Percentile | 50th Percentile | 75th Percentile |
|---|---|---|---|---|---|---|---|---|
| Relational Permanence T1 | 532 | 2.50 | .79 | 1.00 | 4.00 | 2.00 | 2.00 | 3.00 |
| Relational Permanence T2 | 533 | 2.52 | .82 | 1.00 | 4.00 | 2.00 | 2.00 | 3.00 |

Wilcoxon Signed Ranks Test

| | n | Mean Rank | Sum of Ranks |
|---|---|---|---|
| Negative Ranks | 117[a] | 123.54 | 14454.00 |
| Positive Ranks | 127[b] | 121.54 | 15436.00 |
| Ties | 287[c] | | |
| Total | 531 | | |

    a.    Relational Permanence Time 2 < Relational Permanence Time 1

    b.    Relational Permanence Time 2 > Relational Permanence Time 1

    c.    Relational Permanence Time 2 = Relational Permanence Time 1

Test Statistics

| Z | -.47 |
|---|---|
| Asymp. Sig (2-tailed) | .64 |

Table 2.9

*Ordinal Regression Predicting Relational Permanence at Time 2*

| Independent Variables | β | SE | Exp (β) |
|---|---|---|---|
| Age | -.02 | .06 | .98 |
| Gender[1] | .17 | .18 | 1.19 |
| Neglect & Any Form of Abuse Combined[2] | -.72** | .25 | .49 |
| Interpersonal Skills (Time 1)[3] | | | |
| No Interpersonal Skills | -1.53* | .62 | .28 |
| Mild Interpersonal Skills | -.47 | .29 | .62 |
| Moderate Interpersonal Skills | -.25 | .27 | .78 |
| Academic Achievement (Time 1)[4] | | | |
| Severe Problems/More than a Year Behind | .10 | .33 | 1.11 |
| Failing Some Subjects in School | .16 | .25 | 1.18 |
| Doing Moderately Well in School | .12 | .22 | 1.12 |
| Caregiver Resources (Time 1)[5] | | | |
| Severely Limited | -.08 | .34 | .92 |
| Limited | .04 | .24 | 1.04 |
| Necessary | .05 | .21 | 1.05 |
| Low Number (< 9) of Placement Changes (Time 1)[6] | -.19 | .19 | .83 |
| Less Time (< 7 Years) in Care (Time 1)[7] | -.11 | .18 | .89 |
| Time Between Assessments in Months | -.00 | .01 | 1.0 |
| ***p<.001 **p<.01 *p<.05 | | | |

_____

[1] Reference group is female.

[2] Reference group is neglect only.

[3] Reference group is significant interpersonal skills.

[4] Reference group is doing well in school.

[5] Reference group is sufficient resources with few limitations.

[6] Reference group is between zero and eight placement changes.

[7] Reference group is between zero and six years duration in care.

Table 2.10

*Ordinal Regression Predicting Relational Permanence at Time 2, Controlling for Relational Permanence at Time 1*

| Independent Variables | β | SE | Exp (β) |
|---|---|---|---|
| Age | -0.03 | 0.06 | 0.97 |
| Gender[1] | 0.17 | 0.18 | 1.19 |
| Neglect & Any Form of Abuse Combined[2] | -.58* | 0.25 | 0.56 |
| Relational Permanence (Time 1)[3] | | | |
|     No Stable Relationships | -3.80*** | .48 | .02 |
|     At Least One Stable Relationship | -2.12*** | .34 | .12 |
|     Stable Relationships | -1.24*** | .34 | .29 |
| Interpersonal Skills (Time 1)[4] | | | |
|     No Interpersonal Skills | | | |
|     Mild Interpersonal Skills | -.51 | .64 | .60 |
|     Moderate Interpersonal Skills | .19 | .31 | 1.21 |
| Academic Achievement (Time 1)[5]     Severe Problems/More than a Year Behind | .17 | .29 | 1.18 |
|     Failing Some Subjects in School | | | |
|     Doing Moderately Well in School | .26 | .34 | 1.30 |
| Caregiver Resources (Time 1)[6]     Severely Limited | .27 | .25 | 1.31 |
|     Limited | .12 | .23 | 1.12 |
|     Necessary | | | |
| Low Number (< 9) of Placement Changes (Time 1)[7] | -.17 | .34 | .84 |
| Less Time (< 7 Years) in Care (Time 1)[8] | -.08 | .25 | .93 |
| Time Between Assessments in Months | -.08 | .22 | .92 |
| ***p<.001 **p<.01 *p<.05 | | | |

[1] Reference group is female.

[2] Reference group is neglect only.

[3] Reference group is very stable relationships.

[4] Reference group is significant interpersonal skills.

[5] Reference group is doing well in school.

[6] Reference group is sufficient resources with few limitations.

[7] Reference group is between zero and eight placement changes.

[8] Reference group is between zero and six years duration in care.

# CHAPTER III

## Relational Permanence and Positive Outcomes Among African American Adolescents in Foster Care (Study 2)

### Introduction

Social support is often identified among adolescents transitioning to adulthood in the foster care system as the most important factor in leading productive lives after care (Gonzalez, 2015). Social support in the form of relational permanence and the increase in relational permanence over time may lead to a wide variety of positive outcomes. Relational permanence bonds may be formed with biological parents or parental figures, extended family (Samuels, 2008), foster parents (Affronti, Rittner, & Jones, 2015; Semanchin Jones, Rittner, & Affronti, 2016), foster care workers (Augsberger & Swenson, 2015), friends (Rutman & Hubberstey, 2016), and other important non parental adults (Farruggia, Greenberger, Chen, & Heckhausen, 2006). These relationships can provide a variety of benefits to youth who have few safety nets compared to similarly aged youth in the general population.

Parented youth often have a wide variety of social capital that they can utilize to find a variety of resources (Stott, 2013). According to Malecki and Demaray (2003) there are four types of support which are often encompassed within social support: informational support (guidance and advice), instrumental support (resources such as providing someone with materials or money or spending time with someone), emotional support (companionship, affection, and

trust), and appraisal support (evaluative feedback or enhancement of self-worth). Examples relevant for adolescents include receiving advice regarding major life decisions, having someone to loan them money in financial emergencies, receiving invitations for dinner during the holidays, and receiving advice about romantic relationships (Stott, 2013). Adolescents in foster care often lack this support, whereas the majority of youth in the general population receive such support from parents (Farruggia et al, 2006).

Access to the wide variety of resources often encompassed within social support may be the leading reason why social support is often identified as the most important factor in foster care youth leading productive lives after their time care (Gonzalez, 2015). Establishing and maintaining permanent relationships with a caring adult is often noted as the most important feature of time spent in care despite legal or residential permanence (Greeson, Thompson, Ali, & Wenger, 2015). Relational permanence can be experienced from a variety of different sources outside of the parenting relationship.

Rutman et al (2016) explored the types of informal support former foster care youth in care access regularly and who provides this support. Participants listed their partner, partner's family, roommate, and neighbor in addition to the traditional sources of social support from biological family, friends, mentors, peer mentors, former foster parents, and former social workers. Participants stated that friends, partners, and partners' family were the most important source of advice and reassurance because they did not have parents or other family members to turn to for positive guidance or support. Participants also stated that these individuals provided key material and practical support such as housing, food, and money in a crisis situation because they lacked the family support to avoid such situations. Participants felt that this support helped them to: avoid homelessness and trouble with the law, stay on a "good path", keep their job,

focus on school, stay mentally healthy, have feelings of self-worth, have a sense of connection and belonging, have feelings of love, and avoid their children going into foster care. This study provides insight into the importance of social relationships in relation to adolescent outcomes.

There are few studies that examine relational permanence specifically as a unit of analysis as compared to those that examine the concept of social support generally. One exception is Cushing et al. (2014) who examined the correlation between relational permanence and young adult outcomes for youth in foster care. They found that young adults who aged out of the system with relational permanence were more likely to demonstrate overall competence at age 22 (i.e., they were more likely to cover their bills and expenses through working and were more likely to pursue education at age 22). Those without relational permanence were more likely to have an arrest record, one or more substance abuse disorders, and a mental health diagnosis at age 22.

This study seeks to provide further evidence about the contribution of relational permanence, or long lasting social relationships, to positive outcomes among adolescents in foster care and those transitioning to adulthood while in care. This study goes beyond prior work by assessing the developmental significance or relational permanence in a longitudinal design and addressing the unique developmental circumstances of African American youth as they age out of the foster care system and transition to adulthood. Specifically, I assess how relational permanence is related to school achievement, psychological well-being, and lower delinquency. A discussion of the hypotheses I tested are presented below.

**Hypothesis 1**

There are many different reasons that relational permanence may lead to higher school achievement. Tilbury, Creed, Buys, Osmond, and Crawford (2014) found that for youth in foster

care, support from caregivers and support from caseworkers most strongly predicted school achievement and school engagement.  Furthermore, the socializing influence of the school system, and the individuals within it, may lead to higher school achievement.  Miller Dyce (2015) asserts the school system provides African American adolescents in foster care the opportunity to develop peer and extended social networks filled with teachers, coaches, and others who all have the ability to be sources of relational permanence.

Mentoring, can be viewed as a form of relational permanence.  There is a large literature on the topic of mentoring and adolescent outcomes in the general population (DuBois, Holloway, Valentine, & Cooper, 2002), natural mentoring and adolescent development (Dubois & Silverthorn, 2005), and natural mentoring and psychosocial outcomes among older youth in foster care (Munson & McMillen, 2009).  Natural mentoring primarily occurs when an enduring, close, meaningful, non-parental adult relationship is formed organically between an adult and young person.  Unlike programs such as Big Brothers Big Sisters, which match unfamiliar volunteer adult mentors with youth, a natural mentoring relationship occurs naturally between two individuals without a third party match system or organizational involvement (Britner, Randall, & Ahrens, 2013).

Ahrens, Dubois, Richardson, Fan, and Lozano (2008) reported that having a natural mentoring relationship was associated with higher educational achievement. Collins, Spencer, and Ward (2010) agreed that having a natural mentor was associated with a greater likelihood of completing high school or having a GED.  Thompson, Greeson, & Brunsink (2016) conducted a systematic review of the literature and they contended that natural mentoring encouraged school achievement among older youth in and aging out of foster care.  There is also a positive association between natural mentoring and plans to pursue post-secondary education (Smith,

74

Peled, Poon, Stewart, Saewyc and McCreary Centre Society, 2015). Farruggia, Bullen, and Davidson (2013) also note that among ethnically diverse students at-risk for low academic achievement, most had at least one very important nonparental adult in their lives (VIP). There was a significant and positive correlation between VIP presence and academic achievement. In light of evidence that social relationships are correlated with higher academic achievement for older youth in foster care (Farrugia, 2013), I expected that higher levels of relational permanence at Time 1 would be correlated with higher levels of school achievement at Time 2.

**Hypothesis 2**

Psychological well-being is defined by the CANS assessment as a developed strength that includes the ability to enjoy positive life experiences and manage negative life events. It is rated independently of the individual's current level of stress. Psychological well-being is a protective factor for a wide variety of physical and mental illnesses (Keyes, Dhingra, & Simoes, 2010; Lamers, Westerof, Glas, & Bohlmeijer, 2015; Wood & Joseph, 2010). Psychological well-being is also related to biological markers of physical health, reduced risk for various diseases such as Alzheimer's disease and a longer life duration (Ryff, 2014). It is for these reasons that understanding whether psychological well-being can be improved is important to understanding developmental outcomes (Weiss, Westerhof, & Bohlemeijer, 2016). Youth with natural mentors have more positive psychological well-being than youth without natural mentors (Thompson et al., 2016). Youth with natural mentoring relationships are more likely to have not only improved psychological well-being, but also improved overall resilience (Mota & Matos, 2015). Relational permanence with a natural mentor is associated with lower levels of stress, higher life satisfaction, fewer symptoms of depression, and a decreased likelihood of arrest (Munson & McMillen, 2009). Likewise, in the area of psychological well-being, social support

from extended family members, older friends, and a teacher or coach works well to compensate for the loss of parental support. Those foster youth with several forms of social support fare better in terms of psychological well-being than those without support (Farruggia et al, 2006). In light of the findings that social support from a variety of sources is linked to psychological well-being among foster youth (Mota and Matos, 2015), I hypothesized that higher levels of relational permanence at Time 1 would correlate with higher levels of psychological well-being at Time 2.

**Hypothesis 3**

Victims of child abuse and neglect average 47% higher delinquency rates compared to those who are not victims of maltreatment (Ryan & Testa, 2005). The lack or destruction of attachments and social bonds in cases of maltreatment has been implicated as a possible explanation for the relationship between maltreatment and delinquency. For instance, Ryan, Testa, and Zhai (2008) found that social bonds lessen the likelihood of delinquency. Specifically, they found that among African American males in foster care, those with strong levels of attachment to foster parents and those who engaged in religious organizations were less likely to be involved with delinquency. These findings are further supported by Farineau & McWey (2011), who found that adolescents in foster care who reported strong feelings of closeness with a caregiver had the lowest level of delinquency scores. This study was followed up by Cusick, Havlicek, and Courtney (2012) who investigated whether social bonds play a role in protecting foster care youth from engaging in delinquency. They found that bonds to employment and education were associated with a lower risk for arrest; however, social bonds in the form of interpersonal skills were not significant in lowering the risk for arrest. Given the findings of Ryan et al (2008) that social bonds lessen the likelihood of delinquency, I hypothesized higher

levels of relational permanence at Time 1 to be correlated with lower levels of delinquency at Time 2.

**Hypothesis 4**

I hypothesized that positive change in relational permanence is correlated to positive outcomes among African American youth in foster care. This hypothesis is supported by the literature reviewed in the previous sections which note that having social relationships, social bonds, social capital, etc. are likely to be associated with positive outcomes among African American adolescents' outcomes in care. The current study advances prior work by examining not only whether levels of relational permanence are correlated with positive outcomes, but whether the experience of a positive change or increase in relational permanence is correlated with higher levels of school achievement, higher psychological well-being, and lower levels of delinquency compared to those who maintain their level of relational permanence.

Given the findings of Farrugia and colleagues (2013) that social relationships are correlated with higher academic achievement for older youth in foster care, I hypothesized that positive change in relational permanence would be correlated with higher school achievement Given the findings that social support from a variety of sources is linked to psychological well-being among foster youth (Mota and Matos, 2015), I expected positive change in relational permanence to be correlated with higher psychological well-being. Finally, as Ryan et al (2008) found that social bonds lessen the likelihood of delinquency, I hypothesized that positive change in relational permanence would be correlated with lower levels of delinquency.

## Methods

**Participants**

The sample was comprised of 534 African American adolescents in foster care who completed the Illinois Department of Children and Family Services (IDCFS) and Child and Adolescent Needs and Strengths (CANS) survey twice (termed "Time 1" and "Time 2") between 2007 and 2012 while still in care (see Table 2.1).  All youth resided in Cook County, Illinois and were between the ages of 13 and 18.  The mean age of the participants was 16 years old while the media was 17 years old at Time 1.  The majority of the sample were 17 (22%) or 18 (32%) years old. The sample consisted of 316 males (69% of the sample) and 218 females.  The average number of months between the CANS survey at Time 1 and Time 2 was eight months.

**Data**

Data from the CANS assessment were used to test the research hypotheses.  The CANS was developed by Northwestern University in collaboration with the National Child Traumatic Stress Network and IDCFS clinical staff. Though it is not a diagnostic tool, it offers clinically relevant data for service planning and decision making for children and adolescents in care (Lyons, 2009). Beginning in 2005, data for the CANS are collected for all youth in the child welfare system (ages 0 to 18).  The CANS data is collected from multiple sources such as the child, caregiver interviews, caregiver and teacher report tools, clinical observations of the child, and family and case record reviews. The discretion of the caseworker determines which source weighs most heavily in the collection of the data (Kiesel, Fehrenbach, Torgersen, Stolbach, McClelland, Griffin, & Burkman, 2014).  For example, regarding children less than 1 year old, caseworkers are more likely to use family case record review and the clinical observation of the child to determine CANS criteria rather than conducting a child interview which would be more likely the case for adolescent participants.  As part of the Integrated Assessment process, the goal of the CANS is to provide better information about the functioning of children in foster care,

child and family strengths, support systems, and service needs. The first assessment is taken within 45 days of entering IDCFS, to make recommendations for services and appropriate placement. Follow-up assessment, are then administered three months after the first assessment and every six months thereafter (Smithgall, Jarpe-Ratner Yang, DeCoursey, Brooks, & George, 2008). The second assessment, or Time 2 in this study is the follow-up assessment to the first assessment.

The CANS consists of 105 items—each of which may be reliably used alone in data analysis (Anderson, Lyons, Giles, Price, & Estes, 2002)—across eight domains. These domains include trauma experiences, traumatic stress symptoms, child strengths, life domain functioning, acculturation, child behavioral/emotional needs, child risk behaviors, and caregiver needs and strengths. Two domains are age dependent. Children 5 years old and younger are assessed for early developmental needs. Youth 14 years old and older are assessed for independent living needs.

The CANS is scored by adding all the items within a particular domain (e.g., child strengths, life domain functioning). However, the CANS is not intended to offer an overall summary score across all domains (Kisiel, Blaustein, Fogler, Ellis, Saxe, 2009). The CANS is scored by a clinician who is trained and certified in its reliable use. Certification on the CANS requires completing a test case vignette with a reliability of .70 or higher. Interrater reliability is determined using a four-point scoring system based on the degree of strength or impairment and the degree of urgency for intervention.

For the current study, I recoded all variables so that an increase in the variable signifies a positive change in the variable. A detailed overview of the coding system used in this study is included below, in the measures section. I also link the CANS data with the IDCFS Integrated

Database (Illinois Department of Children and Family Services, 2003) in order to retrieve foster care placement information and other demographic variables specific to the foster care system such as the duration of time in a placement setting.

**Measures**

Measures in this study are taken from the CANS assessment and the IDCFS Integrated Database. All demographic variables, including age, maintained their original form. Gender is coded so that a value of "0" signifies male and a value of "1" signifies female.

All variables from the CANS were coded so that an increase in each level signifies positive change within the variable. Variables were measured at both Time 1 and Time 2 in the current study. Relational permanence was measured at Time 1 because it is a predictor to school achievement, psychological well-being, and delinquency at Time 2. Interpersonal skills at Time 1 and maltreatment type are included in the analyses because they were significant predictors of relational permanence in Study 1. The positive change over time variable encompasses both time points because it measures the change in relational permanence from Time 1 to Time 2. Positive change over time is coded so that a value of "0" signifies the maintenance of relational permanence over time and a value of "1" signifies positive change in relational permanence in any way between Time 1 and Time 2. For example, if at Time 1 a youth reports no stable relationships, but at Time 2 the same youth reports stable relationships or very stable relationships, then the youth would have a positive change in relational permanence on both accounts. Maltreatment type is coded so that a value of "0" signifies neglect and all forms of abuse including physical, sexual, and emotional abuse. A value of "1" signifies neglect alone. Below is an in-depth description of each CANS variable used in this study:

- **Relationship Permanence** refers to the stability of significant relationships in the child or youth's life. This likely includes family members but may also include other individuals. In the CANS assessment, a value of "1" signifies that the child does not have any stability in relationships; a value of "2" signifies that the child has had at least one stable relationship over his/her lifetime but has experienced other instability through factors such as divorce, moving, removal from home, and death; a value of "3" signifies that the child has had stable relationships but there is some concern about instability in the near future (one year) due to transitions, illness, or age. A child who has a stable relationship with only one parent may be rated here; a value of "4" signifies that the child has very stable relationships. Family members, friends, and community have been stable for most of his/her life and are likely to remain so in the foreseeable future. The child is involved with both parents. In this study, a value of "1" signifies a youth with no stability in relationships; a value of "2" signifies at least one stable relationship; a value of "3" signifies stable relationships; a value of "4" signifies very stable relationships.

- **Interpersonal Skills** refers to the social skills of the child or youth both with peers and adults. In the CANS assessment, a value of "1" signifies a child with no known interpersonal strengths. The child currently does not have any friends nor has he/she had any friends in the past. The child does not have positive relationships with adults; a value of "2" signifies a mild level of interpersonal strengths. The child has some social skills that facilitate positive relationships with peers and adults but may not have any current relationships, but has a history of making and maintaining healthy friendships with others; a value of "3"

signifies a moderate level of interpersonal strengths. The child has formed positive interpersonal relationships with peers and/or other non-caregivers. The child may have one friend, if that friendship is a healthy "best friendship" model; a value of "4" signifies significant interpersonal skills. The child is seen as well-liked by others and has significant ability to form and maintain positive relationships with both peers and adults. The individual has multiple close friends and is friendly with others. In this study, a value of "1" signifies no interpersonal skills; a value of "2" signifies mild interpersonal skills; a value of "3" signifies moderate interpersonal skills; a value of "4" signifies significant interpersonal skills.

- **School Achievement** describes academic achievement and functioning. In the CANS assessment, a value of "1" signifies that the child is having severe achievement problems. He/she may be failing most subjects or is more than one year behind same age peers in school achievement; a value of "2" signifies that the child is having moderate problems with school achievement. He/she may be failing some subjects; a value of "3" signifies that the child is doing adequately in school, although some problems with achievement exist; a value of "4" signifies that the child is doing well in school. In this study, a value of "1" signifies severe school problems/more than a year behind; a value of "2" signifies moderate school problems/may be failing some subjects in school; a value of "3" signifies doing moderately well; a value of "4" signifies a child is doing well in school.

- **Psychological Well-Being** is based on the psychological strengths that the child or adolescent might have developed including the ability to enjoy positive life

experiences and manage negative life events. In the CANS assessment, a value of "1" signifies a child with no known or identifiable psychological strengths. This may be due to intellectual impairment or serious psychiatric disorder; a value of "2" signifies a child with limited psychological strengths. For example, a person with very low self-esteem would be rated here; a value of "3" signifies a child with good psychological strengths. The person has solid coping skills for managing distress or solid savoring skills for enjoying pleasurable events; a value of "4" signifies a child with exceptional psychological strengths. Both coping and savoring skills are well developed. In this study, a value of "1" signifies no psychological strengths; a value of "2" signifies limited psychological strengths; a value of "3" signifies good psychological strengths; a value of "4" signifies exceptional psychological strengths.

- **Delinquency** is measured so that both criminal behavior and status offenses that may result from child or youth failing to follow required behavioral standards (e.g. truancy) are measured. In the CANS assessment, a value of "1" signifies a serious level of criminal or delinquent activity in the past 30 days. Examples would include car theft, residential burglary, gang involvement, etc.; a value of "2" signifies a moderate level of criminal activity including a high likelihood of crimes committed in the past 30 days. Examples would include vandalism, shoplifting, etc.; a value of "3" signifies a history of criminal or delinquent behavior but none in the past 30 days. Status offenses in the past 30 days would be rated here; a value of "4" signifies no evidence or history of criminal/delinquent behavior. In this study, a value of "1" signifies serious

criminal/delinquent behavior in the last 30 days (e.g., car theft, burglary, gang involvement, etc.), a value of "2" signifies moderate criminal/delinquent behavior likely in the last 30 days (e.g., vandalism, shoplifting, etc.), a value of "3" signifies a history of criminal/delinquent behavior but none in the last 30 days, a value of "4" signifies no evidence or history of criminal/delinquent behavior.

- **Time Between Assessments** in this study was calculated in months by subtracting the date of the CANS assessment at Time 1 from the date of the CANS assessment at Time 2.

Variables in the Integrated Assessment include number of placement changes and duration of time in care. All variables from the Integrated Assessment were coded so that an increase in each level signified positive change within the variable.

- **Number of Placement Changes** was dichotomized using the middle score in the distribution of scores (i.e., median) to divide the distribution into equal parts. The median was selected after using sensitivity analyses with various cutoffs and thresholds before determining that binary choice model using the median was the best measure for this study. At Time 1, the median number of placement changes was nine. A value of "0" was given to youth with nine or more placement changes (designated "high number of placement changes"), whereas a value of "1" was given to all youth with between zero and eight placement changes (designated "low number of placement changes").

- **Duration of Time in Care** was dichotomized using the middle score in the distribution of scores (i.e., median) to divide the distribution into equal parts. Sensitivity analyses with various cutoffs and thresholds were used to determine

the median was the best measure for this study. At Time 1, the median number of years in foster care was seven. A value of "0" was given to youth who had been in foster care for seven or more years (designated "more time in care"), whereas a value of "1" was given to youth who had been in foster care for zero to six years (designated "less time in care").

See Appendix C for a complete list of the original variables and items in Study 2.

**Analytic strategy**

Three ANCOVAs were conducted to determine whether relational permanence at Time 1 predicted the three aforementioned outcomes at Time 2. An ANCOVA is selected because it allows for the examination of the correlation between relational permanence at Time1 on outcomes at Time 2 while holding the time between assessments as a covariate. The time between assessments is controlled in these analyses because it might have an undue influence on the relationship between the two variables. An ANOVA was not selected to answer this question because it would not allow for control of the time between assessments.

Three ordinal regressions were conducted to examine the impact of positive change in relational permanence on outcomes at Time 2. I chose an ordinal regression because most of the predictors, as well as the dependent variable, are ordinal level variables. Also, in order to address the specific hypotheses of this study an ordinal regression is best because it measures the degree of difference for each variable compared to a lower level of that variable.

Take for example the hypothesis that positive change in relational permanence between Time 1 and Time 2 is correlated with higher school achievement at Time 2. The reference group in each category is the highest level indicator. For example, regarding positive change, the reference group is a value of "1" positive change in relational permanence as compared to a

value of "0" for maintenance of relational permanence across time. A multinomial regression is not appropriate in this case because the ordering of the categories is ignored. A logistic regression approach is not appropriate because there is valuable data that is lost when variables are dichotomized which may translate into a clinical difference for those who have different levels of each variable. For example, adolescents with very stable relationships as compared to those who have at least one stable relationship or no stable relationships at Time 1 may have a different likelihood of attaining psychological well-being at Time 2.

The findings of the ordinal regression are expressed using a hazard ratio. A hazard ratio less than 1 indicates the decreased likelihood of the level of the positive outcome. If 1 is subtracted by the hazard ratio and multiplied by 100, the resultant is equal to the percentage change in the hazard of the differing levels of the positive outcome at Time 2. A hazard ratio of greater than 1 indicates the increased likelihood of the level of the positive outcome. If 1 is subtracted from the hazard ratio and multiplied by 100, the resultant is equal to the percentage change in the hazard of the differing levels of the positive outcome at Time 2.

All of the predictors regarding positive outcomes are age, gender, positive change in relational permanence, relational permanence at Time 1, maltreatment type, interpersonal skills at Time 1, a low number of placement moves, duration of time in care, and the time between assessments.

## Results

### Relational permanence and school achievement

Bivariate Pearson correlations between all key study variables are shown in Table 3.1. It is noteworthy that there was not a significant bivariate correlation between relational permanence

at Time 1 and school achievement at Time 2 (r = -.02). Therefore it was unsurprising that the hypothesis regarding relational permanence and higher school achievement was not supported. Relational permanence at Time 1 is not related to school achievement at Time 2 after controlling for the time between assessments determined by ANCOVA $F(3, 516) = 1.32$, $p = .27$ (see Table 3.2).

**Relational permanence and psychological well-being**

The hypothesis regarding relational permanence and higher psychological well-being was supported. Of note, the bivariate correlation between relational permanence at Time 1 and psychological well-being at Time 2 is significantly positive (r = .18). In further analysis, higher relational permanence significantly predicted higher psychological well-being at Time 2 after controlling for the time between assessments $F(3, 522) = 6.04$, $p < .001$ (see Table 3.3). A Post hoc analysis was performed with a Bonferroni adjustment. Having no stable relationships as compared to having stable relationships correlated with the decreased likelihood of having higher psychological well-being (p<.05). Having no stable relationships as compared to having very stable relationships correlated with the decreased likelihood of having higher psychological well-being, (p<.05). Having at least one stable relationship as compared to having stable relationships correlated with the decreased likelihood of having higher psychological well-being (p<.05). Having at least one stable relationship as compared to having very stable relationships correlated with the decreased likelihood of having higher psychological well-being (p<.05).

**Relational permanence and delinquency**

The hypothesis regarding relational permanence and lower levels of delinquency was not supported. Contrary to prediction, relational permanence at Time 1 significantly correlated with higher, rather than lower, levels of delinquency at Time 2. Relational permanence at Time 1 and

lower delinquency at Time 2 were significantly correlated in the negative direction (r = -.14). Relational permanence at Time 1 and lower delinquency at Time 2 continued to be significantly related in the unexpected direction after controlling for the time between assessments determined by ANCOVA $F(3, 512) = 4.15$, $p < .001$ (see Table 3.4). A Post hoc analysis was performed with a Bonferroni adjustment. Having at least one stable relationship correlated with the decreased likelihood of lower levels of delinquency as compared to having stable relationships (p<.05).

**Positive change in relational permanence and positive outcomes**

Ordinal regression was used to answer the question of whether positive change in relational permanence between Time 1 and Time 2 is correlated with positive outcomes at Time 2. As shown in Table 3.5, the hypothesis regarding school achievement and a positive change in relational permanence is not supported. Positive change in relational permanence between Time 1 and Time 2 did not predict higher school achievement at Time 2. In addition to this primary finding, there were secondary findings: having mild interpersonal skills compared to significant interpersonal skills was correlated with lower levels of school achievement at Time 2, with an odds ratio of .36, 95% CI [.19, .72], Wald $x^2(1) = 8.67$, p<.01. Compared to having significant interpersonal skills, having mild interpersonal skills was correlated with the reduced probability of having high school achievement by 63%.

The hypothesis regarding psychological well-being and a positive change in relational permanence was supported. Positive change in relational permanence correlated with higher psychological well-being at Time 2 (see Table 3.6). A positive change in relational permanence between Time 1 and Time 2 correlated with higher psychological well-being as compared to those who maintained their level of relational permanence, with an odds ratio of 4.99, 95% CI

[3.06, 8.13], Wald $x^2(1) =41.65$, p<.001.  Having a positive change in relational permanence correlated with an increase in the probability of higher psychological well-being by 399% compared to maintaining one's level of relational permanence.

Having no stable relationships at Time 1 compared to those with very stable relationships is correlated with lower psychological well-being at Time 2, with an odds ratio of .03, 95% CI [.01, .10], Wald $x^2(1) =31.37.67$, p<.001.  Having no stable relationships at Time 1 correlated with a decrease in the probability of higher psychological well-being at Time 2 by 97% compared to those with very stable relationships.  Having at least one stable relationship at Time 1 correlated with lower psychological well-being at Time 2 compared to those with very stable relationships, with an odds ratio of .07, 95% CI [.02, .18], Wald $x^2(1) =29.16$, p<.001.  Having at least one stable relationship correlated with a decrease in the probability of higher psychological well-being by 93% compared to those with very stable relationships.  Having stable relationships at Time 1 correlated with lower psychological well-being at Time 2, with an odds ratio of .21, 95% CI [.08, .57], Wald $x^2(1) =9.61$, p<.01 compared to those with very stable relationships. Having stable relationships is correlated with a decrease in the probability of higher psychological well-being by 79% compared to those with very stable relationships.

The hypothesis regarding delinquency and a positive change in relational permanence is not supported.  Change in relational permanence correlated with lower delinquency at Time 2 (see Table 3.7).  However, it was the maintenance of relational permanence between Time 1 and Time 2 that correlated with lower delinquency as compared to those with a positive change in relational permanence over time with an odds ratio of .58, 95% CI [.34, 1.00], Wald $x^2(1) =3.90$, p<.001. (p<.05).  Had the hypothesis been supported, a positive change in relational permanence would have been associated with lower levels of delinquency, not the maintenance of relational

permanence.  The maintenance of relational permanence correlated with a decrease in the probability of delinquency by 42% compared to having a positive change in relational permanence.

Furthermore, being older correlated with higher levels of delinquency as compared to younger youth, with an odds ratio of .61, 95% CI [.50, .74], Wald $x^2(1) = 25.82$, p<.001. (p<.001).  Each one year increase in age correlated with an increase in the adolescent's probability of being involved with delinquency by 39%.  Spending less time in care correlated with a decrease in the likelihood of delinquency by 145% compared to having a longer time in care, with an odds ratio of 2.45, 95% CI [1.47, 4.08], Wald $x^2(1) = 11.78$, p<.01.  Time between assessments correlated with lower delinquency, with an odds ratio of 1.04, 95% CI [1.00, 1.07], Wald $x^2(1) = 3.91$, p<.05).  Each one month increase in the time between assessments correlated with a decrease in the likelihood of being involved with delinquency by 4%.

## Discussion

There is a paucity of research devoted to identifying developmental trajectories that support the positive outcomes of African American youth. The vast majority of research conducted on African American youth involves the identification of problem behaviors, race-comparative studies which often have an atheoretical basis, and studies that do not take into consideration the unique cultural context of African American youth in American society (Garcia Coll et al, 1996; McLoyd, 1998; Wong & Rowley, 2001). In this paper, I sought to expand the literature regarding well-being indicators of African American youth in the child welfare system. It is hypothesized that relational permanence is correlated to higher school achievement, higher psychological well-being, and lower delinquency among African American adolescents in foster

care. Furthermore, it is hypothesized that a positive change in relational permanence over time would be correlated with higher school achievement, higher psychological well-being and lower delinquency. These hypotheses are explored below in addition to their contribution to the literature regarding African American adolescents in the foster care system.

**Relational permanence and school achievement**

Contrary to the hypothesis, there was not a significant relationship between relational permanence at Time 1 and school achievement at Time 2 even after controlling for the time between assessments. This finding was present in both the bivariate and multivariate models. These findings are contrary to prior studies that link natural mentors and other types of social capital to higher school achievement among youth in the foster care system transitioning to adulthood (Ahrens, Dubois, Richardson, Fan, & Lozano, 2008; Smith et al., 2015; Thompson et al, 2016). One reason the findings are inconsistent with previous research may be because the negative expectations regarding the academic ability of African American adolescents in foster care may hinder school achievement beyond the counter of what positive relationships can provide (Miller Dyce, 2015). Perhaps there is too much negativity to offset the positivity of this promotive factor for this population.

Another reason that there is not a significant relationship between relational permanence and school achievement is perhaps the timing of social relationships makes a difference for later school achievement. Reynolds, Temple, Robertson, and Mann (2001) administered an early childhood intervention on mostly Black, low-income, preschool to early childhood participants in Chicago and did a 15 year follow-up examining outcomes related to educational achievement and juvenile arrest. Concerning educational achievement, children who participated in the preschool intervention for one or two years had a higher rate of high school completion, more

91

years of completed education, and lower rates of school dropout. Both the preschool and school-age children in the early childhood intervention group had lower rates of grade retention and special education services. In this study, the intervention lasted at least one year, finished before the children began adolescence, and influenced their achievement outcomes 15 years later. In the current study, only eight months passed between Time 1 and Time 2 and the average age of the sample was 16 years old when these two time points occurred. Perhaps timing is related to the school achievement findings. Lasting relationships may be associated with school achievement, but the social relationships need to be established earlier in the child's life to make an impact on educational achievement later in life. The current study does not allow for the analysis of these questions. More research needs to be conducted to examine relational permanence and timing in the school setting for African American youth in care specifically to answer this question.

**Relational permanence and psychological well-being**

Supporting the hypothesis, relational permanence at Time 1 consistently correlated with higher psychological well-being at Time 2 controlling for the time between assessments. This finding was present in both the bivariate and multivariate models. Having no stable relationships correlated with significantly lower psychological well-being compared to those with stable relationships and very stable relationships. In addition, having at least one stable relationship correlated with significantly less psychological well-being compared to those with stable relationships and very stable relationships. These findings are consistent with an extensive body of research evidence that social relationships are important for psychological well-being (Mota & Matos, 2015; Munson & McMillen, 2009; Thompson et al., 2016). Furthermore, these findings

show that what works for the general population regarding social relationships and psychological well-being also works for African American adolescents in the foster care system.

The findings of this study can be used to support the funding of targeted interventions to improve developmental outcomes among African American adolescents in foster care. Knowing that relational permanence is correlated with higher psychological well-being among African American adolescents can aid child welfare administrators, clinicians, and case workers in supporting interventions and policies that promote higher psychological well-being for this population. As mentioned in the previous chapter, Nesmith and Christophersen's (2014) CORE model focuses on building supportive relationships, youth empowerment, and trauma-informed practice for youth emancipating out of the foster care system. Adolescents, in conjunction with foster parents and social workers, learn social skills necessary to develop and maintain supportive relationships with others. Adolescents can then take these social skills and practice what they have learned at home with their foster parents and with others in the community. Social skills training may also be beneficial in easing the transition to adulthood for youth aging out of the system. Psychological well-being is a promising area for future research regarding relational permanence and positive outcomes for African American youth.

**Relational permanence and delinquency**

This study found a significant relationship between relational permanence and delinquency. Contrary to the hypothesis, those with stable relationships were more likely to engage in delinquent behavior than those with only one stable relationship. Having at least one stable relationship as compared to having stable relationships at Time 1 correlated with significantly lower delinquency at Time 2. These findings are somewhat surprising but were present in both the bivariate and multivariate models. However, they are supported by the

93

literature. Historically, boys with a criminogenic background are less likely to engage in delinquent behavior if they have few or no friends at age 8 compared to those with many friends (Farrington, Gallagher, Morley, St Ledger, & West, 1988). Likewise, Farrington, Ttofi, and Piquero (2016) recently reported that those with few friends as compared to those with many friends were less likely to engage in delinquency. One reason given for why social support might not lead to less delinquency is that the providers of the support are not prosocial influences (Cusick et al., 2012). It is not always possible to distinguish between those social bonds that have a negative influence (gang member or drug dealer) and those that have a positive influence (teacher or mentor). Furthermore, delinquency may be seen as a social activity within itself when a young person is involved in negative peer relationships. More research needs to be conducted to parse out the differences between positive and negative influences on delinquency. More research also needs to be conducted to understand the relationship between different types of social relationships on the reduction of delinquency among African American youth in the foster care system. However, in this study, it appears that African American adolescents in the foster care system experience a similar relationship between relational permanence and delinquency as other at-risk youth.

**Positive change in relational permanence and positive outcomes**

Contrary to the hypothesis, a positive change in relational permanence between Time 1 and Time 2 was not correlated with higher school achievement at Time 2 compared to those who maintain their level of relational permanence. These findings are in accord with evidence from this study that relational permanence at Time 1 is not significantly correlated with higher school achievement at Time 2. In the positive change in relational permanence model however, interpersonal skills at Time 1 correlated significantly with higher school achievement at Time 2.

Additionally, in the model with positive change in relational permanence and higher school achievement, having mild interpersonal skills compared to having significant interpersonal skills reduces the probability of having high school achievement by 63%. This finding is supported by Pettit et al. (2011) who found that youth with higher social skills are more likely to have positive life outcomes. It would be interesting to explore the different mechanisms involved in having social relationships as opposed to having the interpersonal skills to develop social relationships.

Supporting the hypothesis, a positive change in relational permanence is associated with higher psychological well-being at Time 2 compared to those who maintain their level of relational permanence. Having a positive change in relational permanence correlated with the increased probability of higher psychological well-being by 399% compared to those who maintain their level of relational permanence. In further findings, having no stable relationships compared to having very stable relationships at Time 1 correlated with the decreased probability of higher psychological well-being by 97%. Having at least one stable relationship compared to having very stable relationships is correlated with the decreased probability of higher psychological well-being by 93%. Having stable relationships compared to having very stable relationships is correlated with the decreased probability of higher psychological well-being by 79%. It appears that relational permanence correlated most strongly to psychological well-being in terms of developmental outcomes which makes intuitive sense. People who are consistent in your life and affirm your importance are likely to aid in positive affirmations about the self, others, and life in general. It would be interesting to explore the different facets of well-being and the impact relational permanence may have on them.

Contrary to the hypothesis, maintenance of relational permanence is correlated with lower levels of delinquency at Time 2 compared to those with a positive change in relational

permanence.  These findings support the previous finding in study 1 that a higher level of relational permanence at Time 1 correlated with higher delinquency.  One potential reason for these findings, as stated earlier, is that relational permanence, or social support, may not always come from prosocial influences (Cusick et al., 2012).  Or delinquency may be seen as a form of social activity in negative peer relationships. More research needs to be conducted to explore the variation and composition of social support and delinquency among this population.

Delinquency was also found to be related to age, time in care, and the time between assessments.  Older youth had higher levels of delinquency as compared to younger youth. For each 1-year increase in age, adolescents increased their probability of being involved with delinquency by 39%.  Those with a shorter duration of time in care had lower levels of delinquency.  Those with a shorter time in care decreased their probability of being involved with delinquency by 145% compared to those with a longer time in care.  Other research has also found that a shorter time in care is associated with less delinquency (Ryan & Testa, 2005).  Time between assessments was also related to level of delinquency.  For each unit increase by month in the time between assessments adolescents decreased their likelihood of being involved with delinquency by 4%.  Perhaps the more time that passes between a caseworker home visit to complete an assessment, the less likely a caseworker is made aware of acts of delinquency by the youth.  On the other hand, youth who demonstrate low levels of delinquent behaviors may be seen less often by a caseworker compared to youth who demonstrate high levels of delinquent behaviors.  The time between assessments might be a function of the level of need for services for the youth.  However, more research needs to be conducted to understand why a longer time period between assessments is correlated with lower levels of delinquency.

**Limitations and future directions**

One limitation of this study is that there is little information that details the type of social support foster care youth received. It would be informative to follow up with participants to identify who they have relational permanence bonds with and the types of social support they receive. Singer, Berzin, and Hokanson (2013) explored the nuances within the social support structure of transitioning youth in foster care. Researchers found foster care youth had a wide variety of social support among biological family members, adoptive parents, foster families, grandparents, siblings, and other kin. However, alarming within these findings was that while emotional support was often received from those deemed as the closest to the youth, youth often lacked instrumental support and appraisal support in the form of tangible resources and critical encouragement and enhancement of self-worth. Essentially, even with the support adolescents received from their social network there were still critically important gaps within their social support structures where their needs were not being met (Rutman et al, 2016). The current study does not have the qualitative depth to explore these issues and the potential impact they may have on adolescent outcomes. More research needs to be conducted on the nuances within social relationships and their potentially prosocial or detrimental impact on behavioral outcomes.

Another limitation of this study is that it is not possible to distinguish between those social bonds that have a negative influence and those that have a positive influence. In the current study, having stable relationships increases the likelihood of delinquency compared to those with less stable relationships. Social control theory proposes individuals have a natural tendency to be deviant and it is only through connections and attachments to significant others that individuals are able to control these natural tendencies toward deviant behavior (Farineau, 2015). Perhaps more close social ties is not always a positive indicator if those social ties have a negative influence on youth behavior.

Regarding future directions, it would be interesting to explore whether relational permanence is correlated to positive outcomes in physical health, mental health, and longevity for youth in foster care. These areas of development have been explored in the general population (Keyes et al, 2010; Lamers et al, 2015; Ryff, 2014; Wood & Joseph, 2010), but not for youth in foster care. Additionally, it would be interesting to explore the role that gender may play in the outcomes of African American youth in foster care using a moderation analysis. Particularly in relation to delinquency, there may be substantial differences in outcomes based on the sex of the respondents for African American adolescents involved in child serving systems (Weerman & Hoeve, 2012; Williams, Ryan, Davis-Kean, McLoyd, & Schulenberg, 2014). It would be a significant contribution to the literature to explore how race, in combination with gender, is correlated with outcomes regarding adolescents in the foster care system. Examining the moderation of gender in regards to these outcomes would be an especially significant contribution to the literature.

Table 3.1

*Bivariate Correlations Between Key Variables in Study 2*

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Relational Permanence (Time 1) | | | | | | | | | | |
| 2. Relational Permanence (Time 2) | .40*** | | | | | | | | | |
| 3. Interpersonal Skills (Time 1) | .33*** | .15** | | | | | | | | |
| 4. School Achievement (Time 1) | .13** | .02 | .26*** | | | | | | | |
| 5. Low Num. of Place. Changes. | .03 | .11* | .08 | .08 | | | | | | |
| 6. Less Time in Care | .10* | .09* | .10* | .04 | .28*** | | | | | |
| 7. Time Between Assessments | -.01 | -.01 | .09* | .12** | .03 | .09* | | | | |
| 8. School Achievement (Time 2) | -.02 | .06 | .15** | .42*** | .06 | -.06 | .05 | | | |
| 9. Psych. Well-Being (Time 2) | .18*** | .40*** | .17*** | .02 | .13** | .03 | .01 | .20*** | | |
| 10. Lower Delinquency (Time 2) | -.14* | .00 | .02 | .18*** | .12** | -.13** | .13** | .25*** | .06 | |
| N | 532 | 533 | 533 | 521 | 533 | 533 | 533 | 524 | 530 | 520 |
| Mean | 2.50 | 2.52 | 2.73 | 2.83 | .48 | .50 | 6.72 | 2.81 | 2.51 | 3.5 |
| (SD) | (.79) | (.82) | (.74) | (.98) | (.50) | (.50) | (9.29) | (.99) | (.72) | (.77) |

***$p<.001$ **$p<.01$. *$p<.05$.

Table 3.2

*ANCOVA for Relational Permanence at Time 1 and School Achievement at Time 2, with Time Between Assessments as a Covariate*

Tests of Between-Subjects Effects

| Source | SS | df | Mean Square | F | Sig | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 5.33 | 4 | 1.33 | 1.37 | .24 | .01 |
| Intercept | 1894.50 | 1 | 1894.50 | 1948.45 | .00 | .79 |
| Time Between Assessments | 1.54 | 1 | 1.54 | 1.58 | .21 | .00 |
| Relational Permanence Time 1 | 3.86 | 3 | 1.29 | 1.32 | .27 | .01 |
| Error | 501.71 | 516 | .97 | | | |
| Total | 4649.00 | 521 | | | | |
| Corrected Total | 507.04 | 520 | | | | |

Table 3.3

*ANCOVA for Relational Permanence at Time 1 and Psychological Well-Being at Time 2, with Time Between Assessments as a Covariate*

Tests of Between-Subjects Effects

| Source | SS | df | Mean Square | F | Sig | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 9.23 | 4 | 2.31 | 4.55 | .00 | .03 |
| Intercept | 1489.73 | 1 | 1489.73 | 2940.96 | .00 | .85 |
| Time Between Assessments | .05 | 1 | .05 | .10 | .75 | .00 |
| Relational Permanence Time 1 | 9.19 | 3 | 3.06 | 6.04 | .00 | .03 |
| Error | 264.42 | 522 | .51 | | | |
| Total | 3605.00 | 527 | | | | |
| Corrected Total | 273.64 | | | | | |

Table 3.4

ANCOVA for Relational Permanence at Time 1 and Lower Delinquency at Time 2, with Time Between Assessments as a Covariate

Tests of Between-Subjects Effects

| Source | SS | df | Mean Square | F | Sig | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 12.29 | 4 | 3.07 | 5.42 | .00 | .04 |
| Intercept | 2740.61 | 1 | 2740.61 | 4830.40 | .00 | .90 |
| Time Between Assessments | 5.22 | 1 | 5.22 | 9.20 | .00 | .02 |
| Relational Permanence Time 1 | 7.06 | 3 | 2.35 | 4.15 | .01 | .02 |
| Error | 290.49 | 512 | .57 | | | |
| Total | 6745.00 | 517 | | | | |
| Corrected Total | 302.79 | 516 | | | | |

Table 3.5

*Ordinal Regression for Positive Change in Relational Permanence and School Achievement at Time 2*

| Independent Variables | β | SE | Exp (β) |
|---|---|---|---|
| Age | −0.06 | 0.06 | 0.94 |
| Gender[1] | −0.03 | 0.19 | 0.97 |
| Positive Change in Relational Permanence[2] | 0.02 | 0.22 | 1.02 |
| Relational Permanence (Time 1)[3] | | | |
|    No Stable Relationships | −0.35 | 0.57 | 0.70 |
|    At Least One Stable Relationship | −0.64 | 0.48 | 0.53 |
|    Stable Relationships | −0.64 | 0.49 | 0.53 |
| Neglect & Any Form of Abuse Combined[4] | 0.54 | 0.28 | 1.72 |
| Interpersonal Skills (Time 1)[5] | | | |
|    No Interpersonal Skills | −1.02 | 0.62 | 0.36 |
|    Mild Interpersonal Skills | −0.99** | 0.34 | 0.37 |
|    Moderate Interpersonal Skills | −0.61 | 0.33 | 0.55 |
| Low Number (< 9) of Placement Changes (Time 1)[6] | −0.27 | 0.20 | 0.76 |
| Less Time (< 7 Years) in Care (Time 1)[7] | 0.37 | 0.20 | 1.45 |
| Time Between Assessments in Months | 0.00 | 0.01 | 1.00 |
| ***p<.001 **p<.01 *p<.05 | | | |

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[1] Reference group is female.

[2] Reference group is maintained level of relational permanence over time.

[3] Reference group is very stable relationships.

[4] Reference group is neglect only.

[5] Reference group is significant interpersonal skills.

[6] Reference group is between zero and eight placement changes.

[7] Reference group is between zero and six years duration in care.

Table 3.6

*Ordinal Regression for Positive Change in Relational Permanence and Psychological Well-being at Time 2*

| Independent Variables | β | SE | Exp (β) |
|---|---|---|---|
| Age | 0.11 | 0.07 | 1.12 |
| Gender[1] | 0.10 | 0.21 | 1.10 |
| Positive Change in Relational Permanence[2] | 1.61*** | 0.25 | 4.99 |
| Relational Permanence (Time 1)[3] | | | |
|    No Stable Relationships | −3.50*** | 0.63 | 0.03 |
|    At Least One Stable Relationship | −2.74*** | 0.51 | 0.07 |
|    Stable Relationships | −1.56** | 0.50 | 0.21 |
| Neglect & Any Form of Abuse Combined[4] | −0.51 | 0.30 | 0.60 |
| Interpersonal Skills (Time 1)[5] | | | |
|    No Interpersonal Skills | −0.47 | 0.74 | 0.63 |
|    Mild Interpersonal Skills | −0.21 | 0.36 | 0.81 |
|    Moderate Interpersonal Skills | 0.17 | 0.35 | 1.18 |
| Low Number (< 9) of Placement Changes (Time 1)[6] | −0.29 | 0.22 | 0.75 |
| Less Time (< 7 Years) in Care (Time 1)[7] | 0.04 | 0.22 | 1.04 |
| Time Between Assessments in Months | 0.00 | 0.01 | 1.00 |
| ***p<.001 **p<.01 *p<.05 | | | |

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[1] Reference group is female.

[2] Reference group is maintained level of relational permanence over time.

[3] Reference group is very stable relationships.

[4] Reference group is neglect only.

[5] Reference group is significant interpersonal skills.

[6] Reference group is between zero and eight placement changes.

[7] Reference group is between zero and six years duration in care.

Table 3.7

*Ordinal Regression for Positive Change in Relational Permanence and Lower Delinquency at Time 2*

| Independent Variables | β | SE | Exp (β) |
|---|---|---|---|
| Age | −0.50*** | 0.10 | 0.61 |
| Gender[1] | −0.34 | 0.26 | 0.71 |
| Positive Change in Relational Permanence[2] | −0.55* | 0.28 | 0.58 |
| Relational Permanence (Time 1)[3] | | | |
|    No Stable Relationships | −0.35 | 0.93 | 0.71 |
|    At Least One Stable Relationship | −0.61 | 0.83 | 0.55 |
|    Stable Relationships | −1.28 | 0.83 | 0.28 |
| Neglect & Any Form of Abuse Combined[4] | −0.42 | 0.38 | 0.66 |
| Interpersonal Skills (Time 1)[5] | | | |
|    No Interpersonal Skills | 0.79 | 1.18 | 2.20 |
|    Mild Interpersonal Skills | −0.92 | 0.48 | 0.40 |
|    Moderate Interpersonal Skills | −0.52 | 0.48 | 0.59 |
| Low Number (< 9) of Placement Changes (Time 1)[6] | −0.35 | 0.26 | 0.71 |
| Less Time (< 7 Years) in Care (Time 1)[7] | 0.90** | 0.26 | 2.45 |
| Time Between Assessments in Months | 0.04* | 0.02 | 1.04 |
| ***p<.001 **p<.01 *p<.05 | | | |

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[1] Reference group is female.

[2] Reference group is maintained level of relational permanence over time.

[3] Reference group is very stable relationships.

[4] Reference group is neglect only.

[5] Reference group is significant interpersonal skills.

[6] Reference group is between zero and eight placement changes.

[7] Reference group is between zero and six years duration in care.

**CHAPTER IV**

**CONCLUSION**

The field of child welfare has historically focused on physical safety and legal permanency without an emphasis on child well-being or the importance of social relationships in positive youth development (Walsh, 2015). The studies of this dissertation add to the literature about child well-being among African American adolescents in care—a group that is often overrepresented within the foster care system (US Department of Health and Human Services, 2015). The findings indicate that relational permanence is linked to positive outcomes among these youth. In particular, higher levels of relational permanence at Time 1 predicted higher levels of psychological well-being at Time 2. Furthermore, positive change in relational permanence over time predicted higher levels of psychological well-being compared to maintenance of relational permanence over time. This relationship held after taking into account maltreatment type, interpersonal skills, number of placement moves, time in care, and time between assessments. These findings support Rutman et al.'s (2016) contention that social support aids youth in staying mentally healthy despite major deficits in support from parents or other family members.

This dissertation also explored the predictors of relational permanence as well. In this study, maltreatment type is the best predictor of relational permanence taking the change in relational permanence into account. Specifically, the experience of neglect combined with any

type of abuse at Time 1 correlated with lower levels of relational permanence at Time 2 compared with the experience of neglect alone. When not taking the change in relational permanence over time into account, interpersonal skills at Time 1 is also a predictor of relational permanence at Time 2. Having no interpersonal skills at Time 1 correlated with lower levels of relational permanence at Time 2 compared to having high interpersonal skills. Furthermore, having mild interpersonal skills at Time 1 compared to having significant interpersonal skills at Time 1 predicted lower levels of school achievement.

Using this knowledge, child welfare administrators, clinicians, and case workers can support interventions and policies that promote the attainment of relational permanence among African American youth in foster care. Child welfare professionals may be aware that when a child comes into care, the type of maltreatment that they experienced before entry into the system is likely to play a major role on their later ability to form lasting relationships. Those with experiences of neglect alone may be better able to form, navigate, and maintain lasting relationships as compared to those with experiences of abuse or abuse and neglect combined. It is important to note here that a relatively small number of youth experienced neglect alone as compared to neglect and some other form of abuse. Only 13% of adolescents experienced neglect alone where as 86% of the sample experienced neglect in combination with some other form of abuse. Furthermore, there are those within the sample who only experienced abuse and those who did not experience abuse or neglect during their time in foster care as shown in Appendix B. Therefore, while child welfare caseworkers can use these findings to inform services for those with experiences of neglect alone, it is important to recognize that most youth in foster care have combined experiences of neglect and abuse, while others have only abuse or other unrelated to either for their contact with the foster care system. While the findings

regarding maltreatment in relation to neglect are important, the descriptive information is also important in highlighting the number of children in the foster care system who are removed from their homes for reasons outside of abuse and neglect. These findings call for future research to examine other aspects of child maltreatment including those who are in care for other reasons such as the lack of access to mental health services, parental incarceration, parental substance abuse, and others.

Another finding in this dissertations involves the importance of interpersonal skills. Child welfare professionals can use these findings to invest more resources towards creating or using established programs to develop interpersonal skills for youth in care. Alternatively, if resources are lacking, child welfare professionals can engage young people in care to join groups or clubs related to their interests such as the arts, sports, or other activities that encourage positive interactions with other youth and gives the opportunity to develop and master interpersonal skills across a variety of social networks (Snow & Mann-Feder, 2013). Many youth in foster care lack the basic interpersonal skills to develop and maintain social connections, but with concerted effort they can overcome these shortcomings and build healthy relationships that may also aid in better regulation of their emotions (Nesmith & Christophersen, 2014).

Among the methodological strengths of this study is its longitudinal design. Rather than assessing the predictors of relational permanence or the correlation of relational permanence with positive outcomes using only cross-sectional data, this study examined variables across two time points. Furthermore, with the use of ordinal regression, this study is able to explore the degree of difference for each variable compared to a lower level of that variable. In that manner, it is easy to understand the potential clinical implications of these findings. Experiencing neglect alone is

correlated with higher relational permanence which is correlated with higher psychological well-being. These findings are clear and easy to understand which is important given the potential clinical and policy implications of this dissertation. Knowing that when a youth is neglected as opposed to abused upon entry into the foster care system and that it may provide them with an advantage in the form of higher psychological well-being as compared to the abused youth, child welfare professionals may be able to allocate resources differently, giving special attention to those with experiences of abuse as opposed to those with experiences of neglect.

Despite the strengths of this dissertation, it is limited by the measurement of the variables, particularly relational permanence. In regards to relational permanence specifically, there are several dimensions within each item which makes the ultimate interpretation of each item difficult. Included within this one variable are measures related to the number of social relationships, the duration of social relationships, the general concern of instability over time, and the inability for youth to change a category over time given the limited access to the full distribution of answers related to the duration of relationships. If given the opportunity to change the measure moving forward, it would be imperative to break up this one item into several items which individually addresses several different dimensions. For example, there would be individual items on the number of social relationships that each youth currently has. Another question would address whether these relationships were with adults, or fellow youth. The duration of each relationship would be addressed separately along with the type of support that is received from different individuals regarding informational support, instrumental support, emotional support, and appraisal support. An item addressing the timing of when the youth met this individual would also be included as the timing of social relationships may play a role in later positive outcomes.

Relatedly, another limitation of this study is that there is little descriptive information about the individuals with whom youth have relational permanence.  Many studies of social support among youth use the Network Map developed by Antonucci (1986) to decipher the difference between inner, middle, and outer circles of social support amongst the general population.  This network-mapping tool has been used successfully in several studies with youth (Antonucci, Akiyama, & Takahashi, 2004; Levitt, Guacci-Franco, & Levitt, 1993), and is especially effective for foster care youth because they are given the freedom to broadly define who is in their social network and detail how they feel about each individual (Singer et al, 2013). There is no information on the CANS survey that details with whom foster care youth have strong and positive levels of relational permanence, how long they have had the relationship, or any other descriptive information regarding these social bonds.  It would be informative to know not only with whom youth feel they have long standing social bonds, but also what type of support they receive.  Do youth receive positive or negative support from these influences?  Is support primarily formal or informal?  Is support emotional, informational, instrumental, or evaluative in nature?  It is possible that youth may report having strong and enduring bonds with an individual out of obligation or embarrassment by lack of support, or because they believe that they should have a long lasting relationship with someone regardless of how permanent or impermanent the relationship may actually be (Singer et al, 2013).  More descriptive information on the social relationships of these youth, and the timing of the social relationships of these youth is needed in future directions.

The short time period of observation is also another limitation. Mean level change and median level change over time in relational permanence was not statistically significant in this study.  There was only eight months on average between assessments.  Perhaps eight months is

110

too short a window to allow for significant change in relational permanence. If youth were in the process of making change, the observation period may have been too brief to detect it. It would be informative to explore relational permanence longitudinally over a longer period of time and with more than two time points. It would also be informative to examine relational permanence indicators after youth leave foster care. In the current study all of the youth were currently in the foster care system. The possibility of developmental change would perhaps be greater if youth were followed from their first assessment in the foster care system, through their time in care, and after care.

Although a number of the hypotheses from the two studies were supported, a number were not confirmed. School achievement, caregivers with financial and social assets, a low number of placement moves, and less time spent in care at Time 1 were not significantly associated with levels of relational permanence at Time 2. In the second study two of the hypotheses were supported, but two were not. Relational permanence at Time 1 and the positive change in relational permanence across time did not predict to school achievement at Time 2. In regards to these outcomes, perhaps the experience of being an African American adolescent in the foster care system is so unique that it impacts youths' experiences in an unexpected manner. Regarding school achievement, Miller Dyce (2015) notes the negative expectations regarding the academic ability of African American adolescents in foster care may hinder school achievement beyond the counter of what positive relationships can provide.

Perhaps a comparative analysis that examines the descriptive level differences between Black and White youth in foster care regarding these variables would determine whether race plays a significant role in why youth in the foster care system do not behave in a manner supported by the literature for these outcomes. Conversely, a comparative analysis between

111

Black youth in the foster care system and Black youth in the general population would be able to address if foster care status plays a significant role in why youth in the foster care system do not behave in a manner supported by the literature for these outcomes. Davis-Kean (2005) used Structural Equation Modeling in order to examine the role that parent education and family income had on the social processes of child achievement for Black and White Americans. She found for Black children, parents' educational attainment and family income were related indirectly to achievement through parent's educational expectations, reading, and parental warmth. For White children, parents' education had both a direct and indirect relation to the child's academic achievement. Parent's educational attainment had a much stronger effect on child achievement than income alone for White children. The differences between these groups were at a descriptive level rather than solely comparing means then utilizing a deficit perspective on the group who scored lower. In both cases, a comparative analysis on race and/or foster care status would be an interesting future direction given the current findings.

It would also be interesting to explore the role of timing in regards to the formation and duration of social relationships related to some of the unsupported hypotheses, school achievement. Perhaps the timing of social relationships is related to school achievement later on. Lasting relationships may be associated with school achievement, but the relationship needs to be established earlier in the child's life before adolescence and maybe even early childhood to be correlated to educational achievement later in life. The current study does not allow for the analysis of timing in regards to positive outcomes, but would be an interesting future direction.

One curious and unexpected finding concerning the relationship between relational permanence and positive outcomes is the finding regarding delinquency. The results suggest that higher levels of relational permanence are associated with higher levels of delinquency rather

than lower levels of delinquency. Furthermore, having a positive change in relational permanence predicted an increase, rather than a decrease, in the likelihood of delinquency. One possible reason for this finding is that those with few friends were less likely to engage in delinquency as compared to those with many friends (Farrington, Ttofi, & Piquero, 2016). Delinquency at this age may be a social activity and being solitary may be seen as a promotive factor. Another reason given for why social support might not lead to less delinquency is that the providers of the social support are negative influences as opposed to positive influences (Cusick et al., 2012). More research also needs to be conducted to understand the impact of different types of social relationships on the reduction of delinquency among African American youth in the foster care system.

Perhaps the most important lesson to be learned from this study is that, in addition to maltreatment type, interpersonal skills is a significant predictor of relational permanence and relational permanence plays a significant role in predicting psychological well-being among African American youth in foster care. These findings give clinicians and policymakers a targeted area of intervention to focus attention and resources for African American adolescents in foster care. One specific policy recommendation is to incorporate interpersonal skills building into the set of skills youth emancipating out of the foster care system must master before their transition to adulthood. This recommendation is supported by the call in the literature for an increased focus on interdependent living skills for youth who age out of care rather than solely independent living skills (Propp, Ortega, & New Hart, 2003). More funding needs to be dedicated to understanding the construct of relational permanence and its impact on youth in the foster care system. Increased attention and resources for relational permanence would be a

significant step towards greater investment in the well-being of children within the foster care

system.

# APPENDIX A

## Study One Variables of Analysis

1. Sex

2. Age

3. Maltreatment Type

4. Interpersonal Skills (Time 1)

5. School Achievement (Time 1)

6. Caregiver Resources (Time 1)

7. Number of Placement Moves

8. Duration of Time in Care

9. Time Between Assessments

10. Relationship Permanence (Time 1)

11. Relationship Permanence (Time 2)


Sexual Abuse

Describes child experience of sexual abuse or the impact of the abuse on child's

functioning.

1. No evidence that child experience sexual abuse.

2. Child has experienced single incident of sexual abuse with no penetration.

3. Child has experienced multiple incidents of sexual abuse without penetration or a

single incident of penetration.

4. Child has experienced severe, chronic sexual abuse that could include penetration

or associated physical injury.

Physical Abuse

Describes the degree of severity of the child's physical abuse.

1. No evidence that child has experience physical abuse.

2. Suspicion that child has experienced physical abuse but no confirming evidence. Spanking without physical harm or intention to commit harm also qualifies.

3. Child has experienced a moderate level of physical abuse and/or repeated forms of physical punishment (e.g. hitting, punching).

4. Child has experienced severe and repeated physical abuse with intent to do harm and that causes sufficient physical harm to necessitate hospital treatment.

Emotional Abuse

Describes the degree of severity of emotional abuse, including verbal and nonverbal forms.

1. No evidence that child has experienced emotional abuse.

2. Child has experienced mild emotional abuse. For instance, child may experience some insults or is occasionally referred to in a derogatory manner by caregivers.

3. Child has experienced moderate degree of emotional abuse. For instance, child may be consistently denied emotional attention from caregivers, insulted or humiliated on an ongoing basis, or intentionally isolated from others.

4. Child has experienced significant emotional abuse over an extended period of time (at least one year). For instance, child is completely ignored by caregivers, or threatened/terrorized by others.

Neglect

Describes the degree of severity of neglect.

1. No evidence the child has experienced neglect.

2. Child has experienced minor or occasional neglect. Child may have been left at home alone with no adult supervision or there may be occasional failure to provide adequate supervision of child.

3. Child has experienced a moderate level of neglect. This may include occasional unintended failure to provide adequate food, shelter, or clothing with corrective action.

4. Child has experienced a severe level of neglect including prolonged absences by adult, without minimal supervision, and failure to provide basic necessities of life on a regular basis.

Relationship Permanence

Refers to the stability of significant relationships in the child or youth's life. This likely includes family members but may also include other individuals.

1. Child does not have any stability in relationships.

2. Child has had at least one stable relationship over his/her lifetime but has experience other instability through factors such as divorce, moving, removal from home, and death.

3. Child has had stable relationships but there is some concern about instability in the near future (one year) due to transitions, illness, or age. A child who has a stable relationship with only one parent may be rated here.

4. Child has very stable relationships. Family members, friends, and community have been stable for most of his/her life and are likely to remain so in the foreseeable future. Child is involved with both parents.

Interpersonal Skills

Refers to the interpersonal skills of the child or youth both with peers and adults.

1. Child with no known interpersonal strengths. Child currently does not have any friends nor has he/she had any friends in the past. Child does not have positive relationships with adults.

2. Mild level of interpersonal strengths. Child has some social skills that facilitate positive relationships with peers and adults but may not have any current relationships, but has a history of making and maintaining healthy friendships with others.

3. Moderate level of interpersonal strengths. Child has formed positive interpersonal relationships with peers and/or other non-caregivers. Child may have one friend, if that friendship is a healthy "best friendship" model.

4. Significant interpersonal skills. Child is seen as well-liked by others and has significant ability to form and maintain positive relationships with both peers and adults. Individual has multiple close friends and is friendly with others.

School Achievement

Describes academic achievement and functioning.

1. Child is having severe achievement problems. He/she may be failing most subjects or is more than one year behind same age peers in school achievement.

2. Child is having moderate problems with school achievement. He/she may be failing some subjects.

3. Child is doing adequately in school, although some problems with achievement exist.

4. Child is doing well in school.

Caregiver Resources

Refers to the financial and social assets (extended family) and resources that the caregiver can bring to bear in addressing the multiple needs of the child and family.

1. Caregiver(s) has severely limited resources that are available to assist in the care and treatment of the child.

2. Caregiver(s) has limited resources (e.g. grandmother living in same town who is available sometimes to watch the child.

3. Caregiver(s) has the necessary resources to help address the child's major and basic needs but those resources might be stretched.

4. Caregiver(s) has sufficient resources so that there are few limitations on what can be provided for the child.

# APPENDIX B

## All Levels of Maltreatment Type

| 1 | Neglect Alone | 71 (13) |
|---|---|---|
| 2 | Physical Abuse Only | 16 (3) |
| 3 | Sexual Abuse Only | 5 (1) |
| 4 | Emotional Abuse Only | 3 (1) |
| 5 | Neglect & Physical Abuse | 34 (6) |
| 6 | Neglect & Sexual Abuse | 15 (3) |
| 7 | Neglect & Emotional Abuse | 35 (7) |
| 8 | Physical & Sexual Abuse | 2 (.4) |
| 9 | Physical & Emotional Abuse | 16 (3) |
| 10 | Emotional & Sexual Abuse | 2 (.2) |
| 11 | Neglect & Physical & Sexual Abuse | 19 (4) |
| 12 | Neglect & Physical & Emotional Abuse | 133 (25) |
| 13 | Physical & Sexual & Emotional Abuse | 9 (2) |
| 14 | Neglect & Sexual & Emotional Abuse | 13 (2) |
| 15 | Neglect & Sexual & Emotional & Physical Abuse | 122 (23) |
| 16 | Other | 39 (7) |
| 17 | All Abuse Only Combined | 53 (10) |
| 18 | Neglect & Any Form of Abuse Combined | 424 (86) |

## APPENDIX C

## Study Two Variables of Analysis

1. Sex

2. Age

3. Relationship Permanence (Time 1)

4. Interpersonal Skills (Time 1)

5. School Achievement (Time 2)

6. Psychological Well-Being (Time 2)

7. Delinquency (Time 2)

8. Number of Placement Moves

9. Duration of Time in Care

10. Time Between Assessments

Relationship Permanence

Refers to the stability of significant relationships in the child or youth's life. This likely includes family members but may also include other individuals.

1. Child does not have any stability in relationships.

2. Child has had at least one stable relationship over his/her lifetime but has experience other instability through factors such as divorce, moving, removal from home, and death.

3. Child has had stable relationships but there is some concern about instability in the near future (one year) due to transitions, illness, or age. A child who has a stable relationship with only one parent may be rated here.

4. Child has very stable relationships. Family members, friends, and community have been stable for most of his/her life and are likely to remain so in the foreseeable future. Child is involved with both parents.

Interpersonal Skills

Refers to the interpersonal skills of the child or youth both with peers and adults.

1. Child with no known interpersonal strengths. Child currently does not have any friends nor has he/she had any friends in the past. Child does not have positive relationships with adults.

2. Mild level of interpersonal strengths. Child has some social skills that facilitate positive relationships with peers and adults but may not have any current relationships, but has a history of making and maintaining healthy friendships with others.

3. Moderate level of interpersonal strengths. Child has formed positive interpersonal relationships with peers and/or other non-caregivers. Child may have one friend, if that friendship is a healthy "best friendship" model.

4. Significant interpersonal skills. Child is seen as well-liked by others and has significant ability to form and maintain positive relationships with both peers and adults. Individual has multiple close friends and is friendly with others.

School Achievement

Describes academic achievement and functioning.

1. Child is having severe achievement problems. He/she may be failing most subjects or is more than one year behind same age peers in school achievement.

2. Child is having moderate problems with school achievement. He/she may be failing some subjects.

3. Child is doing adequately in school, although some problems with achievement exist.

4. Child is doing well in school.

Psychological Well-Being

Based on the psychological strengths that the child or adolescent might have developed including the ability to enjoy positive life experiences and manage negative life events.

1. Child has no known or identifiable psychological strengths. This may be due to intellectual impairment or serious psychiatric disorder.

2. Child has limited psychological strengths. For example, a person with very low self-esteem would be rated here.

3. Child has good psychological strengths. The person has solid coping skills for managing distress or solid savoring skills for enjoying pleasurable events.

4. Child has exceptional psychological strengths. Both coping and savoring skills are well developed.

Delinquency

Includes both criminal behavior and status offenses that may result from child or youth failing to follow required behavioral standards (e.g. truancy).

- Serious level of criminal or delinquent activity in the past 30 days. Examples would include car theft, residential burglary, gang involvement, etc.

- Moderate level of criminal activity including a high likelihood of crimes committed in the past 30 days. Examples would include vandalism, shoplifting, etc.

- History of criminal or delinquent behavior but none in the past 30 days. Status offenses in the past 30 days would be rated here.

- No evidence or history of criminal or delinquent behavior.

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