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PREDICTORS OF FATHER INVOVLMENT:

THE ROLE OF EARLY LIFE EVENTS AND STRESSORS

By

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M.S.W. Washington University in St. Louis, 2013

A Dissertation
Submitted to the Faculty of the
Raymond A. Kent School of Social Work
of the University of Louisville
In Partial Fulfillment of the Requirements
For the Degree of

Doctor of Philosophy in Social Work

Raymond A. Kent School of Social Work
University of Louisville
Louisville, Kentucky

August 2015

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DEDICATION

This dissertation is dedicated to my parents, Guoxian Hao and Rang Wang, for their relentless love, support, and encouragement.

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ABSTRACT

PREDICTORS OF FATHER INVOVLMENT:

THE ROLE OF EARLY LIFE EVENTS AND STRESSORS

Qiuli Hao

August 3, 2015

This study utilized the National Longitudinal Survey of Youth 1997 (NLSY97) dataset to examine the effect of men's early life stressful events and their father involvement with their new biological child(ren).

The problems associated with low level of father involvement or even father absence in the country followed by the dearth of studying men who experienced stressful events during childhood were first discussed. A series of factors in the literature that can affect the level of father involvement and various of childhood stressful events were also presented. Following this, the characteristics of study subjects' demographics, household information, men's crime history, substance use history, early life stressful events, and men's father/figure were studied. A logistic regression analysis was used to determine the best predictors of the level of men's involvement with their new biological child(ren). The best predictors were age when a man became a father and whether he had been arrested in childhood. Future research is needed to evaluate fathering activities representative of the direct and indirect engagement dimensions.

Key words: childhood, early life stressors, father involvement

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CHAPTER I: INTRODUCTION

As of 2011, approximately 24.7 million children, the equivalent of 33% of all children living in the United States, resided in homes without their biological father. Of these 24.7 million, 20.3 million resided in homes without any male figures—biological, adoptive, or step—in the home at all (National Fatherhood Initiative, 2011a).

Research has shown that the role of fathers in child development is substantial. Studies confirmed that during the first 2 years of life, children develop attachment with their father just as they do with their mother (Belsky, 1996; Lamb, 2010). This attachment helps children to use their father figure as a secure base for exploration of their physical and social worlds, thus promoting their emotional and cognitive development (Carlson & Sroufe, 1995; Easterbrooks & Goldberg, 1990). Researchers have also found that the consequences of positive father involvement include fewer behavior problems in later childhood (Aldous & Mulligan, 2002; Lamb, 2010), more positive school attitudes in adolescence (Flouri, Buchanan, & Bream, 2002; Lamb, 2010), greater mental health wellbeing as adults (Wenk, Hardesty, Morgan, & Blair, 1994), and increased economic-educational achievement in adulthood (Alfaro et al., 2006; Harris et al., 1998; Plunkett et al., 2009). When fathers are involved, children tend to ‘‘exhibit less violent behavior, have better impulse control, are more socially adept, and may demonstrate higher than average IQ’’ (Rump, 2002, p. 19). Father absence from a child’s

life has been widely identified as a factor that increases the risk of child maltreatment and negative child outcomes (Berger, 2004; Guterman & Lee, 2005).

Over the past decade, national attention has focused on media portrayals about "deadbeat dads," which is a term for men who father children, inside or outside marriage, and then are assumed to abandon their children, both emotionally and financially. The National Center for Fathering and Families suggested that 70% of the surveyed population agreed that father absence from the home is the most significant challenge facing families in America (National Center for Fathering and Families, 2009). Additionally, almost 97% of respondents in the study indicated that fathers needed to be more involved in their children's lives, while only 50% thought that fathers knew what was going on in their children's lives. Indeed, "responsible fatherhood" is a national priority, with millions of federal dollars now going to programs to enforce child support orders and "healthy marriage," particularly for low-income populations.

In summary, the relationship between father involvement and child well-being has been widely reported, and data show that father involvement is highly correlated with positive child outcomes (Amato, 1994; Amato, 1998; Fagan & Iglesias, 1999; Flouri & Buchanan, 2002). Fathers' active involvement in children's life is not only linked with positive child outcomes, but also benefits the families and communities as a whole. As Mackey and Buttram (2012) suggested, father involvement strongly predicts lessened violence in a community, whereas the absence of fathers is also strongly correlated with elevated levels of violent crime within that community.

Problem Statement

Although there is a link between parenting and children's development, fathers' influence has not been studied to the extent of mothers' influence (Brooks-Gunn et al. 2000; Fitzgerald & Montanez 2001). The primary focus of parenting, fertility, and family formation is women and mothers because they have been considered the primary caregivers. Men and fathers have been largely missing from statistical portraits of families (Castillo et. al., 2011; Downer et al., 2008 ; Marsiglio et al., 2000; Nelson, 2004). Fathers provide caregiving for children similar to mothers (Lamb, 1977; Pleck, 1997), but they also interact with their infants in ways that offer something unique for infant development (Pruett & Litzenburger, 1992; Yogman, 1981). Research has shown that fathers serve a unique role in providing a parenting style and quality that contributes to young children's social development, and which are distinct from that of mothers (Clarke- Lamb, 1975; Lamb, 1997; Stewart, 1978). For example, during visits to their hospitalized premature infants, fathers were more responsive to infants' gross motor cues, comparing with mothers who were more responsive to infants' social cues (Marton & Minde, 1980). Studies have consistently shown that fathers spend more of their time with infants engaged in more proximal, arousing, and idiosyncratic play, whereas mothers spend more of their time with infants doing caretaking tasks or smoothly modulated, soothing, and verbal games (Lamb, 1997). The father's role incorporates more fun and games and serves as a link to the child's outside environment compared to the mother's focus on physical caregiving. Clarke-Stewart (1978) reported that children enjoy and cooperate more in play with their fathers than mothers, and have a preferential reaction to fathers' play. Walker (2000) claimed that fathers can provide aspects of parenting that are

unique and distinct when compared to mothers; as well as offer opportunities for positive social development in their children.

The important role of fathers in children's development has been increasingly recognized in the social sciences literature for a long time (Amato, 1998; Belsky, 1996, 1998; Lamb, 1997). Beliefs of and attitudes about fatherhood and father involvement have been changing, at least in Western societies, as fathers are gradually perceived as being true co-parents (Connell & Goodman, 2002; McBride, Schoppe, & Rane, 2002). Research has also shown positive associations between fathers' residence, fathers' involvement, and children's higher cognitive and socioemotional development, academic achievement, and development of healthy peer relationships (Lamb, 2010; Tamis-LeMonda, & Cabrera, 2002). Healthy father–child interaction is positively related to childhood development. A substantial body of evidence has shown that, on average, children who have active interaction with their father have better behavioral outcomes compared with children with absent fathers (Flouri & Buchanan, 2004; Hofferth, 2003, Jayakody & Kalil, 2002; Teitler, 2001; Stewart, 2003).

However, in the U.S., nearly 21 million children (30%) are presently living with biological non-involved fathers according to the United States Census Bureau (Kreider & Elliott, 2009). For Hispanic/Latino and African American children, these figures are 41% and 66%, respectively (The Annie E. Casey Foundation, 2011). The children of absentee fathers are more likely to experience poor psychosocial outcomes when their fathers are absent or uninvolved. Life is difficult, and the prospects for a productive life in the future for the children of non–involved fathers are not bright. Research has shown that distant fatherhood predicts a greater risk of adverse child and adolescent outcomes (Carlson,

2006), regardless of race, education, or mothers' remarriage (Amato, 2000). These children have a higher risk of suffering poverty, school dropout, and behavior problems like using alcohol, tobacco, and illicit drugs. Additionally, children with absent fathers are more likely to enter the juvenile justice system and have a higher risk to be incarcerated later in life (Flouri, Nock, & Einolf, 2008). Studies show that children whose fathers are not involved in their lives are 10 times more likely to use illegal drugs, 20 times more likely to have behavior disorders, 2 times more likely to go to prison, and 9 times more likely to not graduate from high school (Cabrera & Peters, 2002). In terms of educational attainment, children with absent fathers are less likely to graduate from high school and have lower rates of college attendance (McLanahan, 1997).

Additionally, the National Fatherhood Initiative (2011a) highlighted the assertion that nearly all the social issues facing America today are directly or indirectly impacted by fatherlessness and low father involvement. The report illustrated that how father absence affects children's health, mental wellbeing, academic achievement, and childhood obesity. The empirical data from the report also illustrated that a lack of father involvement will lead to poverty, incarceration, crime, teen pregnancy, child abuse, and substance abuse.

Given these findings, policymakers and practitioners from across the United States have implemented numerous initiatives, such as the Responsible Fatherhood Initiative and Healthy Marriage Initiative, intended to foster more stable family unions among parents and strengthen fathers' involvement with their children. Despite such efforts, limited research has been done to study fathers' residential status, age, race and ethnicity, educational attainment, financial status, and how these factors shape fathers' involvement

(Castillo et. al., 2011). Furthermore, relatively little research has been conducted that fully explicates the differences between men who experienced early life stressors and men who do not have early life stressors and the effect of early childhood stressors has on fathers' involvement with their children. In exploring father–child interaction, the unique perspective and history that fathers bring to their parenting behaviors are often neglected. Research shows that people with stressful events may re-experience these adverse events in the form of "intrusive recollections, flashbacks or nightmares, persistent avoidance of stimuli associated with the stressful event, emotional numbing, as well as a constant state of heightened alertness and increased arousal" (APA, 1994). A man's experiences of historical stressful events can have dramatic effects on his fathering behavior and children's development (Runyon & Kenny, 2002).

Addressing this limitation, this study focuses on the relationship between fathers' early life stressors and how these stressful events affect involvement in their fatherhood. The more we know and understand fathers, the greater likelihood that policymakers and practitioners may be able to develop and implement policies and programs benefitting diverse groups of fathers in their involvement with their children. This study will contribute to the literature by examining all fathers who experienced childhood stressful events and how these events shape the levels of father involvement.

Gaps in Past Research

Fatherhood research has long been concerned with the levels and predictors of father involvement (e.g., Pleck & Masciadrelli, 2004). Much of the existing research has attempted to describe outcomes associated with the well-being and development of children (Castillo, & Fenzl-Crossman., 2010; Cabrera et al. 2000; Lamb 2004). The

contextual factors associated with fathers, and the relationship between fathers' involvement and these contextual factors, have received limited attention in this literature (Castillo et al., 2011).

The research about father involvement has been increasing recently; however, the impact of historical stressful events on father involvement is still understudied (Ee et al., 2013). Psychological wellbeing of parents, such as poststressful stress disorder (PTSD), affects the level and pattern of parent involvement. Childhood stressful events may cause fear and serious challenges to its victims and others (Lewis et al., 1985). People who are not able to overcome the effects of childhood stressful events often struggle with poor learning and social skills and are less likely to be successful in life (Schaaf, 2012). Terr (2003) claimed that childhood stressful events have four long-enduring features: "visualized memories, repetitive behaviors, trauma-specific fears, and changed attitudes about people, life, and the future" (pp. 322, 333). Most current studies focus on mothers who suffered stressful events in childhood, who are found to be less sensitive, less available, less involved, and more hostile and intrusive (Davies, Slade, Wright, & Stewart, 2008; Kaitz, Levy, Ebstein, Faraone, & Mankuta, 2009; Lyons-Ruth & Block, 1996; Tees et al., 2010; Van et al., 2012). Little is known about fathers' experiences of early life stressors and how they relate to their involvement with their own children in later adulthood.

Among the methodological concerns researchers have raised in the study of father involvement, inadequate sample sizes and their resulting inability to yield robust effect has been noticed (Amato & Gilbreth, 1999; Marsiglio et al., 2000; Nelson, 2004). What we know about fathers is largely based on small–scale and short-term clinical studies. In

the clinical tradition, many of these studies have assumed a deficit perspective by being problem focused, sampling the most adversely affected families, lacking standardized instrumentation, and being very subjective in interpretation. Therefore, these studies are not generalizable to other populations. These issues are also important as fatherhood programs across the country struggle to assist fathers with stressful events who are economically disadvantaged in caring for their children. First, without an empirically grounded understanding of fathers with stressful events, it is difficult to determine how individual and environmental factors interact with other family characteristics to influence children's development. Second, very little is known about how to successfully engage fathers in existing services such as case management, parent training, and other interventions promoting child wellbeing (Lee et al., 2009).

A nationally representative sample and the increasing diversity of families in the United States are needed in the father involvement literature (Cabrera et al., 2000; Coley, 2001; Lamb & Tamis- LeMonda, 2004). Such a sample may offer an opportunity to apply more complicated analytical models, such as those that include tests for moderation, mediation, bidirectional effects, and even hierarchical linear modeling, which were rarely evident in the literature. Such research may help policymakers, researchers, and practitioners in developing and implementing policies and practices directed towards various kinds of fathers, residential or nonresidential, married or nonmarried, White or minority, young or old, especially fathers who experienced early life stressors.

In summary, this gap in the literature raises critical questions about current strategies to support the healthy involvement of fathers in the lives of children, especially when

they have a stressful childhood. Additionally, much of the research related to parent trauma history and parenting behavior has been limited to mothers who have been sexually abused or mothers currently in domestic violence situations. This leaves the research somewhat limited in that different types of stressful experiences in parents' histories, including bullying victim, homelessness, loss, and gunshot victim, may lead to different outcomes for parents and different effects on parenting behaviors (Riser, 2009).

The Present Study

To target a positive change in father involvement, understanding the factors associated with positive fathering is necessary. The first aim of this study is to contribute to the understanding of men with childhood stressful events by examining their overall father involvement, documenting their involvement level. The second aim of this study is to ascertain the effect of men' early life stressors, and how these stressors affect and shape their father involvement. The studies discussed above have examined factors that may affect parental involvement level and also found links between childhood stressful events and current parental involvement pattern. However, these studies have only been done with mothers, and their children. Fathers tend to interact with their infants in different ways than mothers (Lamb, 1997). Fathers are more likely than mothers to engage in heightened, playful, arousing, and rough-and-tumble idiosyncratic play with their infants and are less likely than mothers to engage in caretaking (Clarke-Stewart, 1980; Park. 1979). These differences between maternal and paternal interactional styles suggest the possibility that early life stressors may manifest differently among fathers and mothers. The present study will examine the links between past stressful experiences and current involvement style of men.

The primary aim of this study are to affirm a relationship between fathers' childhood stressful events and their involvement with their children. There are a number of benefits to and contributions of the present study. First, this study draws on nationally representative data to examine fathers' involvement with their children. This research has been done in the literature; however, the samples were small. The present study will use the national data. The National Longitudinal Survey of Youth 1997 (NLSY97) data sample includes a diverse group of men, which allows the researcher to examine father involvement among fathers with different races, incomes, classes, ethnicities, etc., which may not be possible in more general samples. Second, the present study will examine childhood stressful events of men in contributing to differences in patterns of participation among various fathers. Research on this topic has only been done with mothers and more information is needed on fathers. Lastly, the findings of the present study in general, will contribute to the greater understanding of father involvement. More specifically, they will be available to policymakers, practitioners, researchers, advocates, and service providers focused on involving men with a history of early life stressors in parenting their children and caring for their families.

Relevance to Social Work

Since the beginning of the social work profession, research in the form of the scientific method has been used to engage systematic and thorough activities to guide, assess, and intervene with individuals, families, and communities (Zimbalist, 1977). The purpose of social work research is to seek solutions to large and complex societal problems in order to promote human and community wellbeing (Liu, 2007). Research is an essential tool toward building knowledge that can be used for practice. Research can

serve as a generative tool to develop and refine theories for practice. When knowledge is empirically grounded, it strengthens practice decisions. It is through social work research that social work professionals will be able to reach conclusions and make advancements that improve social conditions and ameliorate social problems (Hudson & Nurius, 1994).

Prior studies of fathers have primarily focused on the positive effect of father's involvement on child's outcomes and factors related to father involvement. Fathers who have experienced childhood stressful events are under researched in the literature. This research should contribute to understanding how fathers' own experience of childhood stressful events predict fathers' involvement with their children. It is hoped that the findings from this paper will inform social policy, program improvements, and implementations of interventions that will support fathers in (a) becoming more positively involved with their children, (b) understanding the importance of the influence of their past childhood stressful events on level of their involvement with their children, (c) enhancing the fathering role as this may help fathers assume greater parental involvement, and (d) increasing their chances to be involved in their children's lives.

Theoretical Perspectives of Father Involvement

This section will introduce five prevailing theories and discusses their relevancy to the current study. It includes an elaboration on the extent to which each theory has influenced issues relating to historical stressful events and father involvement. These theories provide a better assessment of the characteristics that could directly or indirectly influence the level and pattern of father involvement. The five theories on which the theoretical framework of this research is based are family systems theory, boundary theory, the ecological theory, attachment theory and resilience theory.

Family Systems Theory

The concept of wholeness is the primary unifying feature of family systems theory (Cox & Paley, 2003; Minuchin, Nichols, & Lee, 2007). An essential feature of wholeness is respect for historical and intergenerational influences (Kilpatrick, Hopps, & Gray, 2009). Therefore, a family system is greater than the sum of its members, and it must be considered within the present and historical settings to be understood accurately (Cox & Paley, 1997, 2003; Kilpatrick et al., 2009). There are three important aspects of a family system: "clear boundaries that set guidelines for inclusion or exclusion from the system, interaction among members, and subsystems within the family that are defined by power disparities and relationship bonding between individual members" (White & Klein, 2002, p37). For example, Belsky (1984) suggested that the pattern and quality of interactions in the parental subsystem and the father's subsequent interaction with his children form feedback loops, which are bi-directional influential. The feedback loops indicate that family members have developed shared meaning and established a common bond through roles.

According to family systems theory, a single person cannot be understood without considering the family members and the family context. A person's position within the family, personality, values, and beliefs can affect, and be affected, by the other members of the family. Additionally, the presence or absence of a member of the family can affect the family unit and how it functions (Straus, 1973). Family systems theory suggests that each member of the family has a specific role and should play the role based on shared family culture. The role of each family member can be used to build family relationships and predict other family members' reactions. A break in this loop may change the family

structure, which can become unpredictable, or may stabilize the family system (Avenarius, 2011).

Consistent with family systems theory, father involvement is a multidimensional perception that structures a father's interactions with his children (Lamb, 2000; Padilla et al., 2013). Lamb (2000) identified one of the facets of this concept as engagement or the direct interaction between fathers and their children. Engagement has a positive association with parental relationship quality (Carlson & McLanahan, 2006). Family systems theory suggests that father involvement can be affected by other relational subsystems and the broader system of the individual (Cox & Paley, 1997). For example, the paternal grandmother's acceptance of the father's paternity and feelings toward the child's mother can play a role in encouraging or discouraging the man's involvement. If the grandmother likes the child's mother and is convinced her son is the father, she may encourage marriage or at least child support; however, if she thinks her son is not the father, she may discourage him from involvement (Anderson, 1993).

Boundary Theory

The concept of family boundary is derived from family systems theory and refers to system and subsystem rules regarding participating members, that is, who, when, and how members participate in family life (Minuchin, 1974). Family boundaries become unclear when the family perceives a physically absent member as mentally present or a physically present member as mentally absent (Boss, 1983). This perception of boundary ambiguity has been used most often to refer to remarried families and divorced families (Pasley & Ihinger-Tallman, 1989). Establishing boundaries in divorced and unwed families could be an issue because individuals need to differentiate between the parental

and spousal subsystems. The most challenging task that divorced families faces is to redefine boundaries and understand new roles (Ahrons & Rodgers, 1987) because it is hard to figure out who is in and who is out of the family system and it is unclear what the role of the nonresidential parent should be (Boss, 1987; Price & McKenry, 1989). Family tasks and responsibilities are rearranged; previous relationships are changed, and new members may enter the family. Noncustodial fathers who are physically separated from their children may be at high risk for role confusion, resulting in withdrawal from physical involvement with their children (Ahrons & Rodgers, 1987; Price & McKenry, 1989). Also, the concept of boundary ambiguity suggests that certain conditions pertaining to the father are conducive to fathers' having frequent contact with their children, including but not limited to perceived importance of and satisfaction with the father role, child responsiveness to the father, close physical proximity, less free time since the divorce, a cooperative relationship with the former spouse, and the father's or the former spouse's lack of involvement in a new intimate relationship. However, continued relationships between former spouses are increasingly viewed as appropriate and functional (Depner & Bray, 1990; Price & McKenry, 1988; Wright & Price, 1986), and some authors contend that dismissing the noncustodial father from the family system increases dysfunctional stress (Ahrons & Rodgers, 1987).

Boss (1983) defined boundary ambiguity as the family not knowing who is in and who is out of the system. Boundary ambiguity can result from events both inside and outside the family (Boss, 1983). From outside the family, boundary ambiguity may occur when there are lack of facts or an inherent uncertainty about the event or loss. For example, missing or chronically ill family members in a family may lead to status of

uncertain and continue to be uncertain. From events inside the family, a situation may develop in which family members can get the facts surrounding the event of loss but, for some reason, they ignore or deny these facts. For example, in the case of divorce, children may exclude their stepfather or stepmother when in fact he or she is physically present in the family. Children in divorced families may continue to include their biological father or biological mother who is physically absent at home.

Boundary ambiguity has important consequences, which may lead to poorer family functioning (Boss, 2007; Carroll et al., 2007). The greater the family boundary ambiguity predicts higher the stress for the family, and the greater the individual and family dysfunction. However, family boundary ambiguity may not be dysfunctional over the short term (Boss, 1983). Family members may deny loss during early period, but they may reconstruct the meaning of the loss and clarify and maintain new boundaries of the system.

The Ecological Theory

Bronfenbrenner's (1979) ecological theory looks at an individual's development within the context of the system of relationships that form his or her environment. Bronfenbrenner's theory defines complex "layers" of environment, each having an effect on an individual's development. The structure of environment contains five layers: (a) the microsystem–which is closest to the individual and contains the structures with which the individual has direct contact; (b) the mesosystem–this layer provides the connection between the structures of the individual's microsystem (Berk, 2000); (c) the exosystem–which defines the larger social system in which the individual does not function directly; the structures in this layer impact the individual's development by interacting with some

structure in his/her microsystem (Berk, 2000); (d) the macrosystem–which is composed of cultural values, customs, and laws (Berk, 2000); (e) the chronosystem–which encompasses the dimension of time as it relates to a child's environments; elements within this system can be either external, such as the timing of a parent's death, or internal, such as the physiological changes that occur with the aging of a child. As children get older, they may react differently to environmental changes and may be more able to determine more how that change will influence them.

The ecological theory claims that the relationships experienced within one system influence and are influenced by the relationships developed in the other systems. A person is composed of social, cultural, economic and temporal contexts. Father involvement is the result of the interaction of several factors related to the father's microsystem (e.g. the father's desire to be close to his child, employment status, mental health status); mesosystem (e.g. quality of the marital relationship, spouse's job, and child characteristics); the exosytem (e.g. father's work environment, collective agreement provisions facilitating parental leave); the macrosystem (e.g. the cultural beliefs about father's role in child development, social policies towards father involvement, etc) and the chronological system (e.g. fathers' childhood experience, the model the father had in his family of origin).

Attachment Theory

Attachment theory is an evolutionary and ethological theory of motivation and behavioral control (Bowlby, 1969, 1973) Attachment is an affective bond between a caregiver and child, a behavioral structure in keeping the child from injury, and uplifting the environment under secure circumstances (Bowlby, 1969; Sroufe & Waters, 1977).

According to attachment theory, infants pursue out caregivers for shelter whenever they feel weak or in danger, which is their nature (Ainsworth et al., 1978). In the attachment system, the caregiver's role is to provide the child a secure base to discover the environment and offer protection to the infant when it is requested (Ainsworth et al., 1978). Attachment theory suggests that infants may develop a sense of security and trust with the caregiver when their caregivers are consistently sensitive in caregiving (Bowlby, 1969). In contrast, infants may develop avoidant attachments when their caregivers are insensitive or reject caregiving. Infants may develop ambivalent attachments and become anxious and inconsolable in an attempt to maintain contact with caregivers who respond to their needs in an inconsistently sensitive or insensitive manner (Ainsworth et al., 1978). The disorganized attachment is found when a parent is both the infant's source of fear, protection, and comfort (Main & Hesse, 1990).

Attachment is associated with child outcomes. Research found that children who developed secure attachment with their caregivers are more loving, supportive, empathic, and competent during the preschool years than those who are insecurely attached (Bretherton & Waters, 1985). Children with disorganized attachment are at higher risk for conduct disorder, such as aggression in toddlerhood, acting out, and oppositional disobedient disorder (Lyons-Ruth, 1996), hostile behavior (Lyons-Ruth et al., 1993), troubled peer relationships (Jacobvitz & Hazen, 1999), disruptive behavior problems (Shaw et al., 1996), dissociative experiences in young adulthood (Carslon, 1998; Liotti, 1993), and difficulties with syllogistic reasoning (Jacobsen et al., 1994).

Originally, attachment research focused on the development of bond relationships between infants and their caregivers. However, attachment is a lifespan progressive

experience that continues to develop into adulthood (McFarland, 2000). The bond relationship between an infant and a caregiver can become internalized into an image of the self and others, which may lay the groundwork for adult relationships (Sroufe &Fleeson, 1986). According to adult attachment theory, an individual's internal model of attachment influences his or her caregiving style, which in turn should be related to the infant's attachment (McFarland, 2000). Attachment theory states that parents' internal representations of attachment are related to their outlooks and conceptions of parenting and their ability for reacting to their infants' attachment-related signs (George et al., 1985; Ward, & Carlson, 1995). Secure adults are likely to be sensitive and responsive to their infants. Avoidant adults are often unresponsive and rejecting toward their infants because their internal model of attachment is rigid and closed and minimizes the importance of attachment. Ambivalent adults are likely to be inconsistently available to their infants because their internal model of attachment is still enmeshed with their own past attachment experiences.

Resilience Theory

At one point or another in people's lives, some individuals may experience some form of anxiety. Whether from natural disasters such as earthquakes, tsunamis, hurricanes, or tornadoes; and personal stress from sexual abuse, rape, physical assault, bullying, car accident, or unexpected death. Research shows that more than one half of the overall population, 61% for men and 51% for women experience a stressful incident at some point in their lives (Rodriguez, 2014). Individuals who experienced stressful events may have emotional, cognitive, behavioral and physical reactions that impair several areas of functioning (Dass-Brailsford, 2007). For example, survivors may display

confusion, fear, panic, anxiety, depression, guilt, impaired concentration, an increased sense of vulnerability, loss of control, difficult decision-making, a sense of aimless, and an increase in high-risk behaviors etc.

Several theories have attempted to explain the common negative responses, depression, and anxiety, including cognitive theories, information-processing theories, conditioning theories, neuropsychological theories, and memory-based theories (Brewin & Holmes, 2003). However, individual differences can affect whether persistent depressio develops (Ehlers & Clark, 2000). Those who are able to perceive stress as a separate, time-limited experience, have nurturing and consistent social support, or a positive self-concept, high self-esteem, high self-confidence are easier to recover from stress or anxiety. The majority of individuals exposed to stress or anxiety do not develop a depression or depressive symptoms. Of the individuals with stressful exposure, it is likely that at least 10% of women and 5% of men will develop stress disorder (Rodriguez, 2014). Therefore, it is useful to explore the factors that enable the other 85% of distress victims to survive, and even to psychologically recover. Resiliency is the term applied to those individuals who thrive and excel despite their exposure to stress or anxiety.

Luthar et al. (2000) described resilience as the "dynamic process encompassing positive adaptation within the context of significant adversity" (p. 543). Hines, Merdinger, and Wyatt (2005) defined resilience as "the process by which individuals achieve adaptive functioning in the face of adversity" (p. 381). Condly (2006) considered resilience as the interaction of a child with trauma or a negative environment in which victory, as considered by social norms, is accomplished by the feature of the child's capabilities, motivations, and support systems. Masten and Powell (2003) viewed

resilience as "patterns of positive adaptation in the context of significant risk" (p. 4), whereas Masten and Coatsworth (1998) referred to it as "how children overcome adversity to achieve good developmental outcomes" (p. 205). Although many definitions of resilience as a theoretical construct have been proposed, resilience, in general, refers to manifested capability in the context of major challenges and threats to adaptation or development. Masten and Coatsworth (1998) suggested there are two fundamental circumstances that must exist when identifying resilience as a deterministic factor of competence. First, the individual must be in the presence of, or had exposure to, a significant threat typically characterized by an at-risk status. Second, the individual must achieve high levels of positive adaptation and/or development.

For the purpose of this study, areas of support that affect an individual's resiliency is defined as the interaction of a child with a negative environment in which victory, as considered by social norms, is accomplished by features of the child's capabilities, motivations, and support systems (Condly, 2006), such as individual's strength, flexibility, capacity for mastery, quality of character, personality, coping skills, psychological and psychiatric services, educational and social support, familial and community support systems, spiritual, and internal/self-directed support.

How does the concept of resilience, along with all its development outcomes, overlap with the concept of father involvement and its outcomes? In the context of resilience, each of these stressful factors presents a significant risk that could hamper fathers' involvement with their children. However, researcher has found evidence from longitudinal data to suggest individuals who are exposed to the same kind of risks can have highly differentiated outcomes (Masten, 2007). Some may conquer the physical,

emotional, socially, and psychological stress and function very well in their lives. Some individuals, on the other hand, may fail to adapt and fall into mental disorders. The same holds true for men who have experienced childhood stressful events, and which is the fundamental premise upon which this study is built.

Richardson, Neiger, Jensen, and Kumpfer (1990) proposed a resiliency model (see Figure 1 in appendix) demonstrating that people who are suffering disruptions or reacting to life events may choose the consequences of such disruptions consciously or unconsciously. According to the model, one achieves a state of bio-psycho-spiritual homeostasis, also referred to as the comfort zone, when one has adapted to one's life situation. Individuals continually face stressors, adversity, and life events threatening the status quo. Richardson et al. (1990) asserted that repeated exposure to disruptions results in the formulation of resilient qualities as individuals naturally attempt to deal with disruptions and protect their state of homeostasis. Richardson (2002) stated that such "chronic stressors befall people when they do not develop resilient qualities or have not grown through the disruptions in their life" (p. 311). In their proposed resiliency model, Richardson et al. (1990) illustrated differentiated behaviors that individuals may demonstrate to achieve recovery after a disturbance has taken place. To adapt in the face of adversity, individuals may exhibit behaviors of resilient reintegration. When this recovery occurs, individuals develop some insight and experience growth through an introspective process of identifying and strengthening their collection of resilient qualities (Richardson et al., 1990). Some individuals, on the other hand, may opt to simply move beyond the disruption and avoid any adaptive changes to return to the status quo. Other responses to disruption are to cut one's losses or dysfunctional reintegration. According

to Richardson (2002), this latter response is replete with disruptive behaviors. The responses to disruptions represented in the resiliency model inform the highly differentiated behaviors displayed by men who experience the disruption of father absence. The spectrum of behavioral responses ranges from "positive adaptation" (Luthar et al., 2000, p. 543) resulting in growth—referred to in the model as resilient reintegration—to behaviors like paternal neglect or abandonment of offspring—represented in the model as reintegration with loss—to behaviors including substance abuse, crime, and violence—depicted in the model as dysfunctional integration. Condly (2006) suggested that stressful children are more likely to develop resiliency when there are meaningful opportunities to get a break from the toxic environment, to explore in safety and security, and to believe and dream (p. 228).

CHAPTER II: LITERATURE REVIEW

Father involvement has been one of the focal points of family research over the last two decades. Existing research provides valuable insight into how socioeconomic, societal, and political factors have influenced and are in turn influenced by father involvement. With the increased scrutiny placed on this topic, researchers have shed light on factors that were believed to influence the levels of father involvement observed within families (Inniss, 2013). In this chapter, the purpose is to classify and illustrate the development of the father involvement concept, factors that affect father involvement, different types of childhood stressful events, and some of the effects of that stress or anxiety.

Definition of Father Involvement

Scholars in the 1970s conceptualized and operationalized father involvement as a time-based and readily observable occurrence (Lamb, 1997; Palkovitz, 1997; Pleck, 1997). This definition described father involvement as time that fathers spend with children or direct interaction or shared activities between fathers and children, such as shared meals, shared leisure time, or time spent reading together. Lamb (1986) suggested a broad conceptualization of father involvement and proposed three dimensions of father involvement in parenting and nurturing: (a) interaction (observable interaction or shared activities between a father and a child such as playing, feeding or reading); (b) availability (physical and psychological accessibility to the child, even if not directly interacting); and (c) responsibility (the extent to which a father arranges for resources to

be available to the child, including organizing and planning children's lives). This three-part typology of involvement has been highly influential among scholars. However, one of the main criticisms of Lamb's (1986) characterization is that ethnicity, religiosity, and socio-economics were inadequately take into account as factors impacting fathers' involvement (Palkowitz, 1997).

When scholars discuss "more involvement," they commonly mean more time, higher frequencies of fathering behavior, or greater levels of engagement, accessibility, and responsibility (Palkovitz, 2002). However, most of the knowledge of father involvement comes from investigations of middle-class White men, other groups such as separated/divorced, immigrant, young, aboriginal, gay, new fathers, and fathers of children with special needs are understudied (Father Involvement Research Alliance, 2006, p. 1). Additionally, the definition of father involvement does not access how children and fathers develop a close and nurturing relationship in the framework of families (Cabrera et. al, 1999).

Palkovitz (1997) suggested a framework of father involvement that includes three overlapping domains: cognitive, affective, and behavioral engagement. In addition to the domains of involvement, his model assesses simultaneously occurring fields (e.g., time invested, directness, degree of involvement, salience of involvement, and proximity), and factors impacting father involvement (e.g., individual factors, family process and structure, and meso- macro contexts). Within this conceptualization, 15 ways to be involved in parenting were listed: communication, teaching (role modeling, encouraging activities and interests), monitoring, thinking about children, providing, protection,

affection, emotional support, care giving, shared interests, plan making, direct interaction, child-related maintenance, running errands, and being available (Cabrera et. al, 2000).

Palkovitz (1997) highlighted that father involvement is not static, but "likely to vary across time, developmental periods of both parents and children, and in relation to other components of the social ecology and life circumstances" (p. 213). Recent research has examined fathering experiences over time (Wood & Repetti, 2004), which showed that fathers were likely to increase their relative contribution to child caregiving over the course of 3 years when they had a greater proportion of male children in the family and when life events—particularly changes in employment and financial status—were experienced by the family.

In response to the need to learn more about the diversity of fathering, researchers are exploring what father involvement means within different cultural contexts (e.g., Parke, Coltrane, Brothwith-Duffy, Powers, Adams, Fabricius, Braver, & Saenz, 2004; Roopnarine, 2004). Parke (2000) and Hewlett (2000) studied father involvement in relation to ethnicity and culture. Factors that may affect fathering experiences such as sexual orientation, family process or structure, and social class were taken account into the variability of fatherhood research.

Lee (2004) developed a comprehensive model of father involvement (CMFI), which includes dimensions in direct and indirect engagement. Direct care interactions, teacher/role model interactions, affective interactions, and recreational/play interactions are considered as direct engagement. Providing financial support, responsibility, and availability are categorized in indirect engagement. In contrast to many studies that examine basic caregiving as the only indicator of the level of father involvement, the

CMFI model views direct care as one of the many ways that fathers can be engaged with their children.

In summary, the research on paternal involvement is complex and compelling. Initially, the conceptualizations of father involvement were observed as time and direct interaction, despite the acknowledged relevance of these dimensions to children's and men's development. Father involvement emphasized the amount of fathering rather than the quality of nurturing and the closeness between a father and a child. More recently, researchers have considered fathers' motivations, contexts, involvement, and performing of the paternal role with greater complexity, lending support for the framework and measurement of father involvement as a multidimensional and continually evolving concept characterized by distinct facets (Coley, 2001; Palkovitz, 2002; King & Sobolewski, 2006).

The Measurement of Father Involvement

The study of father involvement goes back several generations; however, only in the last 2 decades, scholars began to research on measurement of father involvement (Bradford et al., 2002). Allen and Daly (2007) argued that father involvement was typically measured in one or a combination of the following three ways: (a) time spent together (including the amount of time spent together and fathers spend performing routine physical child care such as bathing, preparing meals, and dressing a child and how effective, mutual, and reciprocal the play is); (b) The quality of the father-child relationship (the attachment type a child has developed to a father); and (c) investment in fathering (assesses the level of investment in child rearing, including the father's ability

to be an authoritative parent, the degree to which he is facilitative and attentive to his child's needs, and the amount of support he provides his children).

In the 1980s, father involvement was measured as time spent together and frequency of contact, such as the amount of time fathers spend performing routine physical child care such as bathing, preparing meals, and dressing a child in addition to the amount of time fathers' spend playing with their child. For example, Feldman, Nash, and Aschenbrenner (1983) classified father involvement within two broad domains: caretaking and playfulness in their study of 30 European American couples with 6-8 month old children. The researchers defined caretaking as feeding, diapering, etc. Playfulness incorporated being playful and openly affectionate with the infant. The shortcomings of this measure did not assess indirect father involvement, such as paying rent, giving child support to the custodial mother, attending school meetings, and planning activities (Wood & Repetti, 2004).

Beitel and Parke (1998) used reports of parenting behavior from 244 mothers and fathers with 3-5 month old infants about the fathers' engagement in various childcare activities. The researchers developed a three-factor solution for fathers' reports of their involvement which consisted of the following: companion/play (talking, rocking, holding, diapering a baby, or spending time with the infant), indirect care/responsibility (teaching, picking out child's clothes, packing diaper bag, attending school or church functions), direct care (feeding, diapering, getting up at night for feedings, putting child to bed). The researchers pointed out that play activities were less clearly separated from caregiving for fathers than for mothers and suggested that this unclear separation may reflect a more blurred boundary between caregiving and playing for fathers, for whom the

caregiving role is less central to fatherhood. Flouri and Buchanan (2004) performed a study examining the role of father involvement at age 7 in children's school achievement by age 20. There were four 3-point scales pertaining to father involvement at age 7 that were completed by the child's father. Father involvement was categorized into "outings with father", "father manages the child", "father reads to the child" and "father is interested in child's education".

In the past few years, a number of scholars in fathering claimed that the measurement of the construct of father involvement should be improved (Lamb, 2000; Marsiglio, Amato, Day, & Lamb, 2000). The measurement of father involvement has generally focused on the direct involvement of fathers, measuring observable and countable behaviors (Palkovitz, 1997), and neglecting the cognitive and emotional domains of involvement (Palkovitz, 2002). Researchers have begun to broaden their exploration of father involvement. Affective dimensions and cognitive elements were included in the measurement of father involvement (Marsiglio & Cohan, 2000, p. 76). Hawkins et al. (2002) created a nine-factor model that measures behavioral, mental, emotional, moral and ethical facets of father involvement. Schoppe-Sullivan et al. (2004) developed a six-factor model assessing involvement that includes "responsibility, love/physical affection, talking with the child, household activities, child activities and cognitive monitoring."

Finley and Schwartz (2004) studied 2,353 university students (31% male and 69% female) in order to develop a father involvement scale. Measures were completed from the adolescent or adult child's retrospective point of view. The Father Involvement Scale lists 20 domains of father involvement, which were categorized into intellectual

development, emotional development, social development, ethical/moral development, spiritual development, development, career development, developing responsibility, developing independence, developing competence, leisure, fun, or play, income, sharing activities/interests, mentoring/teaching, caregiving, being protective, advising, discipline, school/homework, companionship. Participants were asked to indicate how involved their fathers were in their lives and how involved they desire their father's level of involvement to be compared with what it actually was.

Wood and Repetti (2004) stated that many previous scales have focused on a single father–child dyad, whereas all children in the family were the subjects of their rating scale. They developed a 10-item scale following the tradition of father involvement measures that focus on positive parenting practices rather than simply time together in any activities. Fathers and mothers rated the their own responsibility, their spouse's responsibility, and other child-care providers' responsibility separately. A formula was created to calculate the proportion score that provides a measure of father's self-reported responsibility for child-care tasks.

One major criticism of current measurement of father involvement is that most studies are often cross-sectional (Allen & Daly, 2007). This cross-sectional measurement makes "inferring the direction of causality problematic, and impossible to account for selection effects or pre-existing conditions inherent in the child that may be impacting child development outcomes" (Pleck & Masciadrelli, 2004, p 24). Another major criticism of current measurement of father involvement is that mother and co-parental factors, and larger contextual factors are understudied. A father's involvement with a child occurs within a complex environment of other factors that my influence the

engagement of fathers (Allen & Daly, 2007). Co-parenting arrangements and division of responsibilities may also affect fathers' availability for childcare and level of cooperation with their partners. Additionally, contextual factors such as employment factors, family size and life events or fathers' childhood experience also affect fathers' involvement level (Wood & Repetti, 2004). Hawkins and his colleagues (2002) developed the Inventory of Father Involvement (IFI-26) with 26 items to examine fahters' rating of their involvement on nine dimensions over the past year; discipline and teaching responsibility (a=.85), school encouragement(a=.82), giving support to the mother (a=.87), providing (a=.69), time and talking together (a=.80), giving praise and affection (a=.79), developing talents and future concerns (a=.75), reading and homework support (a=.83), and attentiveness (a=.69).

Traditional conceptualizations of father involvement were defined as time and directly interaction, despite the acknowledged relevance of these dimensions to children's and men's development. Father involvement emphasized the amount of fathering rather than the quality of nurturing and the closeness between a father and a child. Additionally, the measurement of father involvement has focused on observable and countable behaviors (Palkovitz, 1997) and neglected the cognitive and affective domains of involvement (Palkovitz, 2002). Father involvement is a multidimensional, continually evolving concept (Cabrera et. al, 2000).

In summary, the measurement of father involvement has focused on very specific aspects of fathering behavior (e.g. diapering a baby) and other observable and countable behaviors (Palkovitz, 1997) as ways of measuring father involvement. The cognitive and

affective domains of involvement have been understudied and neglected (Palkovitz, 2002).

Factors Associated to Father Involvement

"A father's involvement with his child is likely determined by the same kinds of factors that influence all human interactions" (McClain & Demaris, 2013). The previous discussed research has demonstrated that family demographics, father's personality, the quality of the relationship between the mother and the father, child characteristics, father's mental health, father's motivation, father's self-confidence and competence in the fathering role, father's social support, and parents' sex-role attitudes may affect the level or pattern of father involvement. Understanding of the factors of father involvement requires a multi-level, multi-aspect structure. Parke (1996) has offered a framework that emphasizes four levels of predictors–individual, familial, extrafamilial, and cultural–each of which has multiple components. Parke grouped them into three categories: contextual (work, financial, and child-related variables), individual (demographic and individual functioning variables), and co-parental relationship (alliance, satisfaction, and communication). Cabrera et al. (2007) proposed a heuristic model of father involvement (depicted in Figure 2). The model provides a comprehensive view of fatherhood by systematically organizing the study of fathers and closely relating it to the wellbeing and development of children (Cabrera et al., 2007). According to Cabrera et al. (2007), factors influencing father involvement include both father characteristics and child characteristics. The predictors put forth are individual, contextual, and family-centric, reflecting the complex nature of this topic.

Father Factors

Men's social and demographic factors may influence their involvement with their children. Research has shown that fathers are more involved with their children when they are better-educated, less depressed, have more access to social support, and are more engaged with religious activities (Roggman, et. al, 2002). Minority fathers with low income, poor education and mental disorders may experience deprivation of resources that will affect their daily function and their involvement with their children or family. For example, nonresident, lower-income earning, and less educated fathers are less involved in childrearing than vice versa, whereas middle-class fathers are more likely to be involved in childrearing (Marsiglio et al., 2000). However, there is no strict consistency about how fathers' social and demographic factors predict father involvement. The next section of this chapter is a comprehensive literature review on how father-related factors affect their involvement with their children.

Education. Fathers' education level could be an important variable in the relationship between father and children (Hofferth et al., 2007). Research has shown that fathers' education is positively related to the level of involvement with their children and more educated fathers are more likely to engage in play (Gerson, 1993; Grossman et al., 1988, Roggman, et. al, 2002). Blair et al. (1994) and Nord et al. (1997) analyzed data from the 1996 National Household Educational Survey (NHES) and found that fathers with higher educational attainment have more positive engagement and access to with their school-age children. Sandberg and Hofferth (2001) also found that better educated fathers spend more time with their children than their counterparts. This may be because higher educated fathers view father involvement and child development as more valuable.

They have a better understanding of their fatherhood identity and are more motivated to be actively involved in their children's lives. According to Lamb et al.'s (1987) model of determinants of father involvement, fathers' motivation as well as their perceptions of fathering shape the way and level of their involvement with their children. Research has shown that men with more egalitarian beliefs about gender roles demonstrated higher levels of involvement with childcare than those with more traditional views (Coltrane & Ishii-Kuntz, 1992). Moore and Kotelchuck (2004) reported that fathers are inactive in children's lives when they believe that it is the mother's responsibility to parent a child, or lack of confidence in parenting skills.

Employment. The relations between employment status and the level of father involvement are somewhat mixed: Whereas several studies found a positive association between fathers' employment status and father involvement, others found negative associations between these two. Fathers' employment serves to fulfill the role of being the "good provider;" although often taken for granted; the good provider role represents an important form of involvement for fathers (Christiansen & Palkovitz, 2001). Danziger and Radin (1990) found that fathers who were previously employed participate in higher levels of childrearing duties and keep a positive and beneficial interaction with their children compared to those unemployed fathers. Additionally, greater stability in employment was related to greater levels of father involvement (Coley & Hernandez, 2006).

Liu (2007) indicated that being employed and experiencing job satisfaction should facilitate the transition to fatherhood because they are important resources for dealing with the long-term strains, liabilities, and commitments of raising children. Additionally,

research suggests that many unemployed men feel they cannot contribute to the support and care of their children (Parke, 2000; Sullivan, 1993). Harris and Marmer (1996) found that fathers' involvement with their children was reduced when fathers experienced poverty and welfare use. Elder et al. (1992) found that fathers' involvement level is negatively associated with financial difficulty and that fathers are more likely to became more negative and hostile toward their children.

However, fathers who spend long hours at work have less time to spend with their children or to be involved in programs for their children such as EHS. For example, Rienks et al (2011) found that lower father involvement was related to higher income, though not to number of hours worked and that those who were not employed were more involved, whereas unemployed fathers may have more time to share in household affairs, to strengthen their relationship with the child's mother, and to spend with children compared to employed fathers (Crouter et al., 1987). Therefore, it is important to investigate fathers' work status as a moderator because relationships may be undermined if couples lack time together.

Socioeconomic Factors Associated with Father Involvement

Higher socioeconomic status (SES), especially as measured by level of education and income, appears to facilitate consistent visitation (McKenry & Price, 1992). For example, Blair et al. (1994) conducted a study using data from the NSFH and found that income was positively associated with father–child engagement among children ages 5–18, whereas others found that fathers who contributed a lower proportion of family income were more involved in caregiving activities (NICHD Early Child Care Research Network, 2000). However, Hossain, Field, Pickens, Malphurs, and Del Valle (1997)

researched 34 African American and Hispanic American low-income families to examine the relationship between socioeconomic status and the level of father involvement. Their results indicated that neither a father's income nor his education was significant predictors of his involvement, which means having a low socioeconomic status did not affect the level of fathers' engagement with their children. Hossain and Roopnarine (1994) examined paternal involvement in 40 low to middle-income African American families. Their study also suggested that fathers' income and education were not significant predictors of fathers' involvement. Roopnarine and Ahmeduzzaman (1993) and Applebaum's (2000) study of 40 Puerto Rican fathers showed the same results: there is no significant difference between fathers with different socioeconomic status. In summary, how fathers' economic status affect their involvement level in their children's development needs more clarification.

Race. Studies pointed out that race and ethnicity have on influence on the level of father involvement (King, et. al., 2004; Landale & Oropesa, 2001; Volling & Belsky, 1996). Non-minority fathers tend to differ from minority fathers in their form of involvement with their children. In the literature of father involvement, most studies have focused on White, middle-class fathers (Campos, 2008; Lamb, 1997; Marsiglio et al, 2000; Parke et al., 2004), little empirical research has linked these practices to minority fathers, such as African American fathers, Hispanic fathers, Asian-American, and Native American fathers (Cabrera et al., 2000).

Studies suggest a complex picture of father involvement in African American fathers. A stereotype of absent and disobliging fathering of Black fathers has been generated in the literature. They are portrayed as deadbeats' fathers who abandon their

children and the child's mother. This negative image of Black fathers has seeped into the nation's conscience, even to the extent of shaping social policy on public assistance and associated issues (Smith et al., 2005). Some quantitative studies certainly imply that many young Black fathers has rarely involved in their children's lives than White fathers (Isaacs & Leon 1988; Seltzer & Bianchi, 1988). African American fathers pay less child support, visit less, and are less engaged with their children compared to White fathers (King, Harris, & Heard, 2004). Arendell (1995) used a sample of 17 million 27- to 34-year-olds and found that African American males are more likely to father children out of wedlock than White or Hispanic fathers. Gee et al. (2007) found that African American fathers have lower early postnatal father involvement, as measured by material (in-kind) support, than White and Latino fathers. In addition, African American provided less in-kind support at three years postpartum compared to White fathers.

There are several possible explanations for the inactive or low level of father involvement of African American fathers. First, African American men are typically depicted as ineffective, irresponsible and non-present, African American fathers who are involved in their children's lives are more likely to do so in ways that affirm their identity, ways that are contrary to the common social conceptions and media representations of Black men (Davis, 2013). Second, African American fathers face barriers including history of incarceration, low levels of educational attainment, low rates of employment, and high rates of multiple partner fertility. According to the Bureau of Labor Statistics (2006) African American men have more than double (10.5%) the rate of unemployment for Whites (4.4%). African American/Black fathers tended to have a much lower income than White fathers, which may have important effects for fathers and

for their level of involvement. These barriers and institutionalized discrimination may affect African American men's social and economic conditions, and present the impact of the extended family system on the father-child bond. Also, much of the studies of African American men have been deficit focused, while research on White males has most often focused on married, middle-income fathers.

However, regardless of circumstance, familial background and current life endeavors; African American fathers cared about their children and desired serve an active and present role in their lives. A study showed that African American fathers are more likely to perform child-care tasks for preschool age children compared to White and Hispanic fathers (Ahmeduzzaman & Roopnarine, 1992). Other analyses have found that Black fathers are more likely to visit with their absent children than non-Black fathers (King, 1994; Seltzer, 1991). Bumpass and Lu (2000) suggested that African American children spend more time in cohabiting parent unions than White children, and this could affect levels and type of father involvement. Children in African American families may experience higher level of father involvement because of the longer history the child and father have shared together. Leavell et al. (2012) interviewed African American, Latino, and White fathers (N = 426) from research sites across the United States and found that ethnic differences in fathers' activities with children. For example, African American fathers had the highest level of involvement in recreation and visiting activities compared to White fathers. Benson (2014) conducted a study to examine perceptions of fathering among African American fathers using data from the Fragile Families and Child Wellbeing Study and found that African American fathers cared about their children and desired serve an active and present role in their lives. Even among those fathers who were

absent from the home, African American fathers were more likely than Whites and Hispanics to visit their children on a daily or monthly basis, a pattern that held even after controlling for educational attainment, unemployment, age of the child, and fathers' age (Lerman & Sorenson, 2000). A growing literature has shown that the contribution of young African American fathers has exceeded expectations, for both financial and nonfinancial support (McLanahan et al., 2001; Reichman et al., 2001).

Hispanic fathers, similar to African American fathers in the United States have been generated a rather negative image in the literature. Hispanic fathers are portrayed as being emotionally withdrawn, demanding respect, and strict disciplinarians who eschew child caretaking and nurturing roles in the media and research literature (Aguiar, 2009). Several studies have found that Hispanic fathers engaged less in caregiving activities than African American and White fathers (Varga, 2012). Though the traditional views of Hispanic fathers endure in many areas, increasing evidence indicates that this perspective may reflect stereotypes or attitudes rather than actual behaviors (Couce & Domenech-Rodriguez, 2002). Empirical evidence supports the view that Hispanic fathers are more involved with their children than previously believed. Indeed, Hispanic fathers spend more time with their children on weekends than White fathers according to extensive analysis of time diaries (Yeung et al., 2001). Data from the Fragile Families and Child Wellbeing Study suggests that Hispanic fathers are the most likely to report residing with their children compared to White fathers (Child trends, 2007). Hofferth (2003) analyzed a national data from the 1997 Child Development Supplement and found that Hispanic fathers monitor their children less than African American and White fathers, but exhibit more responsibility for child rearing than White fathers. Carlson and Hognas (2010)

reported that Hispanic fathers have higher levels of coparenting than Whites and African Americans three years and five years post-birth, while another study found that Hispanics were more likely than Whites and African Americans to remain romantically involved with their partners (Moore et al., 2007).

Overall, a major shortcoming of past research on fathering has been a limited inclusion of culture and ethnicity into the discussion (Cabrera & Garcia Coll, 2004) and research on Hispanic fathers in the past has generally relied on small samples and ethnographic reports (Suarez-Orozco & Paez, 2002). In a nutshell, the scientific literature provides two rather different views of African American and Hispanic fathers. The traditional view of African American and Hispanic fathers is that they are distant fathers, who are inactively involved with their children. More recently, studies have suggested that the portrait of young minority fathers is far more complex than this. As with White and Hispanic fathers, African American fathers may be more diverse with respect to such basic issues as residence, contact, and support than previously thought. This dissertation will use a national data to reanalyze how father involvement differs across races and ethnicities.

Age of fathers. Age is related to emotional maturity; fathers who are younger may be less emotionally mature and less likely to identify and understand their roles and responsibilities as fathers (Landale, & Oropesa, 2001). Robbers (2011) performed a longitudinal analysis of young Hispanic fathers' involvement with their children and found that younger fathers differed from older fathers in their involvement with their children. King et al (2004) and Lerman and Sorensen (2000) found that older fathers tend to be more highly involved with their children. Older fathers are more involved in

childrearing than the younger fathers because of the correlation between a father's maturity and sense of responsibility (Liu & Du 2004). Castillo et al. (2011) examined 4,898 fathers who ranged in age from 15 to 80 years old from the Fragile Families and Child Wellbeing Study. The results showed that older fathers tend to be more involved than younger fathers. Castillo et al. (2011) claimed that older fathers have better access to support and greater fathering role identification, which in turn increase the level of father involvement. In summary, fathers' involvement differs on fathers' age, with older fathers being more involved with their children than younger fathers.

Mental Health. How involved fathers are with their children may also depend on psychosocial factors such as psychological well-being, attitudes about close relationships, and use of social support resources (Belsky, 1996; Jain, Belsky &Crnic, 1996; Jarvis & Creasey, 1991). For the most part, findings indicate that depressive symptoms negatively predict father involvement regardless of father residence (Cabrera et al., 2011; Lyons-Ruth et al., 2002, Paulson et al., 2011). For example, Roggman, Benson, and Boyce (1999) examined the relationship between depression and father involvement in a sample of 132 fathers with 10-14 month old infants. The research suggested that fathers' depression was negatively associated with father involvement. Roggman, et al. (2002) conducted a study on 72 low-income fathers who were predominantly White to test the predictors of father involvement in early Head Start and with their children. The outcomes showed fathers' psychosocial functioning predicts their involvement with children. Fathers without symptoms of depression and without feelings of anxiety in close relationships are more likely to be involved with their children. In a sample of fathers with 3-year-old children, Lyons-Ruth et al. (2002) found that depressive

symptoms were associated with reductions in play, reading, and displays of affection. Paulson et al. (2011) reported that depressive symptoms were associated with lower involvement among fathers with 9-month old infants. Rienks et al. (2011) also reported that the number of stressors, degree of anxiety, and depressed mood were negatively related to the involvement level. This finding is consistent with previous research that poor psychosocial functioning is related to poorer fathering (Belsky, 1984; Roggman et al., 2002)

However, research about the impact of depression on father involvement has provided mixed results. Some scholars have noted no association between psychological wellbeing and father involvement for resident fathers, whereas others suggested negative associations between these two factors (Schindler, 2010; Sotomay et al., 2009). For example, Field, Hossain, and Malphurs (1999) conducted a comparison study on parent-child interactions between depressed and non-depressed caregivers. Videotaped recordings of fathers' interactions with their infants were used as data. The study found no significant difference between depressed fathers and non-depressed fathers in their level of engagement with their infant. Interestingly, depressed fathers demonstrated higher levels of engagement with their infants than depressed mothers of these same infants. Similarly, in the study of married, resident fathers with infants, Sotomay et al. (2009) found no direct association between depressive symptoms and fathers' attitude and interaction with children. Schindler (2010) also suggested no association between father's financial contributions or interaction frequency and fathers' psychological wellbeing during middle childhood. Thus, the evidence is inconsistent and the extent to

father's psychological well-being may affect father involvement is unknown (Kotila & Kamp, 2013).

Contextual Factors

It is important to examine the context of fathers when studying father involvement. Brofenbrenner's (1979) ecological theory of human development suggested that it was critical to analyze individuals within their environment. Individuals develop within a specific context and to understand the individual's development; one must examine his/her environment as well. In terms of father involvement, Lamb et al. (1987) noted that fathers with support from their relatives and friends are more likely to have high levels of involvement with their children. The current study will describe how contextual factors affect father involvement.

Family of Origin. Many fatherhood scholars have found that men's family of origin experiences are associated with future fatherhood attitudes and behaviors (Doherty, Kouneski, & Erickson, 1998; Lamb, 1997; Pleck, 1997). Cabrera et al. (2007) captured the potential for the generational perpetuation of father involvement or fatherlessness by representing "rearing history" as a determinant of father characteristics that in turn influences paternal involvement, essentially the concept of reproduction of fatherhood (p. 186). How do a father's childhood and experience with his father affect his relationship with his sons? Typically, there are two structures. The modeling framework claims that fathers who come from caring and nurturing families tend to continue to actively involved in their own families, whereas fathers who come from abusive or distant families are more likely to have negative thoughts on fathering and would continue the abusive pattern in their own families. The compensate model holds the opposite view,

which suggests that fathers who come from families that were more distant will also have stronger attitudes about fatherhood (Floyd & Morman, 2000; Pruett, 1987; Radin, 1988).

Co-Parent Relationship. Fathers do not parent in isolation from their spouses or former spouses. Men's ability to cooperate with the child's mother and the quality of bonding between them are powerful determinants of fathers' commitment to fathering and the level of father involvement (McCLAIN & Demaris, 2013; McKenry & Price, 1992).

Especially for divorced or remarried families, it is not unusual for former spouses to have conflicts over such matters as finances, child custody, and visitation (Wallerstein & Kelly, 1980). For example, Kurdek (1986) reported that fathers in high-conflict families visited less regularly and were less regular in their payment of child support compared to low-conflict families. By studying with both resident and nonresident fathers (N=228), Coley and Morris (2002) found that the parental conflict predicts lower levels of father involvement. In addition, mothers' attitude about the child's father and the relationship between the child's father and mother influence the way fathers act toward their children (Hoffman & Moon, 1999; McBride & Rane, 1997, Roggman et al., 2002). Mothers are often gatekeepers for fathers' involvement with their children (Fagan & Palkovitz, 2011; Schipani, 1991;); that is, mothers may encourage fathers to engage with their children or they may keep fathers away from involvement with their children.

Additionally, a favorable and harmonious relationship between parents has a positive association with father involvement (Ryan, Kalil, & Ziol-Guest, 2008). For example, McBride and Rane (1998) examined 89 families to explore the relationship between perceptions of the parenting alliance, marital quality, and the level of father

involvement. The results indicated that fathers' perceptions of spouses' confidence in their own parenting, as well as mother's emotional appraisal of their partners' parenting and their shared parenting philosophy were significant predictors of father involvement in child rearing activities. Fathers with a satisfied coparenting relationship are more likely to get highly involved with his child.

Belsky (1984) emphasized the impact of the marital relationship on parenting, calling it "the principle support system for parents" (p. 87). Plenty of research has demonstrated that marital satisfaction is a significant predictor of father involvement (Feldman, Nash, & Aschenbrenner, 1983; Levy-Shift & Israelashvili, 1988; Volling & Belsky, 1996). Coltrane and Adams (2004) studied 167 low- to moderate-income two-parent Mexican American families with fifth-grade children. Mothers' work hours and shift work appeared as two central factors that affect father involvement. Jackson and Scheines (2005) examined the associations between and among maternal depressive symptoms, mother-father relationship quality, the levels of father involvement, and children's behavior problems in a sample of African American single mothers and their preschool children in New York City. They found that decreased maternal depressive symptoms predicted better mother-father relationships, which in turn was associated with higher levels of father involvement. Jackson, Choi, and Franke (2009) also found that good relationships between the father and mother predicted lower levels of maternal parenting stress, higher levels of father involvement, and fewer child behavior problems.

In summary, a poor relationship between the resident parent and non-resident parent can cause arguments or overall conflicts during visits. However, a better father-

mother relationship is associated with more adequate fathering and better outcomes for children.

Father-Child Co-residence. Co-residence of the father and child is a strong predictor of father involvement (Gee et al., 2007) and has been described as what sets "the stage for involved fathering" (Sarkadi, Kris-tiansson, Oberklaid, & Bremberg, 2008, p. 156). Numerous studies documented that resident status play a key role in father involvement (e.g., Carlson, Pilkauskas, McLanahan, & Brooks-Gunn, 2011; Fagan & Palkovitz, 2007, 2011). For fathers who are not sharing a residence with their children, it is more difficult for them to get involved. Research also found that nonresidential fathers who are less involved with their children compared to residential fathers, and nonresidential fathers tend to face a multitude of obstacles to maintaining active engagement with their children (Bruce & Fox, 1999). Non-resident fathers tend to face various barriers, such as distance, time, and expenses, that prevent them from being involved with their children (Hawkins et al., 2006). Literature has supported the notion that coresidence of the father and child is a strong predictor of father involvement (Gee et al., 2007; Harris, 2002; Sanders, 1996) and is associated with greater levels of parental relationship quality between the birth parents (Carlson & McLanahan, 2006). Hofferth et al. (2007) found that resident fathers spend more time with their children than non-resident fathers.

Castillo et al. (2011) studied a national representative data from Fragile Families and Child Wellbeing Study and reported that there is significant association between fathers' residency status and the level of involvement with their children, with lower

levels of involvement of nonresidential fathers than residential fathers, which is also in accordance with the findings of previous research.

Social Support or Social Networks. A social network is often used by parents to share information and resources (Shechner et al., 2010). Social networks may help individuals meet their daily accountabilities and overcome challenging situations by supplying them with emotional and instrumental support (Lin & Ensel, 1989). Composed of intimate relationships and involvement with immediate and extended family members, informal networks consist of exchanges occurring between individuals and based on mutual reciprocity and assistance (Wills 1991). Fathers with higher quality relationships are more likely to engage greater father involvement (Carlson et al. 2011; Fagan & Palkovitz, 2011), thus relationship quality may function as a source of support that enhances wellbeing for resident fathers and protects fathers from potential declines in involvement associated with depressive symptoms. Coley (2001) asserted that fathers are more likely to get involved with their children when the paternal grandmothers encourage fathers to do so. Castillo & Fenzl-Crossman (2010) used data from the Fragile Families and Child Well-being Study to examine the relationship between nonmarital fathers' social networks and the level of father involvement. Results indicated that informal networks are positively associated with fathers' involvement with young children. However, fathers with low social support may experience high economic stress. Simons et al. (1993) suggested that low social support causes psychological distress and unsuccessful parenting.

Child Factors

Not only the characteristics of fathers affect father involvement; but also the features of children influence fathers' perspective of fatherhood. In the next section, I will summarize how children's age, gender, temperament, and the number of children in the household all work together in the literature to influence fathers' involvement level.

Age of the Child. Patterns of involvement with children over time are not consistent. Research found that there is a negative relationship between children's age and the level of father involvement, with children's age increases the level of father involvement decreases. (Yueng, Sandberg, Davis-Kean, & Hofferth, 2001). For example, Bruce and Fox (1999) pointed out that the paternal involvement, including father engagement tends to increase as the child grows out of infancy, and then decline as a child grows into adolescence. Fathers spend the least amount of time per day in direct interaction with their infants, on average less than a hour a day (Lewis & Weinraub 1974; Ninio &Rinott, 1988), compared to preschool and school-aged children with ranges from 1.9 to 2.8 hours per day (Pleck, 1997). Ishii-Kuntz (I994) reported that the time American fathers spent with their adolescents decreased to 0.5 to 1 hour per day. Fathers are more likely to interact with younger children because these children are perceived as more responsive (Guidubaldi & Perry, 1985; Seltzer & Bianchi, 1988). However, Lamb (2000) suggested that fathers spend more time with older children relative to younger children. Hofferth et al., (2002) also asserted that fathers are more likely to be involved in childrearing with older children than younger children because interaction with older children is more satisfying than interaction with younger ones.

In summary, the relationship between the age of children and father involvement is not readily apparent whether the association between them is positive or negative. Differences in the measurement of father involvement, data collection at diverse stages in children's lives, and differing study designs may cause these inconsistent results of how age of children predict father involvement. (McClain & Demaris, 2013). Additionally, nonresident fathers who father children with more than one woman had less involvement with children from previous unions (Carlson, Furstenberg, & McLanahan, 2009; Manning & Smock, 1999).

Child's Gender. There is little consistency in the effect of the gender of the child on father involvement. On one hand, research claimed that fathers are more likely to be involved with their sons than their daughters among newborns, toddlers, and school-aged children (NICHD Early Child Care Research Network, 2000; Barnett & Baruch, 1987; Lamb, 2000; Pleck, 1997). On the hand, Sanderson and Thompson (2002) asserted that there was no significant difference in father involvement by child gender, which was in line with previous studies (Marsiglio, 1991; Palkovitz, 1984). Robbers (2011) performed a longitudinal analysis of young Hispanic fathers' involvement with their children. Results showed that there were no differences in father involvement between male and female children.

Child's Temperament. Children's behavior has also been found to affect father involvement as well (Avenarius, 2011). It was previously thought that parental conflict and genetics affected children's behavior. However, the child effects model suggests that the conflict and distress of the parents are caused by, instead of the cause of, the child's behavior (Flouri, 2010). It has even been suggested that the residency of fathers may be

affected by a child's temperament and behaviors (Flouri & Malmberg, 2010). However, the effect of child temperament on father involvement is not consistent in the literature (McBride, Schoppe, & Rane, 2002). Studies suggested that infants with difficult-temper are more likely to draw attention from their caregivers and thus receive a higher level of father participant. (Pleck, 1997; Volling & Belsky, 1991). However, Manlove and Vernon-Feagans (2002) found that fathers may be less involved with difficult sons and temperament did not influence fathers' involvement with their infant daughters.

Historical Stressful Events of Fathers

Adults who experienced childhood stressful events, such as abuse or the loss of a primary caregiver, may exhibit mental disorganization when describing such experiences (McFarland, 2000), which have been linked to internalizing and externalizing symptomatology. This includes depression, anxiety disorder, personality disorders, panic attacks, higher stress levels, and negative attributional behavior (Bal et al., 2005; Kaplan et al., 1999; Lubit et al., 2003; Runyon & Kenny, 2002). Mental illnesses, such as poststressful stress disorder (PTSD), interfere with the quality of parent involvement (Ee et al., 2013). Their results show that men were less involved in caregiving tasks and play activities than women. Research found that fathers with more PTSD symptoms were more likely to encounter greater severity of substance abuse. Among these fathers, PTSD symptoms significantly predicted negative parenting behaviors (Stover et al., 2012). Research studying the impact of PTSD symptoms on fathering reveals a dearth of literature (Stover et al., 2012). Stover et al. (2012) performed a study to examine how PTSD symptoms were associated with fathering 126 fathers at a forensic drug diversion clinic. The results indicated that fathers with PTSD symptoms were likely to perform

neglectful fathering. Histories of trauma and PTSD have significant negative impact on intimate partner relationships and fathering. The following section of the literature review discusses various aspects of childhood stressful events' effect on father involvement.

Defining Early Life Stressors

The concept of stress, the idea that real events can bring about a rupture in the defending guard of the being, disrupting cognitive construction and the sense of self, has played an essential role in psychoanalytic theory (Connolly, 2011). Those who have personally witnessed family violence; high levels of anger; sexual abuse; neglect; chemical, emotional, and psychological abuse; the death of a loved one; prolonged hospitalization; childhood disfigurement; or disability are categorized as having been exposed to stressful events (Adams, 2006; Condly, 2006; Terr, 2003).

Some individuals are capable of dealing with childhood stress, but Condly (2006) reported that coping mechanisms lessen with time of longer exposure to stress (p. 212). Smith, Leve, and Chamberlain (2006) concluded that untreated stress or anxiety may lead serious behavioral and conduct problems when the victims grow up, such as lack of empathy, impulsivity, acting out, and antisocial behavior. Early life stressor is defined as psychological results of an external blow, whether sudden or in a series, that renders a child temporarily helpless and breaks past everyday coping mechanisms (Terr, 2003). Symptoms of psychological distress may cause negative outcomes such as personal and interpersonal dysfunction, dissociation, depression, and hyperactive vigilance (Kendall-Tackett, et al., 1993).

Child Abuse or Neglect in Family of Origin. According to Briere's (1996) self-trauma model, the child who experiences abuse suffers a disruption in development. For

Briere, the disruption is to the attachment system and to cognitive development. Cognitive distortion associated with safety (i.e., preoccupation with danger), controllability (i.e., current perceptions of helplessness and hopelessness), and internal attribution (i.e., self-blaming and self-criticizing) have been found to be related to child abuse. Symptoms such as poststressful stress, despair, and fear may be caused by such cognitive distortions (Hazzard, 1993; Mannarino & Cohen, 1996). Additionally, child abuse and neglect have been proved to lead to insecure attachment in both childhood and adulthood (Muller et al., 2000, 2001). Adults who report a history of child abuse/neglect tend to endorse an insecure attachment style, indicating that abused individuals hold a negative model of self and of other that may hinder the individual becoming a consistent, loving, and supportive caretaker.

Personal sexual victimization, specifically child sexual abuse experience, has an enduring or long-lasting impact on individuals (Cicchetti & Toth, 1995). There is a body of research (Beitchman et al., 1992; Finkelhor, 1990; Putnam, 2003) with women and some men that documents the negative effects of child sexual abuse on the intergenerational risk to children. However, few studies have examined the effect of child abuse or neglect for men involved in fatherhood programs.

Experience of Loss. Individuals with parent loss or loss of other significant family members in childhood are more likely to have negative outcomes later in life (McFarland, 2000). Marks et al. (2007) reported that men who lost their mother experienced a greater decline in global happiness, a lower level of psychological wellness, and a greater decline in self-rated health than men who continued to have both parents alive. Men have a great risk of binge drinking, a greater decline in self-esteem, a lower level of personal mastery,

a lower level of psychological wellness, and a greater decline in self-rated health when they lost both parents. Specifically, the study suggested that the death of a father may have a more negative effect on sons in contrast to daughters.

The loss of a primary caregiver during childhood removes the key source of protection, security, and comfort. Early loss may predict damage to the capacity for intimacy, vulnerability to psychiatric disorders, and parenting difficulty (Krupnick, 1984). Additionally, when a parent is dead, the living parent may be negatively affected by the loss as well (Krupnick, 1984). This may create chaos, a sense of disorganization, fear, anxiety, and insecurity in a child, which may later be expressed through low-level involvement with their own child (McFarland, 2000). Persons often have strong, long-lasting emotions about the loss of their parent, which may last to their adulthood, even to their marriage. One study found that mothers who experienced the loss of a close person in childhood, whether the loss was resolved or unresolved, were highly likely to perform negative parenting (Thalhuber et al., 1998). An objective of this study is to examine fathers' experiences of loss in childhood and its relationship with current involvement patterns.

Poor Physical Health or Other Chronic Disease. Poor health and increased risk of certain health threats (e.g., drug involvement, violence, HIV/AIDS, and incarceration) among males can impact their full engagement as responsible fathers for their children, their families, their communities, and the nation (Boyce et al., 2012). For example, parents of children with attention deficit hyperactive disorder (ADHD) frequently feel frustrated (Brinig, 2012). Children may not appear to listen, may constantly wander away from the table or homework, and may have a lower chance of satisfactory performance in

school. One can easily imagine how frustration may mutate into something much darker when a family is stressed by marital crises or money problems. However, some evidence also shows that these children may sometimes be scapegoats without ever provoking violence. For example, a large proportion of child abuse occurs where there is a history (in other words, prior indications) of marital violence. A perpetrator may be acting out of mimetic rivalry (that is, being rivalrous with a spouse) while targeting the more susceptible victim, who will not fight back, a child (Brinig, 2012). In a nutshell, children who possessed healthy autonomy and affiliation had greater capacity to develop positive father-child interactions with their father.

The Absence of Father Figure in Childhood. Fathers have an important influence on children and other family members through their multifaceted roles as care providers, companions, protectors, models, moral guides, teachers, and breadwinners in families (Lamb, 1997). Adolescent boys experiencing fatherlessness are more likely to become teenage parents, play truant from school, perform poorly in school, leave school by age 16, and experience adjustment problems when transitioning to adulthood (National Fatherhood Initiative, 2011a). Men who have exposure to "emotionally distant or physically absent fathering, or with destructive fathering in an abusive family situation" (Pickhardt, 2007, p. 1) may lack the confidence or the conception of how not to reenact that negative fatherhood. Unfathered men may be disadvantaged by the absence of a father to model and teach them how to father a child. The fears, insecurities, and emotional consequences of exposure to fatherlessness are a significant disadvantage that men in a parenting role must overcome (Pickhardt, 2007). It is important to acknowledge the risk exposure and explore the lived experiences and meaning of male adaptation to

fatherlessness and the achievement of competence in the area of fathering. Additionally, National Fatherhood Initiative (2011a) reported that fatherless individuals are 5 times more likely to be poor in adulthood. When a father's attitudes and memories originate in an experience dominated by paternal apathy or abandonment, he must overcome his experiential influence to be engaged, available, accessible, and responsible with his own children. Overcoming a lack of positive paternal modeling and avoiding the negative outcomes accompanying fatherlessness are both challenging and complex (Inniss, 2013).

Crime History. Imprisonment affects the lives of poor and minority males so prevalently that it is almost an expected and modal stage in their early lives (Waller, & Swisher, 2006). More than 600,000 men are released from prison annually (Travis & Wahl, 2005), and they usually face significant reentry challenges and needs, which include lower educational attainment, a lack of specialized job skills, less effective communication skills, higher substance abuse, and violent histories, all of which are factors that negatively related to couples' relationship status. Hence, fathers with crime history have been found to be less likely to marry or cohabit with their children's mothers (Hagan & Dinovitzer 1999; Western et al., 2004; Western & McLanahan, 2000). Past or recent incarceration is therefore expected to negatively affect father involvement and the development of their children (Carlson & McLanahan, 2006; Council of State Governments, 2003).

However, recently released fathers may also attempt to reconnect with their children and partners. Research also has shown that criminal histories increase fathers' desire for involvement (Mendez, 2000). The previously incarcerated fathers may join in parenting or fatherhood programs to facilitate and promote this involvement, which can positively

affect children's development. Hence, the effect of criminal histories on father involvement is mixed. Incarceration sometimes undermines family life, sometimes improves it, and sometimes is inconsequential (Giordano 2010; Sampson 2011; Turanovic, Rodriguez, & Pratt 2012).

Substance Use. Individuals with substance abuse history are more likely to have lower levels of life quality compared to the general population and to people with other chronic health problems. Substance abuse may cause a range of physical, psychological, and social problems affecting individuals' physical and mental health even through adulthood (Evren & Evren, 2011). Problems associated with alcohol or drug use might impair interactions with children and present obstacles to father involvement. Substance abuse has been claimed to be a common reason to end relationships by women (Amato & Preveti, 2003), which may prevent fathers from visiting their children. Researches have shown that fathers with substance abuse issues are at a higher risk for negative emotions during father–child interactions and more negative attitudes toward their infants and young children compared with nonalcohol-dependent fathers (Stover, et al., 2012). Hence, alcohol-dependent fathers are more likely to perform poor parenting, including lower responsiveness to infants, impulsivity, social isolation, and spending less time with children (Hamer 2001; Magura & Laudet 1996; McMahon & Rounsaville 2002). Moreover, research suggests that parental substance use is associated with diminished outcomes for children (Johnson & Leff 1999).

Substance abuse is one of the major obstacle to employment and the ability of fathers to provide financial support to their children (Kissman, 2001). Research has shown that substance abuse leads to lower responsiveness to infants, impulsivity, social

isolation, and fewer interactions with children (Hamer 2001; McMahon & Rounsaville 2002). Neault et al. (2012) found that fathers report less substance use have higher levels of involvement in childrearing and being present at their child's birth. Contrary to this finding, Collins, Grella, and Hser (2003) examined father involvement of substance-abusing fathers in substance abuse treatment and found that most fathers (51%) in the sample were classified as being highly involved with their children. And fathers who were more involved with their children showed lower levels of addiction severity at baseline assessment than less involved fathers.

There is dearth information about fatherhood for alcohol- and drug-abusing men comparing with the research on motherhood and the same issues (Stover et al., 2012). The mixed information also suggests that further exploration of substance-abusing fathers' involvement and interaction with their children is warranted.

Bullying Experience in Childhood. For American youth, bullying is a common and destructive experience. Studies show that 24-29% of youth have been bullied before age 18 (Seals & Young, 2003). Exposure to bullying may cause behavioral and emotional problems both in childhood and in adulthood, such as depression and anxiety (McCabe et al., 2010) and symptoms of poststressful stress disorder (Capaccioli, 2010).

Studies show that bullying victims are twice as likely to commit suicide than their peers (Meltze et al., 2011). Individuals with childhood bullying experience have lower levels of life satisfaction compared to their counterparts (Chen & Wei, 2011). The experience of bullying not only has lasting effects on mental health of individuals, but also influences individuals' physical health. Adults who reported childhood bully victimization have been found to experience significantly poorer physical health,

including lower health-related quality of life in their adulthood when compared to those who had not been bullied (Allison et al., 2009). In a nutshell, experiences during childhood, such as the death of or separation from a parent, abuse by parents, history of fatherlessness, unloving rearing behaviors, and interaction with the juvenile system have been thought of as important in child development and adult mental health.

Summary

In summary, this chapter presented a literature review of critical thinking in regards to the history and development of the definitions of father involvement and its measurement, a series of factors that affect father involvement, the concept of trauma and how trauma can affect individual's emotion, physical health, and psychological wellbeing, etc. In the next chapter, the methodology used to conduct the study and test the relationship between fathers' childhood stressful events and their current involvement level with their children will be discussed in more detail.

CHAPTER III: METHODOLOGY

In this chapter, details of the methods that use to explore the associations between men's childhood stressful events and their current involvement patterns with their children will be described. The data for the research and the sample will be introduced. The study variables and the strategy for creating composite measures will be discussed. Lastly, the analysis strategy will be presented.

Data Source

This study is a secondary analysis of data from National Longitudinal Survey of Youth 1997 (NLSY97), which is a comprehensive nationally-representative social science survey sponsored by the U.S. Bureau of Labor Statistics. The NLSY97 consists of a nationally representative sample of approximately 9,000 young men and women born in the years 1980-1984. They were 12-17 years old when firstly interviewed in 1997. Participants were surveyed once during the base year and then once annually since 1997, with 15 rounds of data currently available (Round 15 is the most recent data release, fielded in 2011-2012). In all, 8,984 participants were surveyed at base year, and 7,490 were retained throughout the remaining years. Interviews are about one hour in length and are conducted face-to-face in around 90% of cases (the rest are by phone.) Interviewers used a laptop computer-assisted personal interview (CAPI) system to collect adolescents' survey responses. The system automatically guided the interviewer through the electronic survey, selecting the next question based on the respondents' answer to the current question. Portions of the survey pertaining to potentially sensitive information

(e.g., questions about sexual activity, criminality, or substance abuse) were administered using an audio computer-assisted self-interview (ACAST), allowing respondents themselves, rather than the NLSY97 interviewer, to enter their responses directly into the computer.

This data set was originally collected to explore factors that influence youth entry into and exit from the work force, but survey management has taken an expansive view of long-term employment processes. Beyond comprehensive sections on education, employment, and training, the NLSY97 questionnaire includes extensive sections on household composition, income and assets, employment history, academic achievement, marriage, fertility, income, health, sexual activity, criminal behavior, substance use, schooling, family background, and men's relationships with their fathers.

For the current study, these data include key measures related to the research: childhood stressful events and father involvement. Areas of the survey those are potentially sensitive, such as sexual activity and criminal behaviors compose the self-administered portion of the interview. One unique aspect of the NLSY97 is that Round 1 contains a parent questionnaire that generates information about men's family background and history. The data also contain how involved these men are with their children when they grow up. In addition, the data contain a nationally representative sample, which allows for investigating the effect of men’s early life stressors on their father involvement, potentially being able to generalize findings to the population of fathers and adding to the existing literature.

Sampling

The NLSY97 utilized a probability sampling approach, which includes a cross-sectional sample and an oversample of Black and/or Hispanic or Latino respondents. The cohort was selected using these two samples to get adequate numbers of minority respondents for statistical analysis. The NLSY97 cohort was selected in two phases, as pictured in Figure 3. In the first phase, a list of housing units for the cross-sectional sample and the oversample was derived from two independently selected, stratified multistage area probability samples. This ensured an accurate representation of different sections of the population defined by race, income, region, and other factors. In the second phase, subsamples of the eligible persons identified in the first phase were selected for interview. Of the initial sample, 51% were male and 49% were female; 51.9% were White, 26% were Black, 21.2% were Hispanic/Latino, and 0.9 % of mixed race (U. S. Bureau of Labor Statistics, 2010). Included in the total baseline sample were two subsamples: a nationally representative sample of 6,748 respondents and an oversample of Hispanic and Black respondents living in the US (n = 2,236).

The current investigation focuses on men's fathering involvement, females were excluded from the study. Males who had never had a child were also excluded for this study. Eligible participants for the current study are men who had fathered at least one new biological child (0-4 years old), and this reduced the sample size to 1816.

Data Collection

The interviews are conducted each round using a CAPI instrument, administered by an interviewer with a laptop computer. Computer software automatically guides interviewers through an electronic questionnaire, selecting the next question based on a

respondent's answers. The program also prevents interviewers from entering invalid values and warns interviewers about implausible answers. A set of checks within the CAPI system lowers the probability of inconsistent data both during an interview and over time. The preferred mode of interview is in person. When an interview is conducted in person, during sensitive portions of the interview, the respondents enter their answers directly into the laptop rather than interacting with the interviewer. This self-administered portion, called ACASI, includes an audio option so that the respondents can listen to the questions and answers being read via headphones if they prefer. The audio component theoretically improves response quality when the respondent's literacy is in question. In some cases, due to the location of the respondent or the respondents' reluctance to be interviewed in person, interviews are conducted by phone. In this case the interviewer must administer the SAQ sections.

When the original data was collected, no identifiable information about the individuals participating in the study was entered into the dataset. Nonidentifying identification numbers were assigned to each record to keep the identities of the children and their families confidential.

Variables and Measures

In the previous chapter, the factors that related to father involvement were comprehensively discussed, such as various socio-demographics (race; age; income; employment; educational attainment; mental health; criminal history; substance use history; co-parental factors; child factors (children's age, gender, temperament, and number of children fathered); and family of origin factors (fathering behaviors by father or father figure in childhood). However, due to the limitation of a secondary data

analysis, not all of these variables were assessed in the NLSY97 dataset. As such, the researcher will only focus on variables that are available in the dataset, which were discussed below:

Independent Variables

Social/Demographics. A demographics questionnaire gathered descriptive information about the sample: age, ethnicity, income (previous year's income), number of children, marital status, educational, and current residence. Age was measured in years, and race/ethnic background was operationalized by categories (White, Black or African American, Hispanic/Latino, Native Hawaiian or other Pacific Islander, American Indian or Alaska Native, Asian, and Other). Education attainment was operationalized by eight categories (None, GED, High school diploma, Associate/Junior college, Bachelor's degree, Master's degree, and PhD.) Income was measured by the actual amount that an individual received in the previous year of 2011. Marital status was operationalized by five categories-never-married, married, separated, divorced, and widowed.

Religion was operationalized by categories (Roman Catholic, Baptist, Non-denominational Christian, Muslim, Jewish, Mormon, Hindu/Buddhist, No religion-personal philosophy, No religion-Atheist or Agnostic). Church attendance was operationalized by seven categories- never, once or twice, less than once a month, about once a month, about twice a month, about once a week, several times a week, and every day.

Current residence was operationalized by two categories (rural or urban). Total number of residences was measured by the actual number of different residences since age 12. Veteran status was measured by four categories- did not serve in the military,

served in one of the active military branches, served in one of the active military branches, and served in one of the National Guard branches.

Physical health was operationalized by five categories-excellent, very good, good, fair, and poor. Depression was operationalized by five categories of the number of times a respondent experienced depression (none, 1 time, 2 times, 3 times, 4 or more times). The history of treatment by a mental health professional was operationalized by five categories of the number of times a respondent was treated by a mental health professional (none, 1 time, 2 times, 3 times, 4 or more times).

The questions in this survey assessed the household size of the respondent; the number of biological children born and residing in the household as of the survey date; the number of non-resident biological children the respondent as of the survey date; the gender and age of the child; and whether the respondent has at least one child who had a physical, emotional, or mental condition that demands a lot of attention.

Crime History. Total number of arrests was measured by the number of arrests as reported by the respondent. Total number of incarcerations was measured by the number of separate incarcerations reported by the respondent. The questions in this survey assessed age of first incarceration, length of the longest spell of incarceration.

Substance Use. Smoking history was a dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever smoked a cigarette. The questions in this survey assessed age of first use, number of days used in the last 30 days, and number of cigarettes each day in the last 30 days.

History of alcohol was a dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever drinking alcoholic beverages, including beer, wine or liquor (exclude

childhood sips that have had from an older person's drink). The questions in this survey assessed age of first use, number of days used alcohol in the last 30 days, and number of days the respondent used alcohol right before or during school or work.

History of marijuana was a dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever used marijuana, such as grass or pot, in his lifetime. The questions in this survey assessed age of first use, number of days used marijuana in the last 30 days, number of days the respondent used marijuana right before or during school or work, and number of times the respondent took marijuana since the date of last interview.

History of cocaine or crack or heroin was a dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever used cocaine/hard drugs to get high or achieve an altered state. The questions in this survey assessed age of first use, number of days used cocaine/hard drugs in the last 30 days, number of days the respondent used marijuana right before or during school or work, and number of times the respondent took this drug since the date of last interview.

Childhood Stressful Events. Bullying was a dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever been the victim of repeated bullying before 18. Homelessness was a dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever been homeless or lived in a shelter for the homeless for two or more nights in a row in childhood.

Gunshot history was dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever seen someone is shot or shot at with a gun. The questions in this survey assessed the respondent's relationship to the person who was shot or shot at, which was operationalized by four categories-self, relative, friend, and stranger.

Gang history was dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever belonged to a gang before 18. The questions in this survey assessed the respondent's age when first joined a gang. The questions in this survey also assessed whether the respondent ever had his house or apartment broken into before he was 18, whether the respondent been a victim of a violent crime before 18, whether an adult household member been unemployed at least six months, parents divorced, household member sent in jail, the relationship of the incarcerated person and the respondent, death in the family, and the respondent's relationship with the dead family member, whether a household member been hospitalized because of injury or illness for at least one week, the respondent's relationship with this hospitalized person.

The questions in this survey also assessed whether the respondent had a deformed or missing body part, sensory issue, whether the respondent had a chronic health condition or life threatening disease, whether the respondent took medication regularly for the chronic condition, whether the respondent had a physical/learning/emotional problem that limited his regular activities before 18. These variables were dichotomous (yes=1/no=0) variable reflecting whether a respondent has ever experienced these abovementioned events or situations.

Family of Origin (How study participants' fathers were engaged in fathering). Father/father figure presence was a dichotomous (yes=1/no=0) variable reflecting whether the respondent had a father or father living in the house at the baseline survey in 1997. The questions in this survey also assessed who is the father/father figure (1=biological or natural father 2=a stepfather 3=adoptive stepfather 4=mother's boyfriend 5=adoptive father 6=foster father 7=a relative 8=someone else). Supportiveness of

father/father figure was operationalized by three categories-very supportive, somewhat supportive, and not very supportive. Father/father figure's parenting style was operationalized by four categories, uninvolved, permissive, authoritarian, and authoritative.

Dependent Variable

Father involvement. Father involvement in this study was measured by the direction interaction with a child. This is because that the data of NLSY97 only provides information about the respondent's direct involvement with his child(ren). There are four questions that were consistently being asked in the 15 rounds of the data: (1) how often do you talk/sing to your child in the past month? (2) how often do you read or tell stories to your child in the past month? (3) how often do you bathe or dress your child in the past month? (4) how often do you play with your child in the past month? ((1= not at all, 2=rarely, 3=a few times during the month, 4=a few times a week, 5=about once a day, 6= more than once a day). Father involvement in this study was operationalized by the frequency of these four activities: talk or sing to a child, bathe or dress a child, read or tell stories to a child, and play together with a child.

Research Questions

The overarching research question is: How do men's early life events and stressors predict father involvement (involvement with their children)?

Research Question #1: What is the difference of father involvement with new biological child(ren) among respondents of different races/ethnicities?

Research Question #2: What is the difference of father involvement with new biological children among respondents who first became a father in their teens (13-19) and respondents who became a father in their 20s and 30s (20-32)?

Research Question #3: What is the difference in father involvement with new biological children between fathers who had an arrest history in childhood and those who did not?

Research Question #4: What is the difference in father involvement with new biological children between fathers who had substance use history in childhood and those who did not?

Research Question #5: What is the difference of father involvement with new biological children between respondents who had different fathering history in their childhood?

Research question #6: What are the predictors of father involvement with new biological children? Does the inclusion of a particular variable increase or decrease the probability of the specific outcome?

Research Question #7: What are the predictors of father involvement with new biological children for men who had only one child?

Research question #8: What are the predictors of fathers' level of involvement with new biological children (high versus low) when there are equivalent number of cases?

Analysis Strategy

The data analyses will be conducted in three steps. The first step will be to use descriptive statistics to present a profile of the study sample of fathers. Next, bivariate correlations will be conducted to explore associations between independent variables (e.g. father's race, age, education, family of origin, child's age, gender, childhood stressful events etc.) and men' current involvement levels. The third step will be to use

regression analyses to examine how independent measures are linked to fathers' involvement with their children. All the appropriate assumptions were tested before a hierarchical logistic regression analysis were performed. The assumptions for the logistic regression analysis techniques are discussed in more detail below.

Hierarchical Logistic Regression Analysis

Logistic regression is applicable in situations where the DV is categorical and may have as few as two values (George & Mallery, 2010). The formula of a logistic regression analysis "results in an equation that allows us to predict the likelihood of a given value category of the outcome variable" (Weinbach & Grinnell, 2010, p. 250). Logistic regression has as its ultimate goal to predict a case's group membership on the outcome variable by calculating the probability that a case will belong to the category where the event is occurring. Prior to analysis, the outcome variable of involvement was recoded as dichotomous and applied the following transformations: 0= low involvement, 1=high involvement.

The Logic behind Logistic Regression

The match involved in logistic regression analysis utilizes probabilities, odds, and the logarithm of the odds (George & Mallery, 2000). In a logistic regression application, odds are defined as the ratio of the probability that an event will occur divided by the probability that the event will not occur. In other words,

$$Odds = \frac{p(\mathrm{X})}{1 - p(\mathrm{X})}$$

Where p(X) is the probability of event X occurring and 1-p(X) is the probability of event X not occurring.

The regression equation that is used in logistic regression is the following:

$$\ln(odds) = \alpha + B_1X_1 + B_2X_2 + \cdots + B_KX_K$$

Where *B*=the change in log odds of membership for any 1 unit change in *X*.

Unlike multiple regression, logistic regression requires that no assumptions about the normal distributions of the independent variables (Tabachnic & Fidell, 2007). However, there are certain assumptions that must be met in logistic regression. Logistic regression is sensitive to high correlations among predictor variables. In other words, when one or more predictor variables are very highly correlated with each other, it can cause severe distortion in the analysis. If multicollinearity is present among predictor variables in the analysis, one or more of the redundant variables should be deleted in order to meet the absence of multicollinearity assumption. A preliminary multiple Linear Regression was conducted to evaluate multicollinearity among the continuous predicators. The table of regression coefficients (see Table 1) indicates that multicollinearity was not violated because tolerance statistics for the 10 indicators are greater than 0.1.

Additionally, logistic regression is very sensitive to outliers. Outliers are "cases with extreme values on one variable or on a combination of variables so that they distort resulting statistics or unduly influence solutions or models" (Mertler & Vannatta, 2002, p.342). Thus, extreme values on predictor variables should be examined carefully.

CHAPTER IV: RESULTS

The primary aim of this study was to investigate the relationship between men's early life stressors and their father involvement among 1816 fathers. The logistic regression modeling was proposed to examine this relationship due to its adaptable and comprehensive approach to modeling both direct and indirect relationships among variables. This chapter will first present descriptive findings of the measures utilized in the study. Demographic characteristics, household information, crime history, and substance use of the study subjects are presented from the most recent wave of interviews that were conducted in 2011. Data on the childhood stressful experiences are presented from the surveys of study subjects during past waves of data collection when they were less than 18 years old. Then, this chapter concludes with the results of the bivariate and logistic regression analyses.

Descriptive Findings

Demographics. The demographic information on the 1816 fathers is presented in Table 1. Most respondents were under 30 years old (53.7%). The mean age of fathers was 29 years (n=1653, SD=1.43, range 26 to 32). The racial/ethnic distribution of fathers was as follows: 53.4% (n=969) were White, 31% (n=563) were African American, 24.9% (n=452) were Hispanic, 0.6% (n=11) were American Indian, and 0.4% (n=9) were Asian or Pacific Islander.

Twenty percent of the fathers identified themselves as Roman Catholic (n=362), 23.3% Baptist, 16.6% non-denominational Christian, 12.1% personal philosophy, and

4.4% Atheist or Agnostic. The majority of the fathers reported that they rarely went to church in the past year, and only 10.1% of them said that they went to church every week.

Nearly half of the men were married (46.8%), while 34.7% were never-married, and 9.3% were separated or divorced. Over two-third of them (68.3%) lived in an urban area. Regarding education, almost half of the fathers (47.2%) had a high school diploma, 9.1% of the fathers (n=165) received a Bachelor's degree, and 2.5% (n=44) have finished Master or PhD degree. Pertaining to annual income, over a third of the fathers (35.3%) earned $20,000 to $50,000 a year. The average annual income for these fathers was $38,499 (SD=27,236, range 0 to 146,002), while the median income was slightly lower at $34,000.

Nearly 80% (n=1452) of the fathers described their physical health as "good" or "excellent", and 11.1% (n=201) indicated that their physical health was "fair" or "poor". From the most recent interview in 2011, 23.8% of the fathers (n=432) reported that they experienced depression and missed work because they were 'too blue' to get up in the morning, or feeling too anxious to conduct their usual activities. Only a few fathers (5.6%, n=102) were treated by a mental health professional because of their emotional, mental or psychiatric problem in the past 12 months.

The majority of the fathers (88.8%) did not serve in the military. As of 2011, the number of residences for fathers over their lifetime ranged from 1 to 39, with average number of residences at 8.52 (n=1560, SD=4.67, range 1 to 39). The average household size of these 1816 fathers as of 2011 was 3.74 (n=1653, SD=1.58, range 1 to 15).

Table 1. Demographic Characteristics of All Fathers (N=1816)

Variable	N	% of Total
Current Age		
26-29 years	975	53.7
30-32 years	678	37.3
Missing	163	9.0
Race/Ethnicity		
White	969	53.4
African American	563	31.0
Hispanic	452	24.9
American Indian, Eskimo, or Aleut	11	0.6
Asian or Pacific Islander	9	0.4
Other	256	14.1
Religion		
Roman Catholic	362	19.9
Baptist	380	20.9
Non-denominational Christian	271	14.9
No religion (personal philosophy)	198	10.9
No religion (Atheist or Agnostic)	72	4.4
Muslim	13	0.7
Other (Jewish, Mormon, Hindu/Buddhist etc.)	338	18.6
Non-interview	181	10
Church Attendance in the Last Year		
Never	585	32.2
Once or Twice	349	19.2
Less than once a month	170	9.4
About once a month	117	6.4
About twice a month	105	5.8
About once a week	184	10.1
Several times a week	65	3.6
Everyday	9	0.5
Non-interview	232	12.8
Current Marital Status		
Never-married	631	34.7
Married	849	46.8
Separated	56	3.1
Divorced	113	6.2
Widowed	3	0.2
Non-interview	164	9.1
Current Residence		
Rural	389	21.4
Urban	1240	68.3

Unknown	14	0.8
Non-interview	173	9.6

Variable	N	% of Total
Education		
None	298	16.4
GED	356	19.6
High School Diploma	858	47.2
Associate/Junior College	88	4.9
Bachelor's Degree	165	9.1
Master's Degree	34	1.9
PhD	3	0.2
Professional Degree (DSS, JD, MD)	7	0.4
Missing	7	0.4
Annul Income		
Less than 5000	68	3.7
5001 to 10,000	75	4.1
10,001 to 20,000	171	9.4
20,001 to 30,000	238	13.1
30,001 to 40,000	214	11.8
40,001 to 50,000	189	10.4
50,001 to 60,000	98	5.4
60,001 to 70,000	77	4.2
70,001 to 80,000	35	1.9
80,001 to 90,000	28	1.5
90,001 to 100,000	6	0.3
100,001 and above	34	1.9
General Health		
Excellent	348	19.2
Very Good	581	32.0
Good	523	28.8
Fair	187	10.3
Poor	14	0.8
Non-interview	163	9.0
Depression	432	23.8
Treated by mental health professional	102	5.6
Veteran Status		
Did not serve in the military	1612	88.8
Served in one of the active military branches	180	9.9
Served in one of the military reserve branches	8	0.4
Served in one of the National Guard branches	16	0.9
Total Number of Residences		
One	23	1.3
Two	62	3.4
Three	88	4.8
Four	133	7.3
Five	137	7.5
Six	145	8.0
Seven	145	8.0

Eight	149	8.2
Nine	118	6.5
Ten	115	6.3
Eleven to Twenty	423	23.3
Twenty One to Thirty Nine	22	1.3
Missing	256	14.1
Household Size as of the Survey Date		
One	138	7.6
Two	152	8.4
Three	456	25.1
Four	476	26.2
Five	246	13.5
Six	109	6.0
Seven	47	2.6
Eight and more	29	1.6
Non-interview	163	9.0

Age at Which Subjects First Became Fathers. The average age at which subjects became a father was 23 years old (n=1652, SD=3.6, range 9 to 31). Only 18.4% of the men became fathers in their teens (see Table 2).

Household. Over forty percent of fathers had only one biological child (43.2%, n=784), 34.9% of the fathers (n=633) had two biological children, and 2.7% (n=104) had more than four children (see Table 2). The number of biological child born and residing in the household ranged from 1 to 6. The number of biological children not living in the household ("non-residential biological children") ranged from 1 to 9.

Child Demographics. There were both boys (50.9%, n=1614) and girls (49.1%, n=1555) being parented by the fathers (see Table 3). The average age of the children was 6 years old in 2011 (n=1652, SD=3.6, range -1[1] to 19)

[1] -1 means the respondent is expecting a new child in the next year

Table 2. Age at Which Subjects First Became a Father

Variable	N	% of Total
Age When the Subjects First Became a Father		
9-19	334	18.4
20-31	1318	72.6
Missing	164	9.0%

Variable	Mean	Median	Mode	SD	Range
Age When the Subjects First Became a Father	23	23	22	3.6	9 to 31

Table 3. Child Demographics

Variable	N	% of Total
Total Number of Biological Child(ren)		
One	784	43.2
Two	633	34.9
Three	258	14.2
Four	87	4.8
Five	34	1.9
Six	6	0.3
Seven	3	0.2
Eight	1	0.1
Nine	1	0.1
Missing	2	0.1
Number of Residential Biological Children		
One	601	33.1
Two	438	24.1
Three	142	7.8
Four	35	24.1
Five	5	0.3
Six	1	0.1
Non-interview	164	9.1
Number of Non-residential Biological Children		
One	312	17.2
Two	173	9.5
Three	70	3.9
Four	24	1.3
Five	10	0.6
Six	2	0.1
Seven	2	0.1
Nine	1	0.1
Non-interview	164	9.1
Gender of Children		
Boy	1614	50.9
Girl	1555	49.1

Variable	Mean	Median	Mode	SD	Range
Age of the Subjects' Biological Child	6	6	4	3.6	-1 to 19

Crime History. As of 2011, nearly half of the study subjects (n=845, 46.5%) reported that they had never been arrested over their lifetime (see Table 4). For those with an arrest record, the average number of arrests was 2.3 (n=958, SD=4.3, range 1 to 67).

Regarding incarceration history, 17.5% of the 1816 fathers (n=317) have been incarcerated as of 2011. The average number of total incarcerations for all fathers over their lifetime was 0.3 (n=1816, SD=0.8, range 0 to 7). For those with an incarceration history, the average age of their first incarceration was 21.5 years old (n=315, SD=3.66, range 11 to 30). The average months for the longest spell of their incarceration was 13.9 (n=310, SD=19.4, range 1 to 157).

Table 4. Crime History

Total Number of Arrest	**N**	**% of Total**
Never	845	46.5
1 to 4 arrests	677	37.3
5 to 9 arrests	179	10.0
10 to 14 arrests	69	3.8
15 to 19 arrests	23	1.3
20 to 24 arrests	12	0.7
25 to 29 arrests	5	0.3
30 to 34 arrests	2	0.1
35 to 39 arrests	4	0.2
67 arrests	1	0.1
Total Number of Incarceration		
Never	1799	82.5
One incarceration	173	9.5
Two incarcerations	78	4.3
Three incarcerations	38	2.1
Four incarcerations	20	1.1
Five incarcerations	6	0.3
Six incarcerations	1	0.1
Seven incarcerations	1	0.1
Age When First Incarcerated		
Under 12 years old	1	0.1
13 to 15 years old	7	0.5
16 to 18 years old	65	3.6
19 to 21 years old	99	5.5
22 years and older	143	7.9
Length of Longest Incarceration		
0 to 3 months	117	6.5
4 to 6 months	35	1.9
7 to 9 months	34	1.9
10 to 12 months	25	1.4
13 to 18 months	28	1.5
19 to 24 months	17	0.9
25 to 36 months	33	1.8
37 to 48 months	8	0.4
49 months and longer	20	1.1

Substance Use History. The majority of the fathers (78%, n=1417) indicated that they had a history of smoking (see Table 5). More than a third of them (35.1%, n=638) had their first cigarette when they were between 11 to 15 years old.

Almost all (n=1712, 94.3%) had a history of drinking alcoholic beverages (including beer, wine or liquor). Over a third (36.9%, n=671) were 11 to 15 when they first drank alcohol. Two thirds (66.7%, n=1211) had a history of using marijuana. The average age of first using marijuana was 13 years (n=473, SD=2.2, range 1 to 18).

Nearly a quarter (24.2%, n=439) reported that they had used cocaine/crack/heroin. The average age of these fathers when they first used these hard drugs was 13.5 years (n=144, SD=3.0, range 1 to 21).

A Childhood Substance Use Index[2] score was created by summing number of substances the fathers reported having ever tried at the baseline interview for a possible total score of 3. Higher scores indicate more instances of substance use. Scores on the Substance Use Index were obtained only for respondents who answered all three items. Respondents who answered fewer than three items were coded as missing on the Childhood Substance Use Index. However, very few missing data occurred. The average score for these 1816 men of the childhood substance use index was 1.19 (n=1808, SD=1.1, range 0 to 3).

2 This index includes items and responses identify whether a respondent have ever smoked, ever had a drink of alcohol, ever used marijuana in childhood, range 0 to 3.

Table 5. Substance Use History

Variable	N	% of Total
Age When First Smoked		
4 years old	2	0.1
5 years old	5	0.3
6 years old	16	0.9
7 years old	15	0.8
9 years old	30	1.7
10 years old	68	3.7
11 to 15 years old	638	35.1
15 to 17 years old	110	6.0
20 years old	1	0.1
History of Alcohol	1712	94.3
Age When First Drink Alcohol		
One to Five	33	1.8
Six to Ten	117	6.4
Eleven to Fifteen	671	36.9
Sixteen to Twenty	54	3.0
Twenty one	1	0.1
Missing	832	45.8
Ever Used Marijuana	1211	66.7
Age 1st used Marijuana		
One to Nine	16	0.9
Ten to Eighteen	457	25.2
Ever Used Cocaine/Crack/Heroin	439	24.2
Age 1st Used Cocaine/Crack/Heroin		
One to Five Years Old	5	0.3
Six to Ten Years Old	9	0.6
Eleven to Fifteen	97	5.3
Sixteen to Twenty	30	1.7
Twenty one	1	0.1
Non-interview	295	16.2

Early Life Stressful Experiences

Health Condition in Childhood. From their parent report in 1997 and their self-report in 2002, 1.6% (n=29) of the men were born with or acquired a disability (i.e. part of his body was deformed or missing (see Table 6) in childhood. Nearly 15% of them had a chronic health condition or life threatening disease such as asthma, heart condition, anemia, diabetes or cancer as well as either trouble seeing, hearing or speaking during childhood.

From the parent report, 14.9% (n=271) of the men had physical, emotional, learning, or mental condition that limits or has limits their ability to attend school regularly, do regular school work, or work at a job for pay before they were 18. A very small percentage (n=59, 3.2%) had an eating disorder, learning or emotional problem, or a mental health condition that limited their ability to attend school regularly, do regular school work, or work at a job for pay.

Early Life Stressful Experiences. Early life stressors experienced by fathers are presented in Table 6. These childhood stressors/experiences are categorized as individual and family early life stressors.

Early Life Stressors-Individual. A fifth of the men (20.9%) indicated that they had run away from home during their childhood. Over 25% (n=461) were a victim of bullying before 18. Almost six hundred (33%) reported that they saw someone get shot or shot at with a gun before they were 18. Over a quarter (28.3%) indicated that they witnessed either their friend or a stranger being shot. Surprisingly, 4.9% indicated that themselves were gunshot victims. Approximately 21.6% joined a gang before they were 18. Roughly 2.9% (n=53) reported that they had been homeless or lived in a shelter for

two or more nights in a row before they were 18. Six percent (n=117) said that they have been a victim of a violent crime, such as physical or sexual assault, robbery, or arson before they turned 18. A fourth (25.1%, n=456) had the experience of their house or apartment being broken into before they were 18 years old.

Early Life Stressors-Family. Nearly 200 men (11.5%) reported that they had an adult member of their household (other than themselves) experience one or more periods of unemployment lasting at least six months. Six percent (n=112) indicated that their parents were divorced when they were 13 to 18 years old.

Nearly 7.1% of the fathers stated that an adult member of their household (other than themselves) had been sent to jail or prison before they were 18. A half of the fathers (50.1%, n=910) reported that they experienced the death of a close relative, either their parent, or their sibling, child, grandparent, or their partner passed away. Almost three hundred (16.3%) had a member of his household stay in a hospital for at least one week for treatment of illness or injury before they were 18.

Individual Behavioral Problems. Sixteen percent of the fathers had been arrested before 18 years old (n=296).

Table 6. Early Life Stressful Experiences (N=1816)

Variable	N	% of Total
Individual Physical Health Issues		
Physical Health Issues		
Birth Characteristics-Damaged or Missing Body Part	29	1.6
Sensory Issue	385	21.2
Chronic Health Condition or Life Threatening Disease	267	14.7
Physical/Learning/Emotional Problem Limiting School/Work Performance(parent report)	271	14.9
Eating Disorder/Mental/Emotional Prob that Limits Regular Activities Before 18 (youth report)	59	3.2
Individual Social Level Stressors		
Run Away from Home	379	20.9
Victim of Bullying	461	25.4
Seen Anyone Shot With A Gun	599	33
Relationship with shoot victim-myself	89	4.9
Relationship with shoot victim-relative	73	4
Relationship with shoot victim-friend	240	13.2
Relationship with shoot victim-stranger	274	15.1
Joined a Gang	393	21.6
Age 1st Joined A Gang		
Five to Ten	40	0.2
Eleven to Fifteen	306	16.7
Sixteen to Twenty	46	2.5
Homeless	53	2.9
Victim of A Violent Crime	117	6.4
House/Apartment Been Broken Into	456	25.1
Family Level Stressors		
Variable	**N**	**% of All**
Household Member Unemployed At Least Six Months	208	11.5
Parent unemployed	105	5.8
Partner unemployed	29	1.6
Relative unemployed	67	3.7
Non-relative unemployed	18	1.0
Parents Divorced	112	6.2
Household Member In Jail	129	7.1
Parent in Jail	24	1.3
Partner in Jail	1	0.1
Relative in Jail	97	5.3
Non-relative in Jail	9	0.5
Death in the Family	910	50.1
Mother passed away	31	1.7

Father passed away	28	1.5
Grandparent passed away	508	28
Sibling passed away	18	1.0
Partner passed away	1	0.1
Hospitalization of Household Member for at Least One Week	296	16.3
Mother hospitalized	80	4.4
Father hospitalized	49	2.7
Child hospitalized	8	0.4
Partner hospitalized	13	0.7
Sibling hospitalized	54	3.0
Grandparent hospitalized	75	4.1
Relative hospitalized	28	1.5
Non-relative hospitalized	7	0.4

Father/Father Figure in Childhood and Their Level of Supportiveness and Parenting Style. The information of how the study subjects' fathers were involved in their lives in their childhood is presented in Table 7. The majority of them (70.3%, n=1276) lived with their father or father figure. Nearly half (48.8%, n=886) reported that their fathers were very supportive compared to the 6.7% (n=123). Only 29.4% (n=534) described their fathers' parenting style as authoritative, while 8.6% (n=156) reported their fathers' parenting style as uninvolved. This was surprisingly not more than the 4.9% (n=89) of study subjects who reported uninvolved parenting style of their father or father figure who did not reside with them.

Table 7. Description of Men' Father, their Level of Supportiveness and Parenting Style

Variable	N	% of Total
Lived with Father/Father Figure	1276	70.3
Biological Father	975	53.7
Stepfather	200	11.0
Mother's Boyfriend	37	2.0
Adoptive Father	17	0.9
Foster Father	6	0.3
A Relative	32	0.5
Someone Else	9	2.0
Lived with no Father/Father figure	532	29.3
Missing	8	0.4
Residential Father/Father Figure's Supportiveness		
Very Supportive	886	48.8
Somewhat Supportive	341	18.8
Not Very Supportive	48	2.6
Non-residential Father/Father Figure's Supportiveness		
Very Supportive	123	6.7
Somewhat Supportive	115	6.4
Not Very Supportive	49	2.7
Residential Father's Parenting Style		
Uninvolved	156	8.6
Permissive	349	19.2
Authoritarian	233	12.8
Authoritative	534	29.4
Non-residential Father's Parenting Style		
Uninvolved	89	4.9
Permissive	41	2.3
Authoritarian	60	3.3
Authoritative	57	3.1

Men's Overall Father Involvement with New Biological Child(ren)

Father involvement was determined by surveying fathers on how often they talk/sing bathe or dress, read books to, and play with their biological children. To measure overall father involvement, responses on the above activities were gathered from 2000 to 2011 (at each wave of the data collection) - from fathers if they were parenting children between birth and four years of age. A total father involvement score was computed by averaging all the father involvement activities for all the children by number of children over the twelve waves of data . The average score ranged 1 to 6 (see Table 8), with higher scores indicating more involvement. The average score for a father talking or singing to his new child was 5.5 (n=1809, SD=0.85, range 1 to 6) and playing with his child was 5.4 (n=1816, SD=1.0, range 1 to 6). Fathers were less likely to bathe or dress their child as the average score for performing this task was 4.3 (n=1811, SD=1.2, range 1 to 6). Similarly, reading books has a lower average score of 3.4 (n=1816, SD=1.6, range 1 to 6).

Table 8. Men's Overall Father Involvement with New Biological Child(ren)

Variable	N	%	Mean	SD	Median	Mode	Range
Talk or Sing to A Child	1809	99.6	5.5	0.85	6	6	1 to 6
Play with A Child	1816	100	5.4	1.0	6	6	1 to 6
Bathe or Dress A Child	1811	99.7	4.3	1.2	4.5	5	1 to 6
Read Books or Tell a Story to A Child	1816	100	3.4	1.6	3.5	1	1 to 6

Selection of Key Variables and Index Computations for Bivariate and Multivariate Analyses

Research needs to be conducted in a parsimonious i.e. simple and economical manner. Simplicity in explaining the problems and generalizing solutions for the problems is preferred to a complex research framework. Also, the current research aimed to examine the relationship between men's early life stressors and their father involvement. For the sake of parsimonious and purpose of this study, 11 predictor variables were included in the current research (see Table 9). Some of these variables were resulted from indexes created through categorization of related variables.

Social/Demographic Characteristics. Ethnicity, arrest history in childhood, substance use history in childhood, and age when the study participant first became a father were used in the data analysis.

Individual Level Physical Conditions. An index of the individual physical conditions was developed by summing the responses to the 3 items[3], ranging from 0 to 3. Higher scores indicate more physical issues in childhood. The average score of the individual behavioral stressors was 0.4 (n=1816, SD=0.6, range 0 to 3).

Individual Level Social Stressors. An index of the individual social stressors was created by summing the responses to the 7 items[4], for total possible score of 7 points. Higher scores indicate more stressful childhood. The average score of the individual psychosocial stressors was 1.3 (n=1816, SD=1.3, range 0 to 7).

[3] Damaged body part at birth, sensory problem, and chronic disease in childhood.
[4] These items are being bullied, witnessing gunshot, join a gang, run away, homelessness, victim of violent crime, apartment or house being broke into.

Family Level Stressors. The family level early life stressors[5] were summed to produce a composite score for the Family Level Stressors Index; ranging from 0 to 5. Higher scores indicate a more difficult family in childhood. The average score of the respondents for this family level index was 0.9 (n=1816, SD=0.9, range 0 to 5).

Men's Father/Figure in Childhood. Men's father/father figure presence was assessed by a dichotomous variable (1=yes 0=no). A variable was created to assess men's father/father figure supportiveness no matter residential or non-residential (1=supportive 0=not supportive). Father/father figure's parenting style was dummy coded for the regression analysis (1=uninvolved 0=other parenting style).

[5] This index includes divorce, household member in jail, death of close relative, hospitalization of household member, unemployment of a family member.

Table 9. Variables Included in the Data Analysis

Category	Variables	# of Items
Social/Demographics	Ethnicity Age when the study participant first became a father Men's total number of biological children	3
The Childhood Substance Use Index.	Ever smoked, had a drink of alcohol, used marijuana in childhood	3
Crime History in Childhood	Whether a man had an arrest history in childhood	1
Individual Level Physical Conditions	Damaged body part at birth, sensory problem, and chronic disease	3
Individual Level Social Stressors	Victim of bullying, witness gunshot, join a gang, run away, homelessness, victim of violent crime, experience of their house or apartment being broken into	7
Family Level Stressors	Parents' divorce, household member in jail, death of close relative, hospitalization of household member, unemployment of a family member.	5
Men's Father/Figure in Childhood	Whether a man had a residential father or father figure in childhood, their supportiveness, and parenting style	3
Men's Overall Father Involvement	Frequency of talking, reading stories, bathing, and playing with a child over the 12 years	4

Research Question #1: What is the difference of father involvement among respondents of different races/ethnicities?

1a Hispanic versus Non-Hispanic

An independent samples t-test was conducted to examine whether there was a significant difference in father involvement between respondents who identified themselves as Hispanic and Non-Hispanic. Non-Hispanic fathers reported a slightly higher level of involvement with their children (M=4.65, SD=0.88, n=1361) than Hispanic fathers (M=4.58, SD=0.9, n=452). The test revealed there is no statistically significant difference between these two groups (t=-1.5, df =1811, p=0. 85). Hispanic fathers are equally likely to be involved in fathering as are non-Hispanics fathers

1b: White, Black, and Other.

A one-way between subjects ANOVA was conducted to compare the effect of race/ethnicity on father involvement in Black, White, and other racial groups. There was a significant effect of race/ethnicity on father involvement at the $p<.05$ level for the three groups ($F(2, 1805) = 4.0$, $p = 0.00$). Post hoc comparisons using the Tukey test indicated that the mean score for Black fathers' involvement (Mean=4.5, SD=0.9, n=563) was significantly different than White fathers (Mean=4.7, SD=0.86, n=969). No significant difference was observed between Black and Other racial groups.

Taken together, these results suggest that White fathers tend to have the highest level of father involvement, following by Other, and Black fathers.

Research Question #2: What is the difference of father involvement with new biological child(ren) among respondents who first became a father in their teens (13-19) and respondents who became a father in their 20s and 30s (20-32)?

An independent samples t-test was conducted to examine whether there was a statistically significant difference between respondents who first became a father in their teens and respondents who became a father in their 20s and 30s in relation to their overall father involvement. The test revealed a statistically significant difference between these two groups (t=5.6, df =447.2, p=0.00). Respondents who became a father in their 20s (M=4.71, SD=0.8, n=1318) reported significantly higher levels of involvement with their children than those who had their first biological child in their teens (M=4.37, SD=1.0, n=334).

Research Question #3: What is the difference in father involvement with new biological child(ren) between fathers who had an arrest history in childhood and those who did not?

An independent samples t-test was conducted to compare father involvement for men with and without arrest history in childhood. There was a statistically significant difference in the scores for men with arrest history in childhood (M=4.34, SD=0.99, n=296) and men without arrest history in childhood (M=4.68, SD=0.86, n=1507); *t* (1801) =6.0, p=0.00. These results suggest that arrest history in childhood really does have an effect on men's involvement with their children. Specifically, men without arrest history in childhood had higher level of father involvement.

Research Question #4: What is the difference in father involvement with new biological child(ren) between fathers who had substance use history in childhood and those who did not?

This study found that fathers with a childhood substance abuse history were not statistically significantly different in being involved (M=4.62, SD=0.91, n=1117) with their children compared to fathers who never used these three substances in childhood (M=4.66, SD=0.85, n=691), t (1806) = -1.0, p>0.05.

Research Question #5: What is the difference of father involvement with new biological child(ren) between respondents who had different fathering history in their childhood?

5a: Comparison between respondents who had lived with their father/father figure in childhood versus those who did not (non-residential)

An independent samples t-test showed that respondents who had a residential father or father figure in their childhood (M=4.69, SD=0.85, n=1276) had significant higher level of father involvement than those who had no residential father or father figure (M=4.51, SD=0.96, n=532), t (893) =3.73, p=0.00.

5b: Comparison between respondents' fathers level of supportiveness

An independent samples *t*-test was conducted to compare the effect of fathers' supportiveness on respondents' involvement with their children. There was a significant effect of men's fathers' supportiveness on their own involvement with their children at the p<.05 level for the two groups (t (1444) =-4.11, p = 0.00). The results showed that respondents who had a very supportive father were significantly more involved with their

children (Mean=4.73, SD=0.8, n=967) than those respondents who reported not having a supportive father in childhood (Mean=4.54, SD=0.9, n=479).

5c: Comparison between men's fathers' parenting styles on father involvement

A one-way between subjects ANOVA showed that respondents' fathers' parenting style had a significant influence on respondents' involvement with their children, F (3, 1423) =5.67, p = 0.00. Post hoc comparisons using the Tukey test indicated that the mean score of father involvement for respondents with a father with an uninvolved parenting style (M=4.49, SD=0.9, n=201) was significantly lower than respondents who a father with an authoritative (M=4.76, SD=0.83, n=582), or permissive parenting style (M=4.70, SD=0.86, n=362). No statistically significant difference in parenting was observed between respondents who experienced uninvolved and authoritarian parenting styles.

Taken together, these results suggest that men who had an authoritative fathering reported the highest level of father involvement, followed by respondents who experienced permissive fathering, and authoritarian fathering. Men who experienced uninvolved fathering style in childhood reported experiencing lowest level of father involvement.

Table 10. Differences in Father Involvement by Race/Ethnicity, Arrest History, Father Presence, Supportiveness, and Parenting Style

Group		**Father Involvement**				
		N	**Mean**	**SD**	**t-value**	**p-value**
Hispanic	Yes	452	4.58	0.90	-1.5	0.85
	No	1361	4.65	0.88		
Race/Ethnicity		**N**	**Mean**	**SD**	**F-value**	**p-value**
	Black	563	4.5	0.9	2.0	0.00
	White	969	4.7	0.85		
	Other	276	4.59	0.87		
		N	**Mean**	**SD**	**t-value**	**p-value**
Age when a Men First Became a Father	19 and under	334	4.37	1.0	5.6	0.00
	20-32	1318	4.71	0.8		
Arrest History in Childhood	Yes	296	4.34	0.99	6.0	0.00
	No	1507	4.68	0.86		
Substance Use History in Childhood	Yes	1117	4.62	0.91	-1.0	0.31
	No	691	4.66	0.85		
How Respondents Were Fathered		**Respondents' Current Father Involvement**				
		N	**Mean**	**SD**	**t-value**	**p-value**
Lived with Father/Father Figure	Yes(Residential)	1276	4.70	0.85	-3.73	0.00
	No(Non-residential)	532	4.51	0.96		
Supportiveness	Supportive	967	4.73	0.8	-4.1	0.00
	Not supportive	479	4.54	0.9		
		N	**Mean**	**SD**	**F-value**	**p-value**
Parenting Style	Uninvolved	201	4.49	0.92	5.67	0.00
	Permissive	362	4.70	0.86		
	Authoritarian	282	4.59	0.86		
	Authoritative	582	4.76	0.83		

Table 11. Correlation Matrix

Correlation Matrix

	Hispanic	Race	Arrest	Substance Use	Father Figure	Support From Father	Fathering Style	Age Became a Father	Social Stress	Physical Condition	Family Stress	Read	Play	Talk	Bathe	Involvement
Hispanic	1.00															
Race	.54**	1.00														
Arrest	.02	.01	1.00													
Substance Use	-.01	.08**	.28**	1.00												
Father Figure	.05	.16**	-.09**	-.04	1.00											
Support	.00	.02	-.07**	-.13**	.21**	1.00										
Fathering Style	.03	.00	-.06**	-.15**	.16**	.46**	1.00									
Age Became a Dad	-.12**	.07**	-.16**	-.05	.13**	.14**	.02	1.00								
Social Stress	.02	-.10	.22**	.29**	-.13**	-.19**	-.06	-.19**	1.00							
Physical Condition	-.04**	.01	.03	-.02	.03	-.04	-.02	-.02	.10**	1.00						
Family Stress	-.05**	-.12**	.06**	.02	-.07	-.02	.03	-.07**	.15**	.11**	1.00					
Read	.00	.00	-.08**	-.03	.02	.11**	.08**	.10**	-.07**	.01	-.03	1.00				
Play	-.02	.01	-.12**	-.01	.07**	.05	.04	.19**	-.10**	.00	-.05	.33**	1.00			
Talk	-.06	.12**	-.12**	.01	.10**	.07*	.05	.26**	-.10**	-.01	-.06*	.25**	.57**	1.00		
Bathe	-.04	.04	-.10**	-.06	.08**	.09**	.07**	.22**	-.10**	.01	-.06*	.39**	.46**	.42**	1.00	
Involvement	-.04	.03	-.14**	-.04	.09**	.11**	.09**	.25**	-.12**	.00	-.07*	.76**	.75**	.68**	.77**	1.00

Note: ** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Logistic Regression Analysis

The aim of the study was to investigate which IVs (race; whether the subject has a father figure in childhood, father's supportiveness in childhood, substance use in childhood, arrest history in childhood, physical, social, and family stressors in childhood, age when the study subject became a father, and number of biological children) are predictors of level of involvement with their children (i.e., low involvement or high involvement). Prior to analysis, the variable of involvement was recoded as dichotomous and applied the following transformations: 0=low involvement (n=310), 1=high involvement (n=1491).

Data were first screened for missing data and outliers. A preliminary multiple Linear Regression was conducted to calculate Mahalanobis' distance (M-D) and to evaluate multicollinearity among the 11 predicators. The table of regression coefficients (see Table 12) indicates that multicollinearity was not violated because tolerance statistics for the 11 indicators are greater than .1. The MD that is calculated by SPSS Regression can be compared to a chi-square distribution with DF equal to the number of predictors in the Regression (Tabachnick & Fidell, 2007). The probability of MD^2 (the p-value, i.e. the right tail area) was computed to identify the probability of getting an MD^2 value as large as the current case's value in a chi-square distribution with 10 degrees of freedom. Cases exceeded the chi-square criteria of $X^2(11) = 22.458$ at p=0.001 were excluded. In this dataset, 15 cases have a MD^2 with a probability less than or equal to 0.001 were eliminated using select cases from the final analysis.

Table 12. The Table of Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
Age_befa	.056	.007	.232	8.441	.000	.768	1.302
number_of_children	.000	.023	.001	.021	.984	.789	1.268
child_sub	-.019	.019	-.024	-.970	.332	.925	1.081
social_stre	-.047	.018	-.068	-2.654	.008	.872	1.147
physical_cond	.022	.036	.015	.609	.543	.984	1.017
family_stre	-.021	.024	-.021	-.847	.397	.965	1.037

a. Dependent Variable: Involvement

Research Question #6: What are the predictors of father involvement with new biological child(ren)? Does the inclusion of a particular variable increase or decrease the probability of the specific outcome?

Hierarchical logistic regression analysis was used to explore which of the 11 predictor variables (race; whether the subject has a father figure in childhood; father's supportiveness and parenting style in childhood; substance use history in childhood; arrest history in childhood; physical, social, and family stressors in childhood; age when the study subject became a father; and total number of biological children) were the best predictors of father involvement. Predictor variables were entered in five blocks.

Block 0

The classification able for the first block in the analysis, where no predictors were entered is shown in Table 13.

Table 13. Classification Table for Black 0

Observed			Predicted involvement		Percentage
			low	high	Correct
Step 0	involvement	low involvement	0	192	.0
		high involvement	0	1068	100.0
	Overall Percentage				84.8

a. Constant is included in the model.

b. The cut value is .500

The results in this table indicated that the constant only model correctly classified 84.8% of the cases.

Block 1

Race and physical health conditions were added in this block to the model. Race was dummy coded as 1=Black, 0=Non-Black. The Black fathers were treated as the reference category. Physical health condition was on a scale from 0 to 3. The results for Block 1 are shown in Tables 14 to 17.

Table 14. Omnibus Tests of Model Coefficients for Block 1

		Chi-square	df	Sig.
Step 1	Step	8.959	2	.011
	Block	8.959	2	.011
	Model	8.959	2	.011

Table 15. Nagelkerke R Square for Block 1 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1066.619[a]	.007	.012

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 16. Classification Table for Block 1

			Predicted involvement		
	Observed		low	high	Percentage Correct
Step 1	involvement	low	0	192	.0
		high	0	1068	100.0
	Overall Percentage				84.8

a. The cut value is .500

Table 17. Variables Included in the Equation of Block 1

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 [a]	Non-Black(1)	.509	.169	9.08	1	.003	1.663
	physical_cond	-.078	.134	.34	1	.561	.925
	Constant	1.382	.147	88.28	1	.000	3.984

a. Variable(s) entered on step 1: Black, physical_cond.

According to the omnibus tests of model coefficients, the variables in block 1 slightly improved the prediction and the model was significant (p=0.01), with this block explaining 1.2% of the variance in father involvement (Nagelkerke R Square=0.012). Race as an indicator was significant predictor of father involvement. According to the Wald test, Non-Black fathers are 1.66 times more likely to be highly involved with their children. Men with physical issues are 0.925 times less likely to be involved with their children, but this variable was not a significant predictor.

Block 2

In this block, respondents' father figure presence in childhood, father/figure's supportiveness, and fathering style were added. Fathering style was dummy coded as 1=uninvolved 0=other parenting style. The other two variables are categorical measures, with 1 indicating the respondent had a father/figure in childhood, and the father/father figure was supportive. Respondents who had a father/father figure in childhood, father/figure was supportive, and the fathering style was uninvolved were the reference categories.

Table 18. Omnibus Tests of Model Coefficients for Block 2

		Chi-square	df	Sig.
Step 1	Step	7.225	3	.065
	Block	7.225	3	.065
	Model	16.184	5	.006

Table 19. Nagelkerke R Square for Block 2 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1059.394[a]	.013	.022

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 20. Classification Table for Block 2

Observed			Predicted Involvement low	Predicted Involvement high	Percentage Correct
Step 1	involvement	low	0	192	.0
		high	0	1068	100.0
	Overall Percentage				84.8

a. The cut value is .500

Table 21. Variables Included in the Equation of Block 2

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Non-Black(1)	.503	.173	8.486	1	.004	1.654
	physical_cond	-.068	.134	.259	1	.611	.934
	fath_fig(1)	.072	.264	.075	1	.785	1.075
	Fa_sup(1)	-.412	.195	4.444	1	.035	.663
	Uninvolved(1)	.074	.254	.084	1	.771	1.077
	Constant	1.462	.302	23.523	1	.000	4.316

a. Variable(s) entered on step 1: fath_fig, Fa_sup, Uninvolved.

According to the omnibus tests of model coefficients, the step of adding the three childhood father/figure variables, showed a trend toward significance (p=0.065), with the

overall model being significant (p=0.006). The model explained 2.2% of the variance in father involvement (Nagelkerke R Square=0.022). The overall prediction kept as 84.8% accuracy. According to the Wald test, race and supportiveness of father/figure were significant predictors, with the likelihood of non-Black man 1.65 times more likely to be highly involved with their children, and men without a supportive father/figure 0.663 times less likely to be highly involved.

Block 3

In the third block, the family and social stressors were added. The family stressor variable was on a 0-7 scale, and the social stressor variable was on a 0-4 scale. The results for block 3 are shown in tables 22 to 25.

Table 22. Omnibus Tests of Model Coefficients for Block 3

		Chi-square	df	Sig.
	Step	16.788	2	.000
Step 1	Block	16.788	2	.000
	Model	32.972	7	.000

Table 23. Nagelkerke R Square for Block 3 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1042.607 [a]	.026	.045

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 24. Classification Table for Block 3

Observed			Predicted involvement		
			low	high	Percentage Correct
Step 1	involvement	low	0	192	.0
		high	0	1068	100.0
	Overall Percentage				84.8

a. The cut value is .500

Table 25. Variables Included in the Equation of Block 3

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 [a]	Non-Black(1)	.373	.177	4.436	1	.035	1.452
	physical_cond	.005	.137	.001	1	.973	1.005
	fath_fig(1)	.067	.264	.064	1	.800	1.069
	Fa_sup(1)	-.294	.200	2.159	1	.142	.745
	Uninvolved(1)	.161	.257	.393	1	.531	1.175
	social_stre	-.209	.064	10.606	1	.001	.811
	family_stre	-.201	.090	4.986	1	.026	.818
	Constant	1.872	.323	33.598	1	.000	6.503

a. Variable(s) entered on step 1: social_stre, family_stre.

According to the omnibus tests of model coefficients, the step of adding the social and family stressors, showed a significance (p=0.000), with the overall model being significant (p=0.000). The model explained 4.5% of the variance in father involvement (Nagelkerke R Square=0.045). The model correctly classified 84.8% of the cases. Wald statistics indicated that race, family, and social stressors were significant predictors, with the likelihood of non-Black man 1.45 times more likely to be highly involved with their children. The odds ratio for social stressor shows that when holding all other variables constant, a man is 0.81 times less likely to be involved with his children for each one point increase on social stressors. Inverting the odds ratio for number of family stressor

reveals that for each one point increase on family stressors, a man is 0.82 times less likely to be involved with his children.

Block 4

In the fourth block, the childhood substance use index (on a 0-3 scale) and arrest history before 18 were added (1=yes, 0=no). The reference category for arrest history in childhood was the men who had been arrested before 18.

Table 26. Omnibus Tests of Model Coefficients for Block 4

		Chi-square	df	Sig.
Step 1	Step	22.390	2	.000
	Block	22.390	2	.000
	Model	55.361	9	.000

Table 27. Nagelkerke R Square for Block 4 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	1020.217[a]	.043	.075

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 28. Classification Table for Block 4

			Predicted		
			involvement		
	Observed		low	high	Percentage Correct
Step 1	involvement	low	1	191	.5
		high	2	1066	99.8
	Overall Percentage				84.7

a. The cut value is .500

Table 29. Variables Included in the Equation of Block 4

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 [a]	Non-Black(1)	.421	.182	5.367	1	.021	1.524
	physical_cond	.007	.139	.002	1	.961	1.007
	fath_fig(1)	.098	.267	.136	1	.712	1.103
	Fa_sup(1)	-.298	.202	2.168	1	.141	.742
	Uninvolved(1)	.150	.260	.334	1	.563	1.162
	social_stre	-.159	.069	5.382	1	.020	.853
	family_stre	-.190	.091	4.354	1	.037	.827
	child_sub	.026	.078	.109	1	.742	1.026
	arrest_bef18(1)	.954	.200	22.850	1	.000	2.596
	Constant	.971	.384	6.410	1	.011	2.642

a. Variable(s) entered on step 1: child_sub, arrest_bef18.

A test of the full model against the previous model was statistically significant, indicating that the predictors as a set reliably distinguished between lowly involved fathers and highly involved fathers (X^2 (2, N=1260)=22.39, p<0.001). The model correctly classified 84.7% of the cases. The Wald criterion demonstrated that race; social and family stressors; and arrest history in childhood made significant contributions to prediction (see Table 29). EXP(B) value indicates that when social stress increase by one unit the odds ratio is 0.853. Therefore, men are 0.853 less likely to be involved with their children. The odds ratio for family stress indicates that a man is 0.827 times less likely to be involved with his children for each one point increase on family stressors. Non-Black fathers are 1.524 times more likely to be involved with his children. Men without an arrest history in childhood were 2.60 times more likely to be involved with their children.

Block 5

In the last block, number of children and age when a man became a father were added. Both variables are continuous measures.

Table 30. Omnibus Tests of Model Coefficients for Block 5

		Chi-square	df	Sig.
Step 1	Step	31.858	2	.000
	Block	31.858	2	.000
	Model	87.219	11	.000

Table 31. Nagelkerke R Square for Block 5 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	988.359[a]	.067	.116

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.

Table 32. Classification Table for Block 5

			Predicted		
			involvement		
	Observed		low	high	Percentage Correct
Step 1	involvement	low	4	188	2.1
		high	6	1062	99.4
	Overall Percentage				84.6

a. The cut value is .500

Table 33. Variables Included in the Equation of Block 5

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 [a]	Non-Black(1)	.276	.187	2.186	1	.139	1.318
	physical_cond	-.009	.141	.004	1	.949	.991
	fath_fig(1)	.049	.272	.032	1	.857	1.050
	Fa_sup(1)	-.160	.208	.596	1	.440	.852
	Uninvolved(1)	.218	.265	.679	1	.410	1.244
	social_stre	-.112	.070	2.561	1	.110	.894
	family_stre	-.180	.092	3.813	1	.051	.836
	child_sub	.022	.079	.080	1	.777	1.023
	arrest_bef18(1)	.775	.206	14.227	1	.000	2.171
	Age_befa	.139	.027	26.887	1	.000	1.149
	number_of_children	.031	.085	.132	1	.717	1.031
	Constant	-2.118	.761	7.757	1	.005	.120

a. Variable(s) entered on step 1: Age_befa, number_of_children.

A test of the full model against the previous model was statistically significant, indicating that the predictors as a set reliably distinguished between lowly involved fathers and highly involved fathers (X^2 (2, N=1260)=31.858, p<0.001). The model explained 11.6% of the variance in father involvement (Nagelkerke R Square=0.116). The model correctly classified 84.6% of the cases. Wald statistics indicated that arrest history in childhood and age when a man first became a father were significant predictors, with the likelihood of men without arrest history in childhood 2.17 times more likely to be highly involved with their children. The odds ratio for when age became a father shows that when holding all other variables constant, a man is 1.15 times more likely to be involved with his children for each one point increase on age when he first became a father.

In summary, a logistic regression analysis was conducted to predict father involvement level using race; whether the subject has a father figure in childhood;

father's supportiveness in childhood; substance use history in childhood; arrest history in childhood; physical, social, and family stressors in childhood; age when the study subject became a father; and total number of biological children as predictors. Regression results indicated that the overall model of two predictors (age became a father, arrest history in childhood) were statistically reliable in distinguishing between highly and low involved males (-2 Log Likelihood=988.359, X^2 (2, N=1260) = 31.858, p<0.001). The model correctly classified 84.6% of the cases. The odds ratio for age when became a father shows that when holding all other variables constant, a man is 1.15 times more likely to be involved with his children for each one point increase in age when became a father. Inverting the odds ratio for arrest history in childhood reveals that men without an arrest history in childhood are 2.17 times more likely to be highly involved with their children.

Research Question #7: What are the predictors of father involvement for men who had only one child?

Enter method logistic regression was performed to answer this question. The results of the regression analysis were presented below.

Block 0

The classification able for the first block in the analysis, where no predictors were entered is shown in Table 34.

Table 34. Classification Table for Black 0

Observed			Predicted involvement		Percentage Correct
			low	high	
Step 0	involvement	low	0	66	.0
		high	0	483	100.0
	Overall Percentage				88.0

a. Constant is included in the model. b. The cut value is .500

The results in this table indicated that the constant only model correctly classified 88% of the cases.

Block 1

Race and physical health conditions were added in this block to the model. Race was dummy coded as 1=Black, 0=Non-Black. The Black fathers were treated as the reference category. Physical health condition was on a scale from 0 to 3. The results for Block 1 are shown in Tables 35 to 38.

Table 35. Omnibus Tests of Model Coefficients for Block 1

		Chi-square	df	Sig.
Step 1	Step	47.333	10	.000
	Block	47.333	10	.000
	Model	47.333	10	.000

Table 36. Nagelkerke R Square for Block 1 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	356.028 [a]	.083	.159

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

Table 37. Classification Table for Block 1: Method=Enter

Observed			Predicted involvement		Percentage Correct
			low	high	
Step 1	involvement	low	3	63	4.5
		high	4	479	99.2
	Overall Percentage				87.8

a. The cut value is .500

Enter logistic regression was conducted to determine which independent variables (race; whether the subject has a father figure in childhood, father's supportiveness in childhood, substance use in childhood, arrest history in childhood, physical, social, and family stressors in childhood, and age when the study subject became a father) are predictors of father involvement level (low and high) for men who only had one child. Regression results indicated that the overall mode of two predictors (age became a father, arrest history in childhood) were statistically reliable in distinguishing between highly and involved males (-2 Log Likelihood=356. 028, X^2 (10, N=549) =47.33, $p<0.001$). The model correctly classified 87.8% of the cases. Regression coefficients are presented in Table 38. Wald statistics indicated that age became a father and arrest history in childhood significantly predicted men's involvement level with their children. The odds ratio for age when became a father shows that when holding all other variables constant, a man is 1.22 times more likely to be involved with his children for each one point increase on age when became a father. Inverting the odds ratio for arrest history in childhood reveals that for a man without arrest history in childhood is 2.35 times more likely to be involved with his children.

Table 38. Variables Included in the Equation of Block 1

		B	S.E.	Wald	df	Sig.	Exp(B)
	Non-Black(1)	.553	.321	2.973	1	.085	1.739
	fath_fig(1)	1.145	.643	3.169	1	.075	3.142
	Fa_sup(1)	-.440	.343	1.644	1	.200	.644
	Uninvolved(1)	-.245	.451	.294	1	.587	.783
	child_sub	-.050	.138	.128	1	.721	.952
Step 1	arrest_bef18(1)	.853	.371	5.286	1	.021	2.348
	Age_befa	.197	.043	20.759	1	.000	1.217
	social_stre	-.043	.127	.116	1	.733	.958
	physical_cond	.028	.231	.014	1	.904	1.028
	family_stre	-.101	.164	.381	1	.537	.903
	Constant	-3.333	1.177	8.019	1	.005	.036

a. Variable(s) entered on step 1: non-Black, fath_fig, Fa_sup, Uninvolved, child_sub, arrest_bef18, Age_befa, social_stre, physical_cond, family_stre.

Research Question #8: What are the predictors of fathers' level of involvement with new biological child(ren) (high versus low) when there are equivalent number of cases?

In the original model of all cases (n=1260), the model was able to classify 84.6% cases. However, the actual number of low involved fathers (n=192) is very small compared to high involved fathers (n=1068). In the second model of fathers who only had one child (n=549), the mode was able to classify 87.8% cases correctly. The number of low involved fathers (n=66) was also very small compared to high involved fathers (n=483).

In order to further confirm the accuracy of the model, a random sample of 20% of the high involved fathers (n=205) were selected and merged with low involved fathers (n=192). Hence, the low and high involved fathers have the equivalent number of cases. Hierarchical logistic regression analysis was used to explore which of the 11 predictor variables (race; whether the subject has a father figure in childhood; father's

supportiveness and parenting style in childhood; substance use history in childhood; arrest history in childhood; physical, social, and family stressors in childhood; age when the study subject became a father; and total number of biological children) were the best predictors of father involvement. Predictor variables were entered in five blocks.

Block 0

The classification able for the first block in the analysis, where no predictors were entered is shown in Table 39.

Table 39. Classification Table for Black 0

Observed			Predicted involvement		Percentage Correct
			low	high	
Step 0	involvement	low involvement	0	192	.0
		high involvement	0	207	100.0
	Overall Percentage				51.9

a. Constant is included in the model.

b. The cut value is .500

The results in this table indicated that the constant only model correctly classified 51.9% of the cases.

Block 1

Race and physical health conditions were added in this block to the model. Race was dummy coded as 1=Black, 0=Non-Black. The Black fathers were treated as the reference category. Physical health condition was on a scale from 0 to 3. The results for Block 1 are shown in Tables 40 to 43.

Table 40. Omnibus Tests of Model Coefficients for Block 1

		Chi-square	df	Sig.
Step 1	Step	7.404	2	.025
	Block	7.404	2	.025
	Model	7.404	2	.025

Table 41. Nagelkerke R Square for Block 1 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	546.164[a]	.018	.025

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Table 42. Classification Table for Block 1

Observed			Predicted involvement		Percentage Correct
			low	high	
Step 1	involvement	low	65	127	33.9
		high	45	162	78.3
	Overall Percentage				56.9

a. The cut value is .500

Table 43. Variables Included in the Equation of Block 1

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Non-Black(1)	.613	.227	7.258	1	.007	1.845
	physical_cond	.044	.178	.062	1	.804	1.045
	Constant	-.386	.208	3.453	1	.063	.680

a. Variable(s) entered on step 1: non-Black, physical_cond.

According to the omnibus tests of model coefficients, the variables in block 1 slightly improved the prediction and the model was significant (p=0.025), with this block explaining 2.5% of the variance in father involvement (Nagelkerke R Square=0.025).

Adding race and physical condition variables slightly increased the overall prediction accuracy to 56.9%. However, the prediction accuracy for low involved fathers increased from 0 to 33.9%.

Race as an indicator was significant predictor of father involvement. According to the Wald test, Non-Black fathers are 1.85 times more likely to be highly involved with their children.

Block 2

In this block, men's father figure presence in childhood, father/figure's supportiveness, and fathering style were added. Fathering style was dummy coded as 1=uninvolved 0=other parenting style. The other two variables are categorical measures, with 1 indicating the respondent had a father/figure in childhood, and the father/father figure was supportive. Respondents who had a father/father figure in childhood, father/figure was supportive, and the fathering style was uninvolved were the reference categories.

Table 44. Omnibus Tests of Model Coefficients for Block 2

		Chi-square	df	Sig.
Step 1	Step	7.608	3	.055
	Block	7.608	3	.055
	Model	16.184	5	.010

Table 45. Nagelkerke R Square for Block 2 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	537.555[a]	.037	.049

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Table 46. Classification Table for Block 2

Observed			Predicted Involvement		Percentage Correct
			low	high	
Step 1	involvement	low	96	96	50.0
		high	68	139	67.1
	Overall Percentage				58.9

a. The cut value is .500

Table 47. Variables Included in the Equation of Block 2

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Non-Black(1)	.571	.232	6.044	1	.014	1.769
	physical_cond	.049	.180	.073	1	.787	1.050
	fath_fig(1)	-.578	.400	2.093	1	.148	.561
	Fa_sup(1)	-.217	.255	.720	1	.396	.805
	Uninvolved(1)	.387	.348	1.237	1	.266	1.472
	Constant	-.563	.415	1.845	1	.174	.569

a. Variable(s) entered on step 1: fath_fig, Fa_sup, Uninvolved.

According to the omnibus tests of model coefficients, the step of adding the three childhood father/figure variables, showed a trend toward significance (p=0.05), with the overall model being significant (p=0.01). The model explained 4.9% of the variance in father involvement (Nagelkerke R Square=0.049). The overall prediction was 58.9%, slightly higher than previous model. However, the prediction accuracy for low involved fathers increased from 33.9% to 50%. According to the Wald test, race was the only significant predictor, with the likelihood of non-Black man 1.77 times more likely to be highly involved with their children.

Block 3

In the third block, the family and social stressors were added. The family stressor variable was on a 0-7 scale, and the social stressor variable was on a 0-4 scale. The results for block 3 are shown in tables 48 to 51.

Table 48. Omnibus Tests of Model Coefficients for Block 3

		Chi-square	df	Sig.
Step 1	Step	15.576	2	.000
	Block	15.576	2	.000
	Model	30.589	7	.000

Table 49. Nagelkerke R Square for Block 3 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	521.979 [a]	.074	.098

a. Estimation terminated at iteration number 3 because parameter estimates changed by less than .001.

Table 50. Classification Table for Block 3

Observed			Predicted involvement		
			low	high	Percentage Correct
Step 1	involvement	low	95	97	49.5
		high	63	144	69.6
	Overall Percentage				59.9

a. The cut value is .500

Table 51. Variables Included in the Equation of Block 3

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Non-Black(1)	.501	.237	4.473	1	.034	1.651
	physical_cond	.181	.188	.928	1	.335	1.198
	fath_fig(1)	-.606	.404	2.248	1	.134	.546
	Fa_sup(1)	-.046	.267	.030	1	.863	.955
	Uninvolved(1)	.447	.356	1.574	1	.210	1.564
	social_stre	-.284	.090	9.877	1	.002	.753
	family_stre	-.237	.120	3.893	1	.048	.789
	Constant	-.095	.441	.047	1	.829	.909

a. Variable(s) entered on step 1: social_stre, family_stre.

According to the omnibus tests of model coefficients, the step of adding the social and family stressors, showed a significance (p=0.000), with the overall model being significant (p=0.000). The model explained 9.8% of the variance in father involvement (Nagelkerke R Square=0.098). The model correctly classified 59.9% of the cases. Wald statistics indicated that race, family, and social stressors were significant predictors, with the likelihood of non-Black man 1.65 times more likely to be highly involved with their children. The odds ratio for social stressor shows that when holding all other variables constant, a man is 0.75 times less likely to be involved with his children for each one point increase on social stressors. Inverting the odds ratio for number of family stressor reveals that for each one point increase on family stressors, a man is 0.79 times less likely to be involved with his children.

Block 4

In the fourth block, the childhood substance use index (on a 0-3 scale) and arrest history before 18 were added (1=yes, 0=no). The reference category for arrest history in childhood was the men who had been arrested before 18.

Table 52. Omnibus Tests of Model Coefficients for Block 4

		Chi-square	df	Sig.
Step 1	Step	9.438	2	.009
	Block	9.438	2	.009
	Model	40.026	9	.000

Table 53. Nagelkerke R Square for Block 4 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	512.541	.095	.127

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 54. Classification Table for Block 4

			Predicted		
			involvement		
	Observed		low	high	Percentage Correct
Step 1	involvement	low	110	82	57.3
		high	62	145	70.0
	Overall Percentage				63.9

a. The cut value is .500

Table 55. Variables Included in the Equation of Block 4

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Non-Black(1)	.600	.247	5.899	1	.015	1.822
	physical_stre	.184	.190	.932	1	.334	1.202
	fath_fig(1)	-.509	.408	1.554	1	.213	.601
	Fa_sup(1)	-.051	.270	.036	1	.850	.950
	Uninvolved(1)	.399	.359	1.234	1	.267	1.490
	social_stre	-.215	.096	4.988	1	.026	.807
	family_stre	-.228	.121	3.524	1	.060	.796
	child_sub	-.117	.106	1.231	1	.267	.889
	arrest_bef18(1)	.676	.275	6.055	1	.014	1.967
	Constant	-.630	.507	1.542	1	.214	.533

a. Variable(s) entered on step 1: child_sub, arrest_bef18.

A test of the full model against the previous model was statistically significant, indicating that the predictors as a set reliably distinguished between lowly involved fathers and highly involved fathers (X2 (2, N=399)=40.03, p<0.001). The model correctly classified 63.9% of the cases. The Wald criterion demonstrated that race; social stressors; and arrest history in childhood made significant contributions to prediction (see Table 55). EXP(B) value indicates that when social stress increase by one unit the odds ratio is 0.81. Therefore, men are 0.81 less likely to be involved with their children. Non-Black fathers are 1.82 times more likely to be involved with his children. Men without an arrest history in childhood were 1.97 times more likely to be involved with his children.

Block 5

In the last block, number of children and age when a man became a father were added. Both variables are continuous measures.

Table 56. Omnibus Tests of Model Coefficients for Block 5

		Chi-square	df	Sig.
Step 1	Step	10.683	2	.005
	Block	10.683	2	.005
	Model	50.710	11	.000

Table 57. Nagelkerke R Square for Block 5 of Logistic Regression Analysis

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	501.858	.119	.159

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than .001.

Table 58. Classification Table for Block 5

			Predicted		
			involvement		
	Observed		low	high	Percentage Correct
Step 1	involvement	low	114	78	59.4
		high	61	146	70.5
	Overall Percentage				65.2

a. The cut value is .500

Table 59. Variables Included in the Equation of Block 5

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Non-Black(1)	.464	.253	3.350	1	.067	1.590
	physical_stre	.164	.193	.726	1	.394	1.179
	fath_fig(1)	-.506	.412	1.506	1	.220	.603
	Fa_sup(1)	.061	.275	.049	1	.826	1.063
	Uninvolved(1)	.496	.363	1.860	1	.173	1.642
	social_stre	-.173	.099	3.083	1	.079	.841
	family_stre	-.194	.123	2.481	1	.115	.824
	child_sub	-.105	.107	.956	1	.328	.901
	arrest_bef18(1)	.581	.280	4.306	1	.038	1.787
	Age_befa	.106	.035	9.246	1	.002	1.112
	number_of_children	.022	.113	.039	1	.843	1.023
	Constant	-3.067	1.037	8.752	1	.003	.047

a. Variable(s) entered on step 1: Age_befa, number_of_children.

A logistic regression analysis was conducted to father involvement level of 399 cases; using race whether the subject has a father figure in childhood; father's supportiveness in childhood; substance use history in childhood; arrest history in childhood; physical, social, and family stressors in childhood; age when the study subject became a father; and total number of biological children as predictors. Regression results indicated that the overall mode of two predictors (age became a father, arrest history in childhood) were statistically reliable in distinguishing between highly and low involved males (-2 Log Likelihood=501.858, X^2 (2, N=399) = 50.71, p<0.001). The model correctly classified 65.2% of the cases. The odds ratio for age became a father shows that when holding all other variables constant, a man is 1.11 times more likely to be involved with his children for each one point increase on age became a father. Inverting the odds ratio for arrest history in childhood reveals that for men without arrest history in childhood 1.79 times more likely to be highly involved with their children.

Summary

Three logistic regression analyses were conducted: the first one used all of the 1816 cases and father involvement with all children, the second one used fathers who only had one child, and the third one for a combination of balanced number of low and highly involved fathers. All three models revealed that age when became a father and arrest history are significant predictors of father involvement. Though the third model was only able to correctly classified 65.2% of the cases, it has a higher rate of predict low involved fathers (59.4%) compared to the other two models. The third model explained more of the variance in father involvement (Nagelkerke R Square=0.159).

CHAPTER V

DISCUSSIONS, AND SOCIAL WORK IMPLICATIONS

This study examined the relationship between men's experience of childhood stressors and their overall level of father involvement. The predictor variables were based on a man's preexisting characteristics (demographics, physical condition), childhood stressors (social and family level), father/father figure in childhood, and time when experienced fatherhood (age became a father, number of biological children). Hierarchical logistic regressions were performed to determine the best predictors of father involvement. This chapter will expand upon the meaning of the results from the previous chapter. In addition, the strengths and limitations of the study, implications for social work practice and suggestions for future research will be delineated.

Summary of Findings

Overall, the results indicate that fathers in this study are, in general, positively involved with their new biological children across multiple fathering dimensions. They talk/sing, play, read, and bathe/dress their children. At the same time, there is variation in involvement by fathers, depending on their characteristics and childhood histories. In the paragraphs below, the relationship between demographic characteristics and father involvement will be first discussed, followed by determinants of father involvement from outcomes of the logistic regression.

Social/Demographic Variables and Father Involvement

Past research has suggested inconsistent results father involvement for Black, Hispanic, and White fathers (Davis, 2013; Gee et al., 2007; King, Harris, & Heard, 2004; Smith et al., 2005). The current study showed that Black fathers had a lower involvement with their children in performing fathering activities such as play, talk, dress a child, or read with a child compared to non-Black fathers. Non-Hispanic fathers showed slightly higher involvement in these activities, but no significant difference was found between Hispanic and non-Hispanic fathers.

A man's childhood and experience with his father effects his relationship with his children. Cabrera et al. (2007) captured the potential for the generational perpetuation of father involvement or fatherlessness by representing "rearing history" as a determinant of father characteristics that in turn influences paternal involvement, essentially the concept of reproduction of fatherhood (p. 186). There are two models: the first model claims that men who had a caring and nurturing father figure in childhood tend to continue to actively involved with his children, whereas men who came from abusive or distant families are more likely to have negative thoughts on fathering and would continue the negative pattern to his children. The compensate model holds the opposite view, which suggests that men who come from families that were more distant will also have stronger attitudes about fatherhood (Floyd & Morman, 2000; Pruett, 1987; Radin, 1988).

The current research echoes the first model, showing that men who had a father/father figure had higher involvement with theri children than those who lived with no father/father figure in childhood. Also, men who had a supportive father, either

residential or non-residential, engaged in more direct activities with their children than those who had a non-supportive father/father figure in childhood.

Researchers have shown that fathers with substance abuse issues are at a higher risk for negative emotions during father–child interactions and more negative attitudes toward their infants and young children compared with nonalcohol-dependent fathers (Stover, et al., 2012). The current research performed a comparison between men who had a history of substance use in childhood and those who did not. The results showed that men who had a history of substance use in childhood had a lower involvement with their children, though the difference observed was not statistically significant.

Determinants of Father Involvement

Individual and family early life stressors as factors were not retained in the final model as they did not show significant effect on father involvement. The possible explanations are as follows: first, time as a factor may affect a person's behavior. Second, the negative effect of these stressful experiences may be solved. This is unknown from the current dataset as there is no variable assessing this area. Third, some protective factors may increase a man's father involvement, such as support system, positive co-parent relationship. These protective factors are also not available in the current dataset.

Predictive models demonstrated that age when became a father, and arrest history in childhood are consistently strong predictor of biological father's level of involvement. The older a man was when he became a father, the more likely it was that he spent time or played with his child. A man without a history of arrest showed significant higher level of involvement with his children.

The final model explained 16 percent of variance in father involvement. It is clear that some factors which contribute to father involvement according to the literature were not included in the design of this this study, such as child characteristics, co-parent relationship, mental health, and support system.

On the whole, this study aimed to understand the effect of men' early life stressors, and how these stressors affect and shape their father involvement. This study examined one facet of father involvement which had not previously been studied and contributed to the literature by examining men's early life stressors and documenting their involvement level.

Implications for Social Work Practice

Research indicates that increased father involvement is related to positive child wellbeing (Lamb & Tamis-Lemonda, 2004). As such, social workers should strive to engage positive father involvement. However, fathers are not a primary participant involved in services/interventions compared to a child' mother (Krisky, 2010). Phares, Fields, and Binitie (2006) identified a number of factors that may contribute to the lack of father participation including: service providers not actively inviting father participation, service providers' biases in not considering father participation important, discomfort with interparental conflict, fathers' time-constraints, fathers' assessment of intervention as unnecessary, and fathers' problem solving or coping styles. Since positive parenting appears consistently associated with positive child outcomes, it would make sense for social workers to promote positive father involvement, and to intervene in cases where the father is not actively involved in his children's lives.

Although individual social stressors experienced in childhood did not emerge as a predictor in the final model, it showed a trending significant effect toward father involvement (p=0.51). A man was a victim of bullying, witnessing gunshot, experienced homelessness; victim of violent crime, etc. does impact his level of father involvement. As such, fathers' childhood experiences should be assessed in order to provide appropriate services to engage father involvement. Father involvement issues cannot be solved if social workers are blind to a father's childhood experience.

Additionally, the final model revealed two significant predictors of father involvement: age when a man became a father, and arrest history in childhood. Age when became a father showed a positive relationship with father involvement, and arrest history in childhood indicated a negative relationship. Programs that educate teenager males on the importance of avoiding pregnancy and crime should be developed. Very many programs focused teenage pregnancy on girls. Based on this study's findings, appropriate programs for teenage boys should also be developed. Also, parenting classes or programs should be offered for fathers.

Strengths

Past research has suggested inconsistent results of father involvement and was largely based on small–scale and short-term clinical studies. In the clinical tradition, many of these studies have assumed a deficit perspective by being problem focused, sampling the most adversely affected families, lacking standardized instrumentation, and being very subjective in interpretation. Therefore, these studies are not generalizable to other populations. One strength of this research is the probability sampling method used to be representative of a general population living in the United States born January 1,

1980 through December 31, 1984. As such, the findings have a stronger generalizability than small sample sized studies.

Additionally, the sample in this study contains sufficient numbers of Black and Hispanic or Latino respondents for statistical analysis, which enables the researcher to study and compare father involvement for different racial groups. The results reflect the racial, ethnic, and socioeconomic diversity of U.S. fathers.

Third, including father involvement data over a period of 12 years, increased the ability of the findings to be generalized to more fathers. Lastly, this study examined how men's stressful events in childhood affect their father involvement, which makes the study quite unique in including early life stressors as predictors of father involvement.

Limitations of this Study

This study had several limitations. First, the father involvement data were collected through self-report measure. Therefore, there was potential for study subjects to over report their involvement level than data collected from their partners and children. Second, study subjects were nationally representative samples born from 1980 to 1984. Care should be used in generalizing from the findings of father involvement of all ages based on the NLSY97. Father involvement may vary significantly from men who were born other than this time period.

Third, accounts of early life stressors were retrospective, thus relying on the participants' memory of an event that occurred years prior to the time of the study, which may lead to incorrect detail recollection of these events or experiences, underreporting of events, and the potential effect of the participant's mood/affect regulation state at the time

of reporting accurate details (Barnett, Miller-Perin, Perrin, 2011). Therefore, readers must consider this when interpreting the results of the current study.

Future Research

Kyrisk (2010) conducted a comprehensive five-year review of five social work journals and one family-focused interdisciplinary journal to examine the prevalence of recent research on fathers. The findings indicated that there continues to be a significant lack of research examining fathers relative to mothers.

The current research only examined the direct engagement dimensions of father involvement, such as reading to a child, playing with a child, talking/singing to a child, and dressing a child. According to the most influential framework of father involvement comes from Lamb, Pleck, Charnov, and Levine (1985, 1987), who proposed a three-part model of paternal involvement that encompasses the various forms of participation that fathers may take in their children's lives. These categories consist of (a) direct contact and interaction with the child, (b) being physically and/or emotionally accessible to the child, and (c) being responsible for the child's development. It would be interesting to include indirect component and examine all dimensions of father involvement. Future research could include an evaluation of fathering activities representative of the indirect engagement dimensions (providing financial support, responsibility, availability).

Also, more severe early life stressors such as traumatic experiences in childhood (child abuse, neglect, sexual abuse) were not included in this study. Research that examines these types of childhood victimization would inform treatment design and intervention of best practice. Additionally, since very many variables; such as homelessness, bullying victim, substance use in childhood, crime history; are sensitive

topics in this study. Qualitative study that has a stronger focus of researcher-participant relationship will collect more accurate information of their past stressful history or experiences. In the current study, father involvement is measured by the frequency of interactions. Future research may benefit from finding new ways of exploring these more qualitative aspects of father involvement that are not accurately by mere frequencies of fathering behaviors.

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APPENDIX

Figure 1. The Resiliency Model.

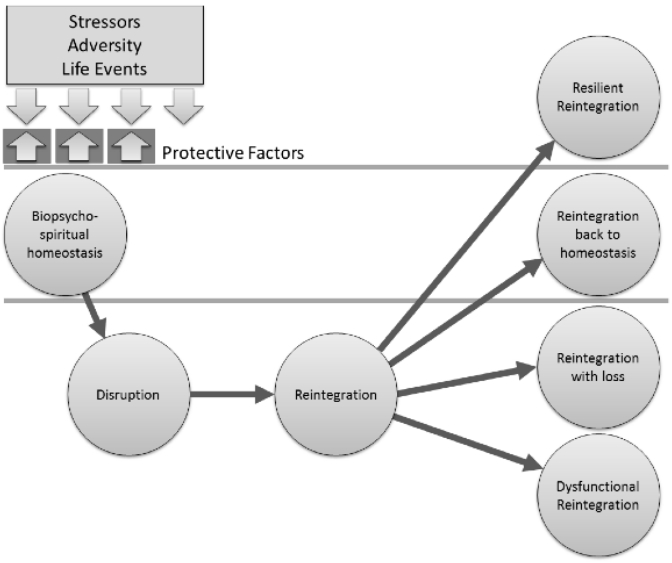


Figure 2. A Heuristic Model of Fatherhood.

Adapted from "Modeling the Dynamics of Paternal Influences on Children Over the Life Course" by N. Cabrera, N., H. E. Fitzgerald, R. H. Bradley, and L. Roggman, 2007, *Applied Development Science, 11*(4).

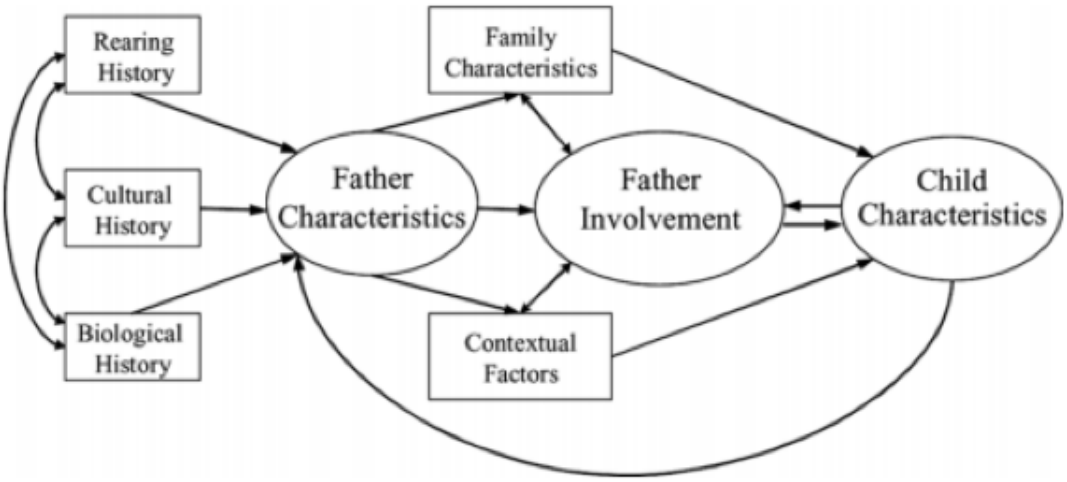
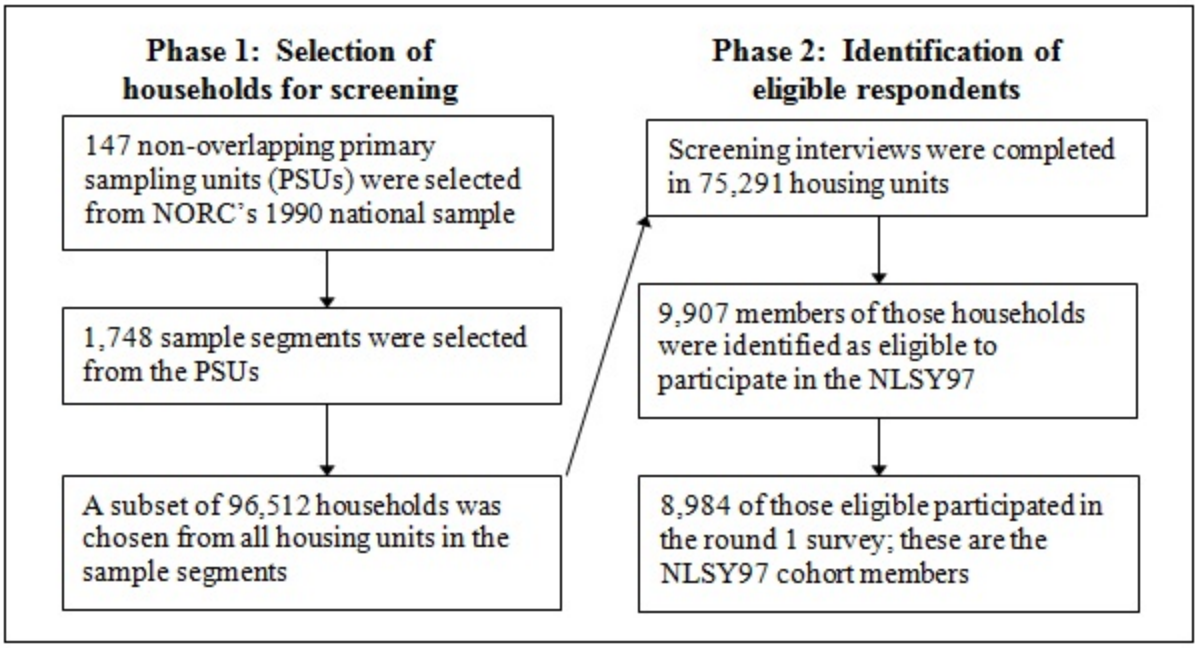


Figure 3. Selection of NLSY97 Respondents



CURRICULUM VITAE

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EDUCATION

Ph.D. **University of Louisville, KY** (Aug. 2009–Aug 2015)

Major: Social Work

MSW **Washington University in St. Louis** (Aug. 2012–Dec. 2013)

Major: Social Work

Children, Youth, and Families specialization

ME **Capital Normal University, Beijing, China** (Sep. 2006–July 2009)

Major: Pedagogy of Social Work

BA **Henan University of Economics and Law, China (**Sep. 2002–July 2006**)**

Major: Administration of Public Affairs

RESEARCH INTERESTS

Parenting education, child maltreatment prevention and treatment, quantitative and qualitative methodologies, parental involvement, cross-cultural parent-child relations, fatherhood, child development, childhood trauma, and international social work.

RESEARCH EXPERIENCE

Research Assistant, Comprehensive Residential Family Treatment for Substance Abuse Recovery (CRFTSAR) project, University of Louisville, funded by SAMHSA PPW VOA-Freedom House II Grant (Jan. 2015-July 2015)

Coinvestigator for a study on the beliefs, attitudes, and needs Chinese men have regarding their role as a father (Dec. 2014–July 2015)

Principal Investigator (dissertation research) for a study on the relationship between fathers' adverse life events in childhood and their current involvement with their children (Dec. 2013–Aug. 2015)

Literature review, research design, data cleaning, data analysis, and innovative interventions development.

Coinvestigator for a study on building a sustainable community in the Ville neighborhood, St. Louis, MO. Supervised by Henry S. Webber, Executive Vice Chancellor for Administration, Washington University in St. Louis (Oct. 2013–Feb. 2014)

Principal Investigator for a study on fathers' experience of parenting education project (Sep. 2013–Jan. 2014)

Study design, qualitative and quantitative data collection, data entry, data coding, data analysis, script writing, and involvement in the development of innovative interventions.

Coinvestigator for a study on the Kentuckiana Regional Planning and Development

Agency (KIPDA) Emergency Care Services Program, Louisville, KY Supervised by Dr. Anna Faul, Professor, Associate Dean for Academic Affairs (Sep. 2010–Jan. 2011)

Principal Investigator for a study on autistic children and their family members, Beijing Bo'ai Hospital, Beijing, China (April–July 2008)

Principal Investigator for the study on challenges faced by immigrants and their children in China (Nov. 2006–Mar. 2008)

PUBLICATIONS

Xia, H., & **Hao, Q.** (2008). Assessment of the needs of children raised by their grandparents in China. *Journal of Southwest University for Nationalities-Humanities and Social Science, 11*(29), 68-69.

Hao, Q. (2008). Marginalized elder populations' living conditions in the suburban area. *Chinese Journal of Social Work, 7*(2), 27-29.

Tian, T., & **Hao, Q.** (2008). An investigation on Chinese immigrant workers' community life. *Chinese Journal of Social Work*, *4*(2), 47-49.

Manuscript Under Review

Hao, Q. (2015). A performance evaluation of the parenting education project for absentee fathers. *Evaluation and Program Planning.*

Manuscripts in Preparation

Hayden, T., & **Hao. Q**. Using classroom assessment techniques to inform teaching and responding to it. *Educational and Psychological Measurement.*

Hao, Q., & Hayden. T. Chinese immigrant fathers' involvement with their children's

social and emotional development. *Journal of Marriage and Family*.

Hao, Q. Understanding resilience in traumatic fathers: Strengthening fathers' positive involvement with their school-aged children. *The School Community Journal.*

PROFESSIONAL EXPERIENCE

Case manager, Fathers' Support Center, St. Louis, MO (Aug. 2013–Mar. 2014)

Delivered case manager services for absentee and noninvolved fathers.

Provided mentoring and counseling services for low-income fathers.

Conducted a program evaluation of a parenting education project.

Social Work Intern, Missouri Charter Public School Association**,** St. Louis, MO (May–July 2013)

Developed key location profile for Charter Public School statewide expansion.

Reviewed comprehensive literature as well as charter school applications.

Developed measurements and drafted documents.

School Social Worker, Bevo-Long Community Education Full Service School, St. Louis, MO (Jan.–Mar. 2013)

Provided individual counseling to students with behavior problems.

Developed a support group to help teenagers build self-esteem.

Supervised conflict resolution/peer mediation programs.

Conducted marketing and fundraising to better serve students and connect communities with the school.

Clinical Social Work Intern, St. Francis Xavier College Church, St. Louis, MO (Jan.–May 2013)

Coordinated with staff, volunteers, clients, and collaborating agencies.

Helped homeless and ex-offenders with obtaining birth certificates and State IDs.

Conducted therapeutic conversations with homeless individuals.

Designed and conducted a program evaluation.

Wrote an evaluation report after data analysis.

School Social Worker*,* Beijing Hua'ao Middle School, Beijing, China (Nov. 2006–June 2009)

Supervised more than 20 BSW students from Capital Normal University.

Offered programs for children to meet their development needs.

Delivered counseling services for children facing in major culture shifts.

Provided life education courses and problem solving workshops.

Developed and conducted peer-mediation programs.

Program Developer, World Vision—China, Beijing, China (Nov. 2007–Jan. 2008)

Developed programs for immigrant middle school children in Beijing.

Conducted qualitative and quantitative research.

Wrote and published two academic papers based on the study.

Clinical Social Work Intern, Beijing Bo'ai Hospital, Beijing, China (April–July 2008)

Developed a behavior therapy group for autistic children.

Conducted research to track the changes or improvements among subjects.

PROFESSIONAL TRAINING

What Are My Students Really Thinking? Collecting Meaningful Data to Inform How You Teach. University of Louisville, Louisville, KY (Sep. 2014)

A Primer for Program Evaluation, Washington University in St. Louis, St. Louis, MO (June 2014)

Effective Treatment Planning: Crafting the Roadmap for Client Progress, Washington University in St. Louis, St. Louis, MO (May 2014)

Global Appraisal of Individual Needs (GAIN) by Fathers' Support Center, St. Louis, MO (Jan.–Mar. 2014)

Case management skills training by Fathers' Support Center, St. Louis, MO (Nov. 2013)

Substance Abuse and Mental Health Services Administration (SAMHSA) Kickoff Training, St. Louis, MO (Oct. 2013)

Assessing and Managing Suicide Risk: Core Competencies for Mental Health Professionals by Suicide Prevention Resource Center, St. Louis, MO (Mar. 2013)

Understanding Post Traumatic Stress Disorder: Fundamentals of Assessment & Treatment, St. Louis, MO (Mar. 2013)

Creating Positive School Culture Through Conflict Mediation and De-escalation by National Council of Alcoholism and Drug Abuse, St. Louis, MO (Feb. 2013)

New Directions for Social Workers in Education, St. Louis, MO (Jan. 2013)

Understanding and Serving LGBT Older Adults, St. Louis, MO (Jan. 2012)

Graduate Teaching Academy, University of Louisville, Louisville, KY (Dec. 2010–April 2011)

Celebration of Teaching and Learning: From College to Career, Louisville, KY (Feb. 2011)

Crisis and Accident Pressure Management certificate, Beijing, China (May 2008)

Social Work of Professional Service in Catastrophic Events—Advanced Level certificate, Beijing, China (May 2008)

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

International Consortium for Social Development-the 15th International Symposium, Hong Kong (July 2007)

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

Addiction Disorder Treatment, acquired certificate, Beijing (Nov. 2006)

HONORS

First-class Scholarship and Second-class Award, Academic and Scientific Research Award, Capital Normal University (2006, 2007 & 2008).

Memorial Award, "New Citizen Cup" Graduate Student Non-profit Project Design Contest (2007).

MEMBERSHIPS AND AFFILIATIONS

Member, Council on Social Work Education (CSWE) 2014–present

REFERENCES

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