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Childbearing before the age of 20:

Does biological father involvement matter to economically disadvantaged black females?

A dissertation submitted in partial satisfaction of the  
requirements for the degree

Doctor of Philosophy in Social Welfare

by

Marquitta Shree Dorsey

2017

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## ABSTRACT OF THE DISSERTATION

Childbearing before age 20:

Does father involvement matter for economically disadvantaged black females?

by

Marquitta Shree Dorsey

Doctor of Philosophy in Social Welfare

University of California, Los Angeles

Professor Aurora P. Jackson, Chair

This study investigates the relationship between teen childbearing among poor black females and various facets of father involvement experienced during childhood including accessibility, engagement and responsibility. Beyond examining paternal involvement as a factor exclusively, this study considers other protective factors that might matter to poor black females who manage to avoid an early birth in spite of economic disadvantage. While teen birth rates have declined over the past 30 years, the disparity between racial groups remains most relevant for minorities, particularly black females. Previous research has not primarily considered the condition of black females in a study including these variables. Studies, for the most part, have focused on paternal involvement for middle class white families, separated by divorce, without regard for black females raised in single mother households.

A convenient sample of black mothers, over age 20, living in public housing provided retrospective responses to a 92-item questionnaire. Measures for the current study included

father involvement, mother's age at first birth, mother's level of education, and closeness to a mother. Additional measures including self-esteem, education and welfare status during adulthood, were used to determine differences between those who gave birth before age 20 and those who did not. Maternal measures were derived from a mother's survey used previously and the Rosenberg Self-esteem scale was used to measure self-esteem.

Results show that 1) selected facets of father involvement do not predict early childbearing among poor black females; 2) while the mother's education and the mother-daughter relationship do not predict early childbearing, having a mother who was once a teen mother does; and finally, 3) there was no indication that self-esteem, education and welfare status during adulthood would differ among those who gave birth before age 20 and those who did not. Implications for future research are discussed.

The dissertation of Marquitta Shree Dorsey is approved.

Todd Franke

Laura Wray-Lake

Gail Wyatt

Aurora P. Jackson, Committee Chair

University of California, Los Angeles

2017

## Dedication

I would like to dedicate this work as a commemorative effort to identifying factors related to the well-being of poor single black mothers.

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## Chapter I

### INTRODUCTION

While working as a community liaison in a low-income community, I organized and led community efforts designed to prevent and intervene in gang-related activities often prevalent in such communities. During this time, I noticed outcome disparities among poor black girls. For instance, there were large numbers of girls experiencing teen births while there were many other girls living in the same community who had not experienced a teen birth. Curious about this disparity with regard to teen births among black girls, I reached out to community leaders for their perspective on this problem. Many responded with definitive answers, including “it’s the fathers”, “fathers aren’t in the home”, or “fathers aren’t involved”, each directly connecting a father’s role with an adolescent daughter becoming a teen mother or not. Skeptical of this feedback, I began to take notice of girls who had fathers living in the home and noticed that many had not become teen mothers and unfortunately, those who had experienced a teen birth often had minimal or no contact with their father. Albeit anecdotal, this experience suggested a need for further investigation of the phenomenon of early births among poor black girls and in particular, differences between girls living in the same community who do and do not experience an early child birth. The question is, are interactions between biological fathers and their daughters during childhood related to childbearing among low-income black teenagers? Little is known about individual differences among adolescent females in economically disadvantaged black families, many of whom are more likely than others to give birth before age 20. In an effort to address this gap in current knowledge, the present study examined whether there is a relationship between involvement by biological fathers—whether resident or nonresident—with



their daughters during the childhood years and childbearing before age 20 among economically disadvantaged black teenagers.

This topic is important because in 2013, there were 26 births for every 1000 adolescent females in the U. S., ages 15-19 (CDC, 2014; Martin, 2013), with a disproportionate number of these births to black adolescent females (Martin, 2013; Solomon-Fears, 2008; Ventura & Hamilton, 2014). While this represents a steady decline in teen births over the past 30 years, still one out of five births to an adolescent mother is a repeat birth (CDC, 2014), with black adolescents disproportionately represented among this group as well (CDC, 2014; Davis, 2001). These circumstances can have dire consequences for both the adolescent mother and her child(ren) over time. For example, teenage mothers are often the daughters of a mother who began having children as a teenager (East, Reyes, & Horn, 2007; Elfenbein & Felice, 2003; Francesconi, 2008; Partington, Steber, Blair, & Cisler, 2009). Frequently these mothers, like their own mothers, are unable to complete high school (Ellis, et al., 2003; Francesconi, 2008; Partington, Steber, Blair, & Cisler, 2009; Lie & Moroney, 1992). This reduces their capacity, subsequently, to earn a living wage. It is well documented in the literature, moreover, that the stresses associated with parenting in circumstances of economic hardship often place single mothers at risk for poor psychological and social well-being (Elfenbein & Felice, 2003; McLoyd, 1990). These, in turn, in many cases are associated with less adequate parenting (McLoyd, 1990). In addition, as stated above, children born to teenage mothers are at greater risk of subsequent teen childbearing than others (East et al., 2007; Elfenbein & Felice, 2003; Francesconi, 2008; Partington et al., 2009).

The rate of children growing up in single-mother households has increased dramatically over the past fifty years (Cruz, 2013; Vespa, Lewis, & Krieder, 2013). For black children, a

large number (51%) grow up in households without the presence of a biological father (American Community Survey, 2007; U. S. Census Bureau, 2006; Vespa, Lewis, & Kreider, 2013). Available research suggests that nonresident biological fathers' involvement with children in single-parent families is associated with better socioemotional and behavioral outcomes (See, for reviews, Adamsons & Johnson, 2013; Amato & Gilbreth, 1999). There is also some suggestion in the literature that biological fathers are important with respect to early sexual activity and birth outcomes for adolescent females (Boardmanetal, Allsworth, Phipps & Lapane, 2006; Ellis, Bates, Dodge, & Fergusson, 2013; Black, Bentley, Papas et al., 2006; Raneri & Wiemann, 2007; Rigsby, Macones & Driscoll, 1998). However, most of this evidence is based on studies of middle-class white families.

The present study adds to this body of literature an examination of individual differences among black women with respect to the quality of the father-daughter relationship during childhood in an effort to determine whether this relationship is associated with early sexual activity leading to childbearing before age 20 using evolutionary theoretical perspectives. The sample consists of 147 economically disadvantaged black mothers living in three public housing projects in Los Angeles. The data were collected in the fall of 2016 in designated locations in the housing developments.

Evolutionary theory of paternal investment proposes that the father's investment in the family is very important in the development of girls' attitudes and behaviors with regard to sex and reproduction (Draper & Harpending, 1982). Evolutionary theory of socialization posits the importance of specific contextual factors that might offer protective qualities to a daughter's development when a father's investment is either low quality or completely absent (Belsky, 1991). Using these theoretical perspectives, three questions are addressed: (1) Is there a

relationship between involvement of biological black fathers with daughters—whether resident or nonresident—and childbearing before age 20 among economically disadvantaged black daughters? (2) Among economically disadvantaged black females, who gave birth before age 20, were there protective factors that might have prevented additional births before age 20? (3) How are economically disadvantaged black females who do not give birth before age 20 different from those who do? It was expected that fathers' involvement with daughters during childhood would be associated with delayed childbearing after age 20. It was further expected that the relationship between father involvement and delayed childbearing would vary in association with the respondents' mothers' childbearing history, educational attainment, and the mother-daughter attachment relationship. Finally, delayed childbearing beyond age 20 was expected to predict higher self-esteem in adulthood.

There are several key concepts to consider. Father involvement was operationalized to include interaction, availability, and responsibility (Lamb, Pleck, Charnov & Levine, 1987, Lamb & Tamis-LeMonda, 2004). Protective factors were operationalized to include, in addition to father involvement, the respondent's mother's age at first birth (Martinez, Copen & Abma, 2011), the level of the respondent's mother's education (Meade & Kershaw, 2008; Regnerus & Luchines, 2006) and the respondent's closeness to the mother during adolescence (Buhi & Goodson, 2007; McNeely, 2002; Rink, Trinker & Harvey 2008). To be included in the study, participant/respondent needed to be a mother age 20 or older, identify as a black woman, and have low income via qualification for public housing residency.

These issues were examined using cross-sectional, retrospective, self-report data, and a survey research design. Results, therefore, address only associations among father involvement, mothers' influence, and childbearing before age 20, not causal relations. Further, the degree to

which the findings are likely to generalize to larger populations is limited by the small sample size (147 respondents).

A limitation of the sample is the element of self-selection. Respondents were made aware of the study through flyers that described the study as an attempt to better understand parenting strategies specific to black families from the perspective of black mothers. Respondents interested in participating in the study met the researcher in a designated room in the housing development and completed a questionnaire that took 30 to 45 minutes of their time. Potential subjects who did not complete the questionnaire may be different from those who did. Finally, data collected from mothers over age 20 who provided retrospective data about childbearing before age 20 may not generalize to black adolescent females younger than 20 years old who may be single mothers at present.

### **Organization of Study**

Chapter 2 presents a review of the relevant empirical evidence with respect to the central issues of this study and the theoretical perspectives. The literature on adolescent childbearing and the consequences for the adolescent mother and her child(ren) is large, and this chapter does not attempt to cover it all. The evolutionary theory of paternal investment involves attitudes and behaviors with regard to sex and reproduction, as well as contextual factors that might offer protective qualities for teenage girls in some circumstances. The literature on these is discussed.

Finally, the research questions and the theoretical expectations are presented.

Chapters 3 and 4 focus on the methods and procedures used to collect and analyze the data. The demographic characteristics of the sample are presented in chapter 3, along with a discussion of the design of the study, including a description of the measures, and the procedures

used to analyze the data. Chapter 4 addresses the three research questions. It presents an analysis of the data and the findings.

Chapter 5, the last chapter, begins with a summary of the findings. It then includes a discussion of what the findings may mean in the context of the evolutionary theoretical perspectives and previous research. It concludes with a discussion of the usefulness of this study and suggestions for additional research.

## Chapter II

### LITERATURE REVIEW

Childbearing before age 20 constitutes a serious problem for adolescents (East et al., 2007; Elfenbein & Felice, 2003; Ellis, et al., 2003; Francesconi, 2008; Partington et al., 2009). Unfortunately, birth rates for black adolescent females are higher than those of their white counterparts. In 2014, for females ages 15-19, 34.9 out of 1000 births occurred among black adolescent females compared to 17.3 out of 1000 births to white adolescent females (CDC, 2014; HHS, 2015). As not all black females are experiencing births before age 20, it is necessary to investigate life experiences that may increase the risk for or protect against childbearing among some adolescent black girls. If such an investigation were successful, it might inform early prevention-intervention strategies for high-risk black youth, and inform policies regarding the social determinants related to racial disparities with respect to adolescent births.

Many correlational studies have identified the absence of a biological father from the home and low quality parent-child relationships as risk factors for early sexual activity and births (Boardman et al., Allsworth, Phipps & Lapane, 2006; Ellis, Bates, Dodge, & Fergusson, 2013; Black, Bentley, Papas et al., 2006; Raneri & Wiemann, 2007; Rigsby, Macones & Driscoll, 1998). Specifically, evolutionary theoretical models suggest that early onset of father absence places daughters at special risk for early sexual activity and adolescent pregnancy. Evolutionary theorists hypothesize the influential effect of a father's role on a daughter's developmental pathways (Belsky, Steinberg & Draper, 1991; Draper & Harpending, 1982, 1988). As highlighted by Hetherington (1972) regarding the effects of early father absence on personality development in adolescent daughters, the evolutionary theory of paternal investment suggests that girls detect

and internalize information about reproductive strategies during the early years of life, thereby establishing the development of their own behavioral systems which make certain types of sexual behavior more or less likely in adolescence. This model suggests the importance of paternal investment—including father presence, contact and quality of father caregiving activities—on the early debut of sexual activity and reproductive behavior.

Although there is a good deal known about factors related to early sexual activity in girls, relatively little is known about the factors and processes related to the prevalence of births among black girls, particularly as it relates to family influences. Most relevant family influences range from contextual factors, such as family composition (Mendle, Harden, Turkeimer, Hulle, Onofrio, Brooks-Gunn, Rodgers, Emery & Lahey, 2009; Raneri & Wiemann, 2007) to individual parental factors, such as paternal involvement and maternal age at first birth (Ellis & Essex, 2007; Ellis, Scholomer, Tilley & Butler, 2012; Kalil & Ryan, 2010). Although most studies reviewed utilize diverse samples, the current study will seek to understand how girls' reproductive behavior develops based on certain family interactions, such as how paternal interactions and certain maternal factors contribute to reproductive development of low-income black girls. This will be achieved by investigating the parental role as a predictor of reproductive development in girls and the relevance of evolutionary theoretical models.

## EVOLUTIONARY THEORY EXPLAINING THE ROLE OF PATERNAL INVESTMENT

Evolutionary theoretical models aim to understand human development using both traditional as well as contemporary approaches. Since this study will be guided by a contemporary approach, evolutionary theory of paternal investment, the following section will

explain the basic tenants of the traditional model of evolutionary theory and then details about the contemporary approach that will be used to guide our understanding of the role of paternal investment to the sexual development of daughters.

### Core Elements of Traditional Evolutionary Theory Explained

At the core of traditional evolutionary models, reproduction is based on three tasks: growth and development, mating and parenting, all of which vary among individuals in how they experience each task. As with all organisms, humans place emphasis on growth and development, seen through childhood dependence (Belsky, 1991). One distinction with humans is the special attention given to parental involvement and developing bonds with one another, but not without variation in how humans manage growth, development, mating and parenting. The concept of parental investment (i.e. direct interaction with a child through caregiving, proximity, protection, education etc.) introduced by socio-biologists, has proven to have a direct influence on the health and development of the child (Paquette, 2004). Advancing the task of parental investment, the following contemporary approach to evolutionary theory reinforces how crucial the father's role is to a child's early experiences by provoking an awareness of several dynamics: resources available and predictable in the environment, trustworthiness of others and the reliability of interpersonal relationships (Belsky, 1991). According to Draper and Harpending (1988), these processes of awareness contribute to how the child develops a reproductive strategy, thus augmenting the core elements of the traditional model of evolutionary theory by emphasizing the tasks of parenting to the development of the child, particularly the paternal role.



## A Contemporary Version of Evolutionary Theory Explaining Paternal Investment

Draper and Harpending (1982, 1988) offer a modern, yet critical examination of how father absence matters to the development of female reproductive strategies. What makes this approach contemporary in nature is the narrow focus given to the role paternal investment plays with the internal processes related to sexual behavioral development in daughters. They posited that individuals evolve to be sensitive to early childhood experiences and environment, and exposure to different environments biases children toward acquisition of different reproductive strategies. For example, the early stages of life are important to girls for gaining an understanding of the father's investment in the family. By gaining this understanding, girls establish a developmental track, which produces certain outcomes through their reproductive behavior by which behavioral patterns and psychological orientations subsequently guide their reproductive functioning (Belsky, Steinberg, & Draper, 1991; Draper & Harpending, 1982). Similar to that of socio-biologist, Draper and Harpending (1982) defined "paternal investment" as the time, energy, and assets committed to the care and nurturance of children, and for this study, the care and nurturance of daughters. Therefore, it is assumed, according to this perspective, that girls, whose early childhood experiences are characterized by low paternal investment, tend to develop reproductive behaviors in a manner consistent with the accelerated onset of sexual activity and early reproduction (Ellis et al. 1999; Draper & Harpending, 1982, Tither & Ellis, 2008).

## EXPLAINING A FATHER'S INFLUENCE ON DAUGHTER'S EARLY SEXUAL ACTIVITY

### *The Importance of Pair Bonds Related to Paternal Investment and Reproductive Strategy*

Since low paternal investment is a precursor to early onset of sexual activity, a clearer discussion of how this occurs is important. Draper and Harpending's (1988) framework posits that specific childhood experiences which occur in the family, such as exposure to paternal investment, shape children's ability to develop bonds with people. They argue that the paternal bond established through early life experiences "sets" the reproductive strategy that individuals tend to adopt and act out throughout life (Barkow, 1984; Belsky et al., 1991). It is noteworthy that the term "strategy" used here does not imply a conscious plan, but how ecologists might refer to behavior as it relates to sexual activity (Belsky et al., 1991). Hence, certain strategies or reproductive behaviors in daughters will only be established based on certain conditions that involve a paternal bond. Take for example, daughters growing up in homes without fathers develop in a way where behaviors reflect an expectation that paternal investment will not be forthcoming and pair bonds will not be enduring (Belsky, Steinberg & Draper, 1991). In contrast, daughters that grow up in a home where a father is present, theorists hypothesize that they will perceive paternal investment to be forthcoming and pair bonds to be sustaining. By and large girls internalize the value of pair bonds and either give attention to establishing them or not, and a lack of early pair bonding with a father contributes to the development of certain reproductive strategies that may promote early sexual activity.

Girls whose early childhood experiences occur in a context characterized by high paternal investment tend to perceive or internalize male parental investment as important to reproduction. Namely, girls that grow up in a home where they perceive others as trustworthy, reliable, rewarding and resources constantly available, particularly coming from a father, will behave/respond in ways that slow the age at maturation (i.e. menarche), therefore forgoing early

sexual activity. These girls will be driven to increase restraint with forming sexual relationships and instead establish and maintain enduring pair bonds with reliable and nurturing mates that will ultimately contribute to child rearing later in life (Draper & Harpending, 1988). To clarify, greater subconscious attention to establishing enduring pair bonds during adolescence replaces attention to early sexual activity, which thereby delays sexual activity even after menarche is achieved. With this in mind, the daughter's developmental track is impressed upon by an internal understanding of a father's role early in life and further, a male's contribution to reproduction based on the quality of the father-daughter bond.

#### THE ROLE OF PARENTAL CLOSENESS TO EARLY SEXUAL DEBUT

Since the paternal bond, as posited by the evolutionary theory of paternal investment, is important to the sexual development of a daughter, the importance of parental closeness and quality bonds must be discussed. With nationally representative data from the National Longitudinal Study for Adolescent Health (Add Health), and a sample of 2,398 respondents 15 years and older, Regnerus and Luchies (2006) argued that no matter the level of risk youth face due to family structure, closeness with parents is influential to the sexual debut of adolescents. They found that girls who reported low quality relationships with their fathers were 40% more likely to engage in early sexual activity compared to those with higher quality relationships with their fathers, suggesting a direct influence of quality father-daughter relationships on a daughter's early sexual debut. Coley, Votruba-Drzal & Schindler (2009) also purport that adolescents whose fathers were more involved reported lower levels of sexual risk behaviors than their peers with less involved fathers. The results from both of these studies parallel Draper

and Harpending's expectations by emphasizing how harmonious father-daughter relationships contribute to a daughter's conceptualization of the male role throughout her life. Girls whose experience involved conflictual childhood interactions with low paternal investment may be inclined to establish relatively unstable pair-bonds with males instead of long-term pair bonds (Belsky et al., 1991; Draper and Harpending, 1982, 1988). Under such circumstances, whether a daughter grows up in an environment where the biological father lives in the home or not, it is the quality of the father's investment and the daughter's closeness with the father that make the difference. The current study tests this expectations by investigating whether the quality of the father-daughter relationship and parental closeness matter with regard to the onset of early sexual activity leading to early births experienced by black girls.

According to a study conducted by Ikramullah, Manlove, Cui and Moore (2009), adolescent girls that reported higher quality relationships with their parents were less likely to have sex by age 16. The authors argue that understanding whether and how parental involvement matters concerning an adolescent's sexual debut requires exploration of specific types of parental influences. Using data from the National Longitudinal Survey of Youth, Ikramullah et al. (2009) found that 59 percent of 12-14 year olds and 39 percent of 15-19 year olds reported that parents had the greatest influence on their decisions about sex. Nearly one third of daughters reported a regularly committed time together with parents important to their decisions about sex. Although these authors did not explore exactly what happened during that committed time together, this acknowledgement certainly implies the need for further exploration of whether and how parental involvement matters concerning the debut of sexual activity and early childbearing specifically among poor black girls.

While there are several studies that suggest a lack of parental closeness and low quality fathering as a risk factor for early sexual activity (Coley, Votruba-Drzal, & Schindler, 2009; Davis & Friel, 2001; Ellis et al., 2003; Ream & Savin-Williams, 2005), there are also scholars who place emphasis on a particular type of fathering as important, such as the amount of contact experienced by a daughter, which may account for the early onset of sexual activity (Ellis, Scholomer, Tilley & Butler, 2012). Using data from a sample of 202 women ages 18-36, in which nearly half lived in a father-absent home, Ellis, Scholomer, Tilley and Butler (2012) found that father absence from the home was associated with greater amounts of risky sexual behavior. This literature highlights the assumption that quality involvement and parental closeness vis-a-vis contact with the father matter with respect to the early sexual debut and ultimately early childbearing of daughters.

#### FATHER/DAUGHTER RELATIONSHIP QUALITY, THE PSYCHOLOGICAL BENEFITS OF DAUGHTER'S SELF-ESTEEM, AND THE IMPORTANCE OF INDIVIDUAL DIFFERENCES

A number of scholars have investigated the nature and impact of activities between fathers and their children on child outcomes across time (Amato & Gilbreth, 1999; Van Wel, Linssen, & Abma, 2000; Van Wel, Linssen & Abma, 2000). For example, based on data from a sample of 1,688 adolescents and young adults ages 12-24, Van Wel, Linssen & Abma (2000) found beneficial effects of close father-child relations on children's feelings about themselves. They found that at various stages of life, parents have significant influences on their children's self-image, even more so than their peers during adolescence. This is consistent with

Belsky et al.'s (1991) contention that the development of a healthy self-image, including positive self-esteem, during adolescence and beyond is contingent upon early environmental contexts that include affirmation and supportive resources. Prior research clearly illustrates the importance of this perspective with respect to sexual decision making during adolescence.

Other scholars support the essential nature of quality father-daughter relationships on a daughter's self-esteem and sexual debut during adolescence ( Allgood, Beckert and Peterson, (2012; Baruch & Barnett, 1975; Carlson, 2006; Liu, 2008; Roberts and Bengston ,1993; Longmore, Manning, Giordano, & Rudolph, 2004; Hendricks, et al., 2005). Bereczkei & Csanaky (1996) found that women who experienced father absence during childhood were more likely to conceive children during adolescence. These studies, however, are based for the most part on samples of mostly middle class white females (see, also, Amato, 1994; Harris, Furstenberg, & Marmer, 1998; Van Wel, Linssen, & Abma, 2000; Videon, 2005). As such, there is a gap in our understanding of the relevance of these assumptions about the associations among father-daughter relationship quality, daughter's self-esteem, and sexual decision making for low-income black girls whose fathers often are nonresident. The present study represents an attempt to reduce this gap in current knowledge about the reproductive strategies of low-income black women early on and early childbearing during adolescence.

As indicated earlier, Belsky, Steinberg & Draper (1991) assert that during the first 5-7 years of life, children gain an understanding of the availability and predictability of resources (e.g. paternal investment) in the environment. This theoretical assumption has not been applied to poor black children whose early life experiences may differ from those of middle-class white children who have been the subject of much of the research informed by evolutionary theoretical

perspectives. However, in an attempt to extend portions of this perspective to less advantaged populations, Belsky et al, (1991) add to these perspectives a socialization aspect positing that the impact of certain contextual factors (i.e. environmental elements and maternal influences) can buffer the negative outcomes of growing up without paternal investment, potentially contributing to delayed childbearing

#### INTRODUCTION TO EVOLUTIONARY THEORY OF SOCIALIZATION: EXPLAINING THE RELEVANCE OF ENVIRONMENT/CONTEXT TO REPRODUCTIVE STRATEGY

Belsky et al. (1991) assert that along with paternal involvement, a child's early socialization contributes to reproductive development. While environmental or contextual factors inform how a child relates to individuals throughout life, parenting behavior is equally affected by various environmental or contextual factors that ultimately influence a child's development. In fact, contextual stressors such as low income or unstable employment, may lead to insensitive, inconsistent and/or unpredictable parenting behavior (Belsky et al., 1991). Such experiences may become problematic for a daughter whose reproductive strategy is largely based on the internalization of environmental conditions (Belsky et al., 1991). They hypothesize that environmental/contextual factors matter to the development of a daughter's reproductive strategy and therefore delayed childbearing activity.

In summary, both theoretical perspectives presented by Draper and Harpending (1982) and Belsky et al. (1991), buttress the importance of environment and how it matters to a child's reproductive behavior both concurrently and later in life. In the context of such factors, it is posited that humans modify reproductive behavior in response to certain social and ecological variables, including family circumstances and family structure (Belsky et al., 1991; Carlson et al. 2014). For example, when a daughter is reared in a single mother household, a mother's

education level or experience as a teen mother may be associated with whether and how discussions about early sexual activity occur, which may thereby be associated with delayed sexual debut. All in all, certain contextual factors, such as a mother's level of education, a mother's timing at first birth, and a daughter's closeness with a mother may act as risk or protective factors insofar as early sexual activity is concerned (Belsky et al. 1991; Ellis, Boyce, Belsky, Bakermanns-Kranenburg & Ijzendoorn, 2011; Carlson et al., 2014).

One final note, while these theorists do not posit that early childhood experiences and reproductive behavior forecast the number of children born to an adolescent female, particularly considering the many variables associated with child development, they do however suggest that the combination of parental and environment influences may predict markers of a reproductive strategy, such as timing of sexual debut and the occurrence of early births (Belsky et al., 1991). The following section will use Belsky et al.'s evolutionary theory of socialization to explain these factors.

## CONTEXTUAL FACTORS EXPLAINED BY EVOLUTIONARY THEORY OF SOCIALIZATION

### *Respondent's Mother's Education as a Protective Factor to Early Births*

Child rearing practices are representative of a parent's effort to prepare their children for the world they expect them to experience (Belsky et al., 1991). In other words, a child's socialization largely depends upon the context of childrearing. Take for example single mother households. In cases where single mothers have higher levels of education, children face lower risk of experiencing an early birth (South, 2001; Upchurch, Lillard & Panis, 2002). One study found that girls whose mothers had a college degree were 64% less likely to have had sex within



a year compared to those whose mother lacked a college degree. These findings suggest that mothers with higher education somehow dissuade early sexual debut. Another study adds that low maternal education potentially contributes to minimal emphasis on achieving educational goals, particularly in economically disadvantaged households (Regnerus & Luchines, 2006). Regnerus & Luchines (2006) suggest that a single mother's lack of attention to education may imply a lack of importance to education. Reasoning similarly, several scholars have identified education as a protective factor for early sexual activity (McNeely, Shew, Beuring, Sieving, Miller, Blum, 2002; Meade, Kershaw & Ickovics, 2008). Belsky et al. (1991) posited that contextual factors matter to the early socialization of children. As such, in the current study, I considered whether a single mother's educational attainment matters to a daughter's sexual debut and early childbearing.

#### *Respondent's Closeness to Mother as a Protective Factor*

Parent's childrearing behavior serves a mediational function between context and child development (Belsky et al., 1991). Several scholars have found developmental advantages of a mother's closeness during adolescence to avoiding early sexual activity (Buhi & Goodson, 2007; Rink, Tricker & Harvey, 2007; McNeely, Shew, Beuring, Sieving, Miller, Blum, 2002). In a sample of 257 adolescents, ages 14 & 15, McNeely et al. (2002) found that satisfaction with a mother's relationship was important for daughters in delaying sexual debut. When greater communication about sex occurred between parents and adolescents, adolescents typically considered their relationship with their parent to be close. These data suggest the importance of the mother-daughter relationship as a protective factor with regard to a daughter's early onset of sexual activity (also see review Buhi & Goodson, 2007).

### *Respondent's Mother's Timing of First Birth as a Protective Factor*

Belsky and his colleagues (1991) emphasize how the family context matters to childrearing practices, as well as the psychological development of a child. A number of studies have tested and reported support for this theoretical notion (East, Reyes & Horn, 2007; Martinez, Copen & Abma, 2011; McNeely, Shew, Beuring, Sieving, Miller & Blum, 2002). For example, Martinez, Copen & Abma, 2011), using a nationally representative sample of females, ages 15-24, reported a 22% probability of giving birth by age 19 if the daughter's mother gave birth by age 19. None of these studies looked at individual differences among poor black girls, as the current study did.

In sum, the present study used an evolutionary theoretical perspective of paternal investment (Draper & Harpending, 1982) and socialization (Belsky, 1991) to test three questions: (1) Is there a relationship between involvement of biological black fathers with daughters—whether resident or nonresident—and childbearing before age 20 among economically disadvantaged black daughters? (2) Among economically disadvantaged black females, who gave birth before age 20, were there protective factors that might have prevented additional births before age 20? (3) How are economically disadvantaged black females who do not give birth before age 20 different from those who do? It was expected that fathers' involvement with daughters during childhood would be associated with delayed childbearing after age 20. It was further expected that the relationship between father involvement and delayed childbearing would vary in association with the respondents' mothers' childbearing history, educational attainment, and the mother-daughter attachment relationship. Finally, delayed childbearing beyond age 20 was expected to predict higher self-esteem, higher educational attainment, and a decreased likelihood to be welfare dependent in adulthood.

## Chapter III

### **METHODS**

#### RESPONDENTS

This investigation of factors predicting early births focused specifically on economically disadvantaged black females. As such, it was a within-group, retrospective design aiming to understand the variability in childbearing that occurred before and after age 20 for a sample of black women. Respondents self-identified as black women (N=147), who were at least 20 years of age, who had given birth to at least one child, and who resided in one of three public housing developments (located in South Los Angeles) at the time of questionnaire administration.

#### PROCEDURES

Through a leveraged relationship with the Housing Authority for the City of Los Angeles' (HACLA) Community Relations officer, I was allowed to recruit sample respondents for the study. HACLA, in partnership with the Los Angeles City Mayor's Office, offers specialized community activities for residents living in each housing development, making it easier to reach the desired sample size. To start, I posted recruitment flyers on the bulletin boards inside and outside of the recreational center located in the center of each housing development. (See flyer in Appendix A.) The flyer provided a description of the study, a contact name and phone number for questions regarding the study, dates and time frames for completing the questionnaire, as well as the incentive amount for participating in the study. Interested participants responded to the flyer by visiting the recreational center before the designated times to sign up. They later returned to participate in the study on the designated days and times.

After obtaining permission to post flyers, a room was reserved in the recreational center for respondents to discretely complete the questionnaire during specified time frames. Posting flyers, a week prior to the designated questionnaire days, along with support from the recreational center staff, resulted in an overwhelming response. Respondents were lined up at the door of the research site, at the designated time, prepared to participate in the study. The designated time for questionnaire completion was from 3-6pm on weekdays within a single week during the month of December, 2016. Mothers who met the selection criteria were then asked to go into the reserved room to provide verbal consent before completing the questionnaire. Permission was granted by the UCLA IRB to acquire verbal consent which included an explanation of the study, incentive amount of \$25 gift card and an opportunity to ask questions about the study. Prior to beginning the questionnaire, respondents also were informed about a follow-up interview opportunity and asked to complete the final contact information sheet if they were interested. (See contact information sheet in Appendix B.) Those sheets were detached from the survey and placed in a separated location from the completed questionnaire. Each completed questionnaire was assigned a unique identifier that linked it to the respondent for subsequent contact when necessary. On average, the questionnaire took 30-45 minutes to complete. (See questionnaire in Appendix C.) After the respondents completed the questionnaire, I inspected each for completeness prior to the respondent leaving the research site.

## MEASURES

The independent variables under investigation were father's involvement with respondent between birth and age 14, respondent's mother's age at first birth, respondent's mother's educational attainment, and respondent's relationship with mother (i.e., closeness). Recall that the respondent age range regarding father presence was informed by literature that investigates

father absence up to age 14 (Bogaert, 2005). Dependent variables were childbearing before or after age 20, number of births before age 20, current level of self-esteem, current educational attainment, and current income (i.e. public benefits status).

**Father Involvement Between Birth and Age 14.** Involvement was assessed using a 9-item, four-point scale (0 = very dissatisfied to 3 = very satisfied), informed by Lamb, Pleck, Cherov, & Leving (1987), asking respondents how satisfied they were with their birth father's accessibility, engagement, and responsibility based on responses to statements such as the following: the amount of time you spent with a birth father up to age 14 (accessibility); the amount of time you were in contact with your birth father during childhood up to age 14 (accessibility); the amount of love and caring you received from your birth father up to age 14 (engagement); the amount of time you spent with your birth father in the park or engaged in fun activities or school activities during your childhood up to age 14 (engagement); the amount of money and help your birth father provided to you and your family during childhood, up to age 14 (responsibility). Cronbach's alpha for this scale was .77.

**Maternal Age at First Birth.** Respondents' mothers' age at first birth was determined by responses to the question "How old was your mother when she had her first child?" Answers were coded as 1= under age 20 and 2=over age 20 (Martinez, Copen & Abma, 2011).

**Maternal Level of Education.** Respondents' mothers' level of education was determined by their answers to the question "During your childhood, what was the highest grade or year of regular school your mother completed?" Response options included (1) Grade school, (2) Some High School, (3) High School Diploma and (4) Some education beyond high school (CDC-NSFG, 2011).

Respondent's Closeness to Mother. Closeness to mother was assessed by a 3-item, four-point scale (0 = very dissatisfied to 3 = very satisfied) asking respondents how satisfied they were with their relationship with their mother based on responses to statements such as the following: the amount of support and encouragement you received from your mother during childhood up to age 14; the amount of time your mother talked to you about sex up to age 14; and the amount of time your mother talked to you about education, employment or future goals up to age 14 (McNeely, Shew, Beuring, Sieving, Miller & Blum, 2002). Cronbach's alpha for this scale was .92.

Respondent's Self-Esteem. Respondent's self-esteem was assessed by the Rosenberg (1965), 10-item, four-point (1=strongly agree to 4=strongly disagree), Self-Esteem Scale asking respondents to indicate the level of their agreement or disagreement with statements such as the following: "I feel that I am a person of worth, at least on an equal basis with others", "I feel that I have a number of good qualities", "All in all, I am inclined to feel that I am a failure", and "I am able to do things as well as most other people". Cronbach's alpha was 0.84.

Participant's Characteristics. For descriptive statistics and control purposes, Respondents reported their level of education, marital status, income according to public benefit receipt, and age at first birth.

1. Level of education was determined by selecting one of the following response options: (1) Grade school, (2) Some High School, (3) High School Diploma and (4) Some education beyond high school. (CDC-NSFG, 2011).
2. Marital Status was determined by answers to the question "Which of these categories best describes your situation: (1) Never Married, (2) Separated, (3) Divorced, (4) Married, (5) Widowed, (6) Domestic Partners and (7) Other.

3. Age at first birth was calculated by subtracting the eldest child's age from the respondent's age. Age at first sexual intercourse was determined by answers to the question "How old were you when you had consensual sex for the first time, with response options including 1= under age 14, 2= age 14-17, 3= Age 18-20 and 4= over age 20". (CDC-NSFG, 2011).

## ANALYTIC PLAN

The first hypothesis involves the relationship between involvement of biological black fathers with daughters—whether resident or nonresident—and childbearing before age 20 among economically disadvantaged black daughters. It was expected that such a relationship would exist and that father involvement would be associated negatively with childbearing before age 20. To test this hypothesis, a logistic regression was conducted in R (R Core Team, 2015). The three facets of father involvement (e.g., accessibility, engagement, and responsibility) were entered into the model to examine whether these facets significantly predict childbearing before age 20. A classification table was also produced to determine whether the model accurately classified childbearing before age 20.

The second hypothesis involves the potential protective factors that might have prevented additional births before age 20 among economically disadvantaged black females who gave birth before age 20. It was expected that mother's age at first birth, mother's educational attainment, and mother-daughter relationship would be associated protectively with additional births after a first birth before age 20. This hypothesis was tested utilizing a multiple regression analysis in R (R Core Team, 2015). Mother of participant's level of education, mother-daughter relationship, and mother of participant's age at birth of first child was entered into a model to examine

whether these potential protective factors are significant predictors of the number of births before age 20.

The third hypothesis is interested in differences between economically disadvantaged black females who did not give birth before age 20 and those who did give birth before the age of 20. It was expected that those who did not give birth before age 20 would, as adults, have higher self-esteem, greater educational attainment, and not be receiving welfare. This hypothesis was tested using three separate analyses. Separate independent-samples t-tests were conducted in R (R Core Team, 2015) to examine if those who gave birth before the age of 20 significantly differed on self-esteem and educational attainment as compared to those who did not give birth before the age of 20. Additionally, a Pearson chi-square was conducted in SPSS (IBM Corporation, 2013) to examine if welfare status significantly differed between those who had given birth before the age of 20 and those who had not given birth before the age of 20.



## Chapter IV

### RESULTS

#### Description of the Sample

Demographic characteristics of the sample with correlations between variables are presented in Table 1. The mean age of mothers was 39.1 (SD = 11.8) years. They ranged in age from 20 to 76 years old. The majority had at least a high school education, and 21 % had some education beyond high school. Of the 147 mothers in the overall sample, half (n = 74) had given birth to their first child before age 20; 73 had not. One hundred and fifteen of the mothers (78%) were the daughter of a mother who gave birth to her first child at or before the age of 20, and 32 were not. About a fourth of the respondents (25%) were raised by a mother who was married when she had her first child and almost half (47%) had a father who was involved with them during the birth-to-age-14 period in their lives. Slightly more than half (54%) of the respondents were receiving welfare benefits and 44% were employed at the time of data collection.

As might be expected, correlational analyses in Table 1 indicate that respondents who gave birth to their first child before reaching age 20 were more likely to have multiple children before age 20 ( $r = .86, p < .01$ ). Respondents' mothers' age at first birth was negatively related to respondents' age at first birth ( $r = -.22, p < .01$ ), indicating that respondents' whose mothers were older when they had their first child were less likely to give birth before age 20. Respondents' mothers' higher educational attainment was associated with their own higher educational attainment currently ( $r = .31, p < .01$ ), while a more positive mother-daughter relationship up to age 14 was associated with lower self-esteem currently ( $r = -.19, p < .05$ ), but also a lower likelihood of depending on welfare currently ( $r = -.24, p < .01$ ). Finally, the father relationship variable(s) were nonsignificant insofar as the childbearing outcomes for respondents in this study

were concerned. (See, also, Table 1.)

Table 1

Means, Standard Deviations, and Correlations Among Variables

Variable	Mean	SD	1	2	3	4	5	6	7	8	9
1. Births <20	1.50	0.50	1								
2. FA involvmt	2.69	1.01	0.04	1							
3. #Births<20	0.62	0.72	0.86**	0.08	1						
4. Mo Age 1 <sup>st</sup> birth	2.72	0.87	-0.16	-0.07	-0.22**	1					
5. Mo Educ.	2.79	1.10	-0.11	0.03	-0.12	0.16	1				
6. Mo-Daughter	3.43	0.82	-0.04	0.06	-0.04	0.03	0.05	1			
7. Cash Benefits	1.54	0.50	-0.14	0.09	-0.11	0.03	-0.14	-0.24**	1		
8. Self-esteem	3.10	0.60	0.19	-0.17	0.13	-0.03	-0.15	-0.19*	0.03	1	
9. Education	3.18	1.11	-0.04	0.09	-0.12	-0.03	0.31**	-0.07	-0.10	0.07	1

Note: \*p < .05. \*\*p < .01; Births<20= child bearer before age 20 [no=1, yes=2]; FA involvmt = father involvement; #Births<20 = number of births before age 20; Mo Age 1<sup>st</sup> birth = mother's age at birth of first child; Mo Educ. = mother's level of education; Mo-Daughter = mother-daughter relationship; Cash Benefits = receives cash welfare benefits [no=1, yes=2]; Self-esteem = self-esteem; Education = educational attainment

Table 2

Frequency Distributions of Categorical Variables (N=147)

Variable	Category				
	1	2	3	4	5
1.Births <20	73	74	N/A	N/A	N/A
2.Mo age 1 <sup>st</sup> Birth	9	55	51	32	N/A
3.Mo Educ.	17	37	64	9	16
4.Cash Benefits	67	80	N/A	N/A	N/A
5.Educ.	4	36	67	9	31

Note: N/A indicates that categories were not on scale of particular variable; two-category variables were recoded from 0 and 1 to 1 and 2 in order for categorical correlations to be computed; Births<20 – participant childbearing before age 20 (1 = no 2 = yes); Mo age 1<sup>st</sup> Birth – mother of participant’s age at birth of first child (1 = under age 14; 2 = age 14-17; 3 = age 18-20; 4 = over age 20); Mo Educ. – mother of participant’s level of education (1 = grade school; 2 = some high school; 3 = high school diploma; 4 = GED; 5 = some education beyond high school); Cash Benefits – welfare status (1 = no, 2 = yes); Educ. – educational attainment (1 = grade school, 2 = some high school, 3 = high school diploma, 4 = GED, 5 = some education beyond high school).

### Missingness

Missing data were assessed through Little’s MCAR test, the missing data mechanism was found to be MCAR,  $\chi^2(99)=109.92$ ,  $p = .21$ . Therefore, missingness was remedied by utilizing listwise deletion.

### Assumptions

The assumptions for the proposed analyses were evaluated through R (R Core Team, 2015). There was an absence of outliers. There was no evidence of violations to normality (i.e., skew values all close to zero, kurtosis values all within  $\pm 3$ ). Homogeneity of variance was met

between groups (i.e., participants who gave birth to their first child before the age of 20 and participants who gave birth to their first child after the age of 20) being compared for all hypothesis 3 analyses. Inspection of the bivariate scatterplots suggests that all variable relationships were linear. In regards to multicollinearity and singularity, the inter-correlations between the variables were inspected; 2 inter-correlations were greater than  $r = .80$  which may be indicative of multicollinearity but all the inter-correlations were less than  $r = .95$  indicating that there are no problems with singularity. This is expected since these highly related inter-correlations are all measuring different facets of father involvement. Since the first hypothesis is interested in how these different facets are related to the outcome individually, I will proceed with the proposed analyses.

### **Research Question 1**

First, it was hypothesized that there would be a relationship between involvement of biological black fathers with daughters—whether resident or nonresident—and childbearing before age 20 among economically disadvantaged black daughters. Specifically, it was expected that father involvement would be associated negatively with childbearing before age 20. This hypothesis was tested by means of a logistic regression conducted in R (R Core Team, 2015). The three facets of father involvement (e.g., accessibility, engagement, and responsibility) were entered in the model as predictors of childbearing before age 20. A classification table was also produced to determine whether the model accurately classifies childbearing before age 20 (table 3).

As depicted in Table 3, there was a lack of model fit on the basis of the three facets of father involvement, which includes accessibility, engagement, and responsibility,  $\chi^2(106,$

$N=110$ ) = 151.82,  $p = .61$ , using a deviance criterion. Comparison of AIC with the three facets of father involvement (159.82) and without the three facets of father involvement (158.07) shows little improvement with the addition of accessibility, engagement, and responsibility as predictors.

Overall classification was imprecise. For bearing a child before the age of 20, in the present sample, 91.38% of those who did not bear a child before the age of 20 were correctly classified and only 11.54% of those who did bear a child before the age of 20 were correctly classified, which led to an overall classification rate of 53.64%. Therefore, individuals who did not bear a child before the age of 20 were overclassified, whereas those who did bear a child before age 20 were underclassified. The present model performed well at predicting which participants did not have a child before the age of 20. Out of 58 participants who did not have a child before the age of 20, the model correctly predicted that 53 did not have a child before the age of 20. However, the present model was only able to correctly predict that 6 participants had a child before the age of 20 when the sample actually contained 52 participants that had a child before the age of 20. This means that the current model was more appropriate for those who did not bear a child before the age of 20. Table 3 depicts the nonsignificant logistic regression results for question 1.

Table 3.

Results of Logistic Regression Analysis by Three Facets of Father Involvement (n=110)

	df	Deviance	AIC	Probability
<b>No Predictors</b>		151.82	159.82	
<b>Accessibility</b>	1	151.82	157.82	0.96
<b>Engagement</b>	1	151.86	157.86	0.84
<b>Responsibility</b>	1	152.07	158.07	0.61

### Research Question 2

Second, it was hypothesized that potential protective factors might have prevented additional births before age 20 among economically disadvantaged black females who gave birth before age 20. Specifically, it was expected that mother’s age at first birth, mother’s educational attainment, and the mother-daughter relationship would be associated protectively with additional births after a first birth before age 20. This hypothesis was tested utilizing a multiple regression analysis in R (R Core Team, 2015). Mother of participant’s level of education, mother-daughter relationship, and mother of participant’s age at birth of first child were entered into a model as predictors of the number of births before age 20.

The initial regression model did not significantly fit the data, such that mother of participant’s level of education, mother-daughter relationship, and mother of participant’s age at birth of first child, taken together, do not significantly predict number of births before age 20,  $F(3, 130) = 2.30, p = .08$ . Specifically, mother of participant’s level of education was not a

significant predictor of number of births before age 20,  $t(130) = -0.92$ ,  $p = .36$ . Additionally, mother-daughter relationship was not a significant predictor of number of births before age 20,  $t(130) = -0.35$ ,  $p = .73$ . However, mother of participant's age at birth of first child was a significant predictor of number of births before age 20, such that the expected number of births before age 20 significantly decreased by 0.16 for every year increase in mother of participant's age at birth of first child, over and above the effect of mother of participant's level of education and mother-daughter relationship,  $t(130) = -2.23$ ,  $p = 0.03$ . (See Table 4.)

Based on this initial model, the two nonsignificant predictors were removed and the model was re-fit. This revised model which only included mother of participant's age at birth of first child significantly fit the data, such that mother of participant's age at birth of first child significantly predicts number of births before age 20,  $F(1, 132) = 5.95$ ,  $p = 0.02$ . Mother of participant's age at birth of first child accounted for 4.31% of the variance in number of births before age 20. Specifically, mother of participants age at birth of first child significantly predicted number of births before age 20, such that number of births before age 20 significantly decreased 0.17 for every year increase in mother of participant's age at birth of first child,  $t(132) = -2.44$ ,  $p = 0.02$ . Compared to the initial model, this revised model provided a significant improvement of model fit,  $F(1, 130) = 4.97$ ,  $p = .03$ . (See Table 5.)

Table 4.

Results of Initial Multiple Regression Analysis by Mother's Education Level, Mother's Age at Birth of First Child, and Mother-Daughter Relationship (n=134)

Predictors	b	t	p	F	df	p	R <sup>2</sup>
<b>Overall Model</b>				2.30	3, 130	.08	.0504
<b>Education Level</b>	-0.05	-0.92	.36				
<b>Relationship</b>	-0.03	-0.35	.73				
<b>Age at First Birth</b>	-0.16	-2.23	.03				

Table 5.

Results of Revised Multiple Regression Analysis by Mother's Age at Birth of First Child

Predictors	b	t	p	F	df	p	R <sup>2</sup>
<b>Overall Model</b>				5.95	1, 132	.02	.0431
<b>Age at First Birth</b>	-0.17	-2.44	.02				

### Research Question 3

Last, it was hypothesized that there were differences between economically disadvantaged black females who did not give birth before age 20 and those who did give birth



before age 20. Specifically, it was expected that those who did not give birth before age 20 would, as adults, have higher self-esteem, greater educational attainment, and not be receiving welfare. This was tested using three separate analyses which first included separate independent samples t-tests that were conducted in R (R Core Team, 2015) to examine if those who gave birth before the age of 20 significantly differ on self-esteem and educational attainment as compared to those who did not give birth before the age of 20. Additionally, a Pearson chi-square was conducted in SPSS (IBM Corporation, 2013) to examine if welfare status significantly differed between those who had given birth before the age of 20 and those who had not given birth before the age of 20.

#### Self Esteem

Table 6 shows that, on average, there was a marginally significant difference in self-esteem between mothers who gave birth to their first child before the age of 20 and mothers who gave birth to their first child after the age of 20. Specifically, mothers who gave birth before the age of 20 had marginally higher self-esteem ( $M = 3.19$ ,  $SD = 0.56$ ) than mothers who gave birth after the age of 20 ( $M = 3.01$ ,  $SD = 0.63$ ),  $t(145) = -1.83$ ,  $p = 0.07$ .

Table 6

t-Test Results Comparing Participants Who Have Given Birth Before the Age of 20 and Participants Who Have Given Birth After the Age of 20 on Self-Esteem (n=147)

	n	M	SD	t	df	p
<b>Before 20</b>	74	3.19	0.56	-1.83	145	.07
<b>After 20</b>	73	3.01	0.63			

## Educational Attainment

Table 7 shows that, on average, there was no significant difference in educational attainment between mothers who gave birth to their first child before the age of 20 ( $M = 3.15$ ,  $SD = 1.03$ ) and mothers who gave birth to their first child after the age of 20 ( $M = 3.22$ ,  $SD = 1.19$ ),  $t(145) = 0.38$ ,  $p = 0.70$ .

Table 7

t-Test Results Comparing Participants Who Have Given Birth Before the Age of 20 and Participants Who Have Given Birth After the Age of 20 on Educational Attainment

	n	M	SD	t	df	p
<b>Before 20</b>	74	3.15	1.01	0.38	145	.70
<b>After 20</b>	73	3.22	1.19			

## Welfare Status

The Pearson chi-square was conducted to test if mothers who had their first child before the age of 20 and mothers who had their first child after the age of 20 differed in welfare status. Results in Table 8 show that mothers who had their first child before the age of 20 did not differ significantly from mothers who had their first child after the age of 20,  $\chi^2(1) = 1.18$ ,  $p = 0.28$ .

Table 8

Cross-tabulation of Bearing First Child Before Age of 20 and Welfare Status

	<b>On Welfare</b>	<b>Not On Welfare</b>	Total	$\chi^2$	p
<b>Before 20</b>				1.18	.28
Observed	37.0	37.0	74		
Expected	40.3	33.7	74		
<b>After 20</b>					
Observed	43.0	30.0	73		
Expected	39.7	33.3	73		
<b>Total</b>	<b>80.0</b>	<b>67.0</b>	<b>147</b>		

## Chapter V

### DISCUSSION

This study examined the relationship of fathers' involvement with daughters during childhood (from birth to age 14) to early sexual activity leading to childbearing by daughters before age 20 in a sample of economically disadvantaged black mothers over the age of 20 living in three public housing projects in Los Angeles. Three questions were addressed retrospectively: (1) Is there a relationship between involvement of biological black fathers with daughters—whether resident or nonresident—and childbearing before age 20 among economically disadvantaged black daughters? (2) Among economically disadvantaged black females, who gave birth before age 20, were there protective factors that might have prevented additional births before age 20? (3) How are economically disadvantaged black females who do not give birth before age 20 different from those who do?

Using evolutionary theory of paternal investment (Draper & Harpending, 1981, 1982, 1988) and evolutionary theory of socialization (Belsky, Steinberg, & Draper, 1991), the principal prediction was that fathers' involvement with daughters during childhood would be associated with delayed childbearing after age 20. It was further expected that the relationship between father involvement and delayed childbearing would vary in association with the respondents' mothers' childbearing history, educational attainment, and the mother-daughter attachment relationship. Finally, delayed childbearing beyond age 20 was expected to predict higher self-esteem in adulthood.

In this chapter, the findings are first summarized. The discussion section considers each question separately in the context of the evolutionary theoretical perspectives and previous empirical evidence. The conclusion addresses the results broadly and suggests some

implications for future research.

## **SUMMARY**

The present variables were nonsignificant in predicting whether father involvement was associated with childbearing in the present sample. There was a lack of model fit on the basis of the three facets examined: accessibility, engagement, and responsibility. While the present model performed well at predicting which participants in the study did not have a child before age 20, it could not predict with accuracy who did give birth before age 20. While the meaning of this result is unclear, it is possible that evolutionary theoretical perspectives may be more predictive of outcomes for middle-class white samples. Correlational analyses, nevertheless, showed that giving birth before age 20 was associated negatively with respondent's mother's age at first birth, indicating that respondents whose mothers were older when they had their first child were less likely to give birth before age 20. This is consistent with previous research (East, Reyes & Horn, 2007; Martinez, Copen & Abma, 2011; McNeely, Shew, Beuring, Sieving, Miller & Blum, 2002). None of the father-relationship variables were significant. It should be noted that the sample was one of convenience. This is a limitation of the present data.

With respect to protective factors, the present results suggest that among the variables tested, only the respondent's mother's age at first birth was protective. As indicated above, multiple regression analyses indicated that respondents whose mothers were older when they gave birth to their first child were most likely to delay childbearing beyond age 20. Surprisingly, neither respondents' mothers' educational attainment nor the mother-daughter relationship during adolescence were associated with respondents' childbearing history. This finding is inconsistent with previous studies that have found such relationships (McNeely, Shew, Beuring, Sieving, Miller & Blum, 2002; South, 2001; Upchurch, Lillard & Panis, 2002). It is possible that

the retrospective quality of the present data, and, perhaps the need of more nuanced variables might explain these findings in this study.

Although there was a marginally significant difference in current self-esteem between mothers who gave birth to their first child before the age of 20 and mothers who did so after age 20, contrary to expectations, those in the latter group were not significantly different with respect to current educational attainment and welfare receipt.

## **DISCUSSION**

Recall that the evolutionary theoretical perspectives predict that evolutionary theory of paternal investment proposes that the father's investment in the family is very important in the development of girls' attitudes and behaviors with regard to sex and reproduction (Draper & Harpending, 1982). Evolutionary theory of socialization posits the importance of specific contextual factors that might offer protective qualities to a daughter's development when a father's investment is either of low quality or completely absent (Belsky, 1991). This study sought to test this theory retrospectively with a sample of black women with low income, some of whom were expected to have given birth to their first child before age 20 and some of whom after age 20.

The present findings with respect to daughters' recall of their involvement with their fathers during childhood and whether this relationship (or non-relationship) was related to their age at the birth of their first child did not achieve significance. When the three facets of father involvement were entered in the logistic regression model as predictors of childbearing before age 20 (Table 3), there was a lack of model fit. It is unclear why the overall classification of the model was imprecise. This might be explained by measurement error; that is, perhaps the measure was not sensitive enough to capture the father-involvement construct in the present

context with the present sample. Indeed, Bercezei et al. (1996) used a 776-item questionnaire to capture the same construct, using an evolutionary theoretical perspective with a middle-class white sample. Perhaps other factors in the present context might have included family stresses associated with racial discrimination (Hall, Kusinoki, Gatny & Barber, 2014) and socioeconomic circumstances (Beltz, Sacks, Moore & Terizian, 2014; Driscoll & Abma, 2015; Kearny & Levine, 2015). In addition, Belsky et al. (1991) assert that along with paternal involvement, a child's early socialization contributes to reproductive development. They assert further that while environmental or contextual factors inform how a child relates to individuals throughout life, parenting behavior is equally affected by various environmental or contextual factors that ultimately influence a child's development. In fact, family contextual stressors such as low income or unstable employment, may lead to insensitive, inconsistent and/or unpredictable parenting behavior (Belsky et al., 1991). Such experiences may become problematic for a daughter whose reproductive strategy is largely based on the internalization of environmental conditions (Belsky et al., 1991). They hypothesize that environmental/contextual factors matter to the development of a daughter's reproductive strategy and therefore delayed childbearing activity. The present study might have included more environmental/contextual variables.

With respect to the expectation that among those in the sample who gave birth before age 20, might include mothers' age at first birth, mothers' educational attainment, and the quality of the mother-daughter relationship have acted as potential protective factors with respect to the prevention of additional births before age 20, the present findings failed again to reach the level of significance expected. Recall that this hypothesis was tested utilizing a multiple regression analysis. Mother of participant's level of education, mother-daughter relationship, and mother of participant's age at first birth were entered into the model as predictors of number of births

before age 20. Only mother of participant's age at first birth reached significance. These findings were unexpected, since growing up with a mother who has achieved higher levels of education is believed to be protective with respect to a daughter's experience with an early birth (Spriggs & Halpern, 2008). In addition, much of the research indicates strong connections between maternal closeness and a delay in sexual debut for diverse samples of adolescents (Rink, Tricker & Harvey, 2008).

Regarding mother of participant's age at first birth and its significance in the present study, Campa & Eckenrode (2006) largely attributed social deprivation (i.e. experience of being poor) to early birth outcomes of children of adolescent mothers. As posited by Belsky (1991), when a child is socialized within certain familial contexts (i.e. single mother households), children will develop a reproductive strategy representative of the experiences and messages they have thus internalized. Here is where one might expect that a mother's communication with her daughter and a mother's education level, even after experiencing an adolescent birth, might be significant correlates of important messages her daughter receives and further internalizes regarding early childbearing (Forehand et al, 2007; Longmore et al, 2009; Mare & Maralani, 2006). The present findings, however, are not consistent with the expectation that participant's mother's education and a close mother-daughter relationship between participants and their mothers during childhood would be protective with respect to early childbearing outcomes. It should be acknowledged, nevertheless, that the initial regression model did not fit the data well. When mothers' educational attainment and mother-daughter relationship were removed from the model and the model was re-fit, the significance of mothers' age at first birth was achieved such that the expected number of births before age 20 decreased by 0.16 for every year increase in mother of participant's age at first birth (see table 4).



Turning now to expectations for mothers who did not give before age 20, the third question addressed the issue of whether as adults they would have higher self-esteem, greater educational attainment, and a lower likelihood of being dependent on welfare in comparison to their counterparts who gave birth before age 20. These predictions were not borne out, entirely, by the findings. As depicted in Tables 6, 7, and 8, results of *t*-tests and cross-tabulations, respectively, indicated that participants who did not give birth before age 20 were no more educated and no less likely to be dependent on welfare benefits as adults than those who did. However, there was a marginally significant finding for self-esteem, but not as expected. Instead, results of a *t*-test indicated that mothers who gave birth before age 20 had marginally higher self-esteem than mothers who gave birth after age 20. The meaning of this finding is unclear in the present context and might be tested by future research with larger and more probabilistic samples. If giving birth before age 20 results in better outcomes over time for some mothers, we need a better understanding of why this might be so. However, this study has major limitations that place the validity of the findings in question.

## **LIMITATIONS AND CONCLUSION**

As mentioned previously, there were several limitations to consider for the current study. First, this study is based on retrospective data collected from a convenience sample of black women living in selected public housing developments. Second, the major variables investigated in this study did not fit the data well. It is possible that greater attention to contextual and environmental factors might have resulted in more significant findings. It is also possible that the theory—evolutionary theory of paternal investment—is a poor fit for low-income, single, black mothers. Third, arguments and questions that fail to take into account larger political and

economic forces may be simplistic. Nevertheless, this study attempted to test whether paternal involvement may have a unique influence on the sexual development of black females. It is a part of a broad body of research that investigates the importance of fathers in the development of daughters' early sexual activity. Uniquely, this study aimed to illuminate factors related to racial disparities in early birth rates, particularly as they relate to black females with low income. Future research might include pilot efforts with such populations to determine how evolutionary theories of paternal involvement might be used to explore family processes that might help to explain such racial disparities.

# PARENTHOOD STUDY



**We are looking to better understand parenting strategies specific to black families from the mother's perspective. This study will eventually inform future parenting programs that aim to assist black adolescent females.**

**You can earn a \$25 visa gift card!**

If you are a black mother, over age 20, please visit the information table near the entrance of the recreation center on

**MONDAY, DECEMBER 12 at 4pm (Site 1)**

**TUESDAY, DECEMBER 13 at 4pm (Site 2)**

**WEDNESDAY, DECEMBER 14 at 4pm (Site 3)**

**The study involves completing a confidential questionnaire, which may take 30-45 minutes.**

If you have questions about the research, please call Marquitta Dorsey, Principle Investigator, University of California, Los Angeles, Department of Social Welfare at 213-631-4613.

## APPENDIX B: STUDY ORAL CONSENT SCRIPT

### **PARENTHOOD STUDY UNIVERSITY OF CALIFORNIA, LOS ANGELES IN-PERSON ORAL CONSENT SCRIPT**

#### *Study of Parental Involvement and Early Childbearing among Black Women*

My name is Marquitta S. Dorsey from the School of Public Affairs, Department of Social Welfare, the University of California, Los Angeles and I am conducting a research study. You were selected as a participant in this study because you are a woman who is 20 years or older, identify as a black woman and live in this neighborhood. Your participation in this research study is completely voluntary.

#### **WHY IS THIS STUDY BEING DONE?**

This research is designed to improve our understanding of how parental behaviors during childhood matter during adolescence and also during adulthood. I am interested in learning about how father involvement and mother's involvement can influence a daughter's childbearing or delay in childbearing, specifically for black women. I am also interested in other factors that might delay early childbearing. This study will inform development of future studies in this area and parenting programs.

#### **WHAT WILL HAPPEN IF I TAKE PART IN THIS RESEARCH STUDY?**

If you volunteer to participate in this study, you will be asked to complete a questionnaire with 113 multiple choice questions in a reserved room. The questionnaire should not take more than 45 minutes to complete. You will be asked about your involvement with your parents during childhood and how you felt during these times. You will also be asked questions about your current status as a parent.

The researcher will ask you to complete the entire questionnaire, which will be reviewed upon completion. You will be asked if you'd like to be contacted after the study to participate in a future interview. This is also completely voluntary and in no way connected to the compensation received for this study. There will be no identifying information connected to this questionnaire. If you are interested in participating in an interview, I will ask you for your contact information to use at a later date. No other identifying information will be used or connected to your completed questionnaire. After the questionnaire is completed, the answered will be typed into a spreadsheet that will be stored on a portable hard drive, which will be stored in locked cabinet in a locked room.

### **HOW LONG WILL I BE IN THE RESEARCH STUDY?**

Participation in the study will take a total of about 45-60 minutes.

### **ARE THERE ANY RISKS OR DISCOMFORTS THAT I CAN EXPECT FROM THIS STUDY?**

We do not expect that any of the questions will cause any serious risk to you. You will be asked to give your perspective on your experiences with your parents and your current perspective of yourself. Although I hope that you would complete the questionnaire, you may choose not to share certain information without penalty. Should you feel uncomfortable during the study, you may choose to end at any time.

### **ARE THERE ANY BENEFITS IF I PARTICIPATE?**

You will not directly benefit from your participation in this research. However, the results of the research may create an advancement of knowledge that will help us to better understand the needs of black adolescent girls as it relates to preventing early childrearing and improving relationships with parents. Your participation and insights will also help us to learn more about factors related to the well-being of black mothers. This will inform future research and design of parenting interventions for black families.

### **WILL I BE PAID FOR MY PARTICIPATION?**

You will receive one \$25 gift card for your participation in this study.

### **HOW WILL INFORMATION ABOUT ME AND MY PARTICIPATION BE KEPT CONFIDENTIAL?**

All information that is shared in the questionnaire will be kept confidential and neither your name nor any identifying information will be stored with your questionnaire or included in any reports about this study. The only people who will have access to the interview recording are the study investigators and my faculty advisor. I will generate reports on the general lessons learned from the study, but no identifying information about any particular individual will be included in published reports. After 5 years, the questionnaires will be destroyed.

### **WHAT ARE MY RIGHTS IF I TAKE PART IN THIS STUDY?**

Taking part in this study is your choice. You can choose whether or not you want to participate. Whatever decision you make, there will be no penalty to you.

- You have a right to have all of your questions answered before deciding whether to take part.
- If you decide to take part, you can leave the study at any time.
- You may refuse to answer any questions you don't want to answer and still remain in the study.

## **WHO CAN I CONTACT IF I HAVE QUESTIONS ABOUT THIS STUDY?**

### **The Research Team:**

You may contact Marquitta S. Dorsey at [msdorsey@ucla.edu](mailto:msdorsey@ucla.edu) or 310-567-8910 with any questions or concerns about the research or your participation in this study.

### **UCLA Office of the Human Research Protection Program (OHRPP):**

If you have questions about your rights while taking part in this study, or you have concerns or suggestions and you want to talk to someone other than the researchers about the study, you may contact the UCLA OHRPP by phone: (310) 825-7122 or U.S. mail: UCLA OHRPP, 11000 Kinross Ave., Suite 102, Box 951694, Los Angeles, CA 90095-1694.

APPENDIX C: STUDY QUESTIONNAIRE

**MOTHER'S QUESTIONNAIRE**

## ABOUT YOUR FEELINGS

Please indicate by circling the number to the right of each statement that best describes how strongly you agree or disagree with each of the following statements.

	1	2	3	4
	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
1. I have little control over the things that happen to me.....	1	2	3	4
2. There is really no way I can solve some of the problems I have.....	1	2	3	4
3. There is little I can do to change many of the important things in my life...	1	2	3	4
4. I often feel helpless in dealing with the problems of life.....	1	2	3	4
5. Sometimes I feel that I'm being pushed around in life.....	1	2	3	4
6. What happens to me in the future mostly depends on me.....	1	2	3	4
7. I can do just about anything I really set my mind to do.....	1	2	3	4
8. I feel that I am a person of worth, at least on an equal basis with others....	1	2	3	4
9. I feel that I have a number of good qualities.....	1	2	3	4
10. All in all, I am inclined to feel that I am a failure.....	1	2	3	4
11. I am able to do things as well as most other people.....	1	2	3	4
12. I feel I do not have much to be proud of .....	1	2	3	4
13. I take a positive attitude toward myself.....	1	2	3	4
14. On the whole, I am satisfied with myself.....	1	2	3	4
15. I wish I could have more respect for myself.....	1	2	3	4
16. I certainly feel useless at times.....	1	2	3	4
17. At times I think I am no good at all.....	1	2	3	4



**ABOUT YOUR PARENTS**

The following questions are related to **YOUR birth father**.

18. Did your birth father live with you between ages birth to age 14? **(CIRCLE ONE)**

**YES.....1**

**NO.....2**

19. Did you ever live with your birth father after age 14?

**YES.....1**

**NO.....2**

27a. If YES, for how long? \_\_\_\_\_

20. Were your mother and father ever married **(CIRCLE ONE)**

**YES.....1**

**NO.....2**

21. Was your mother the head of the household **(CIRCLE ONE)**

**YES.....1**

**NO.....2**

29a. If NO, state who \_\_\_\_\_

22. Would you say you felt closest to your mother or your father during your childhood, between birth to age 14?

**MOTHER.....1**

**FATHER.....2**

**NEITHER.....3**

Tell us about your childhood experiences with your **BIRTH FATHER**. On a scale from 0 to 4, where 4 is very satisfied and 0 is very dissatisfied, how satisfied were you with. **If No Contact skip to Question 29:**

23. The amount of love and caring you received from your birth FATHER during childhood, up to age 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

24. The amount of time you spent with your birth FATHER during childhood, up to age 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

25. The amount of times you were in contact with your birth FATHER during childhood (phone calls, letters, social media), up to age 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

26. The amount of money and help your birth FATHER provided to you and your family during childhood, from birth to age 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

27. The amount of times you spent with your birth FATHER in the park or engaged in fun activities or school activities during your childhood, from birth to age 14?

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

Now tell us about your childhood experiences with your **BIRTH MOTHER**. On a scale from 0 to 4, where 4 is very satisfied and 0 is very dissatisfied, how satisfied were you with:

28. The amount of love and caring you received from your birth MOTHER during childhood, up to age 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

29. The amount of support and encouragement you received from your MOTHER during childhood, up to age 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

30. The amount of times your birth MOTHER talked to you about sex during your childhood, up to age 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

31. The amount of times your birth MOTHER talked to you about sex during your teen years, ages 15 and over

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

32. The amount of times your MOTHER talked to you about education, employment or future goals during childhood from birth to age 14.

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

33. The amount of times your MOTHER talked to you about education, employment or future goals during your teen years, ages 15 and over

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

34. The amount of activities, such as community activities, you did with your mother during childhood, between ages birth and 14

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>VERY DISSATISFIED</b>	<b>DISSATISFIED</b>	<b>SATISFIED</b>	<b>VERY SATISFIED</b>

For the next 8 questions, please indicate by circling the number to the right of each statement that best describes how strongly you agree or disagree with each of the following statements.

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
	<b>STRONGLY AGREE</b>	<b>AGREE</b>	<b>DISAGREE</b>	<b>STRONGLY DISAGREE</b>
35. Do you believe positive father involvement is important in a child's life?	1	2	3	4
36. Do you believe children spending time with their father is important	1	2	3	4
37. Do you believe a father is MOST important in a child's life	1	2	3	4
38. A positive relationship between a child's mother and father is important	1	2	3	4
39. Do you believe positive family time is important to a child's life (family time with both birth mother and birth father)	1	2	3	4
40. Do you believe a father is important to a daughter avoiding a teen birth	1	2	3	4
41. Do you believe cultural activities are important in a child's life	1	2	3	4
42. Do you believe religious activities are important to a child's life	1	2	3	4

### ABOUT YOUR COMMUNITY

Please tell us about **YOUR CURRENT COMMUNITY**. Circle the answer that best describes how you feel.

43. How much of a problem is litter, broken glass or trash on the sidewalks and streets? Would you say it is a big problem, somewhat of a problem, or not a problem in your neighborhood? **(CIRCLE ONE)**

- A BIG PROBLEM .....1**
- SOMEWHAT OF A PROBLEM .....2**
- NOT A PROBLEM .....3**
- DON'T KNOW .....4**

44. How much of a problem is drinking in public? **(CIRCLE ONE)**

- A BIG PROBLEM .....1**
- SOMEWHAT OF A PROBLEM .....2**
- NOT A PROBLEM .....3**
- DON'T KNOW .....4**

45. How much of a problem is people selling or using drugs? **(CIRCLE ONE)**

**A BIG PROBLEM .....1**

**SOMEWHAT OF A PROBLEM .....2**

**NOT A PROBLEM .....3**

**DON'T KNOW .....4**

**46. How much of a problem is groups of teenagers or adults hanging out in the neighborhood and causing trouble? (CIRCLE ONE)**

**A BIG PROBLEM .....1**

**SOMEWHAT OF A PROBLEM .....2**

**NOT A PROBLEM .....3**

**DON'T KNOW .....4**

**47. How much of a problem is excessive use of force by police? (CIRCLE ONE)**

**A BIG PROBLEM .....1**

**SOMEWHAT OF A PROBLEM .....2**

**NOT A PROBLEM .....3**

**DON'T KNOW .....4**

48a. If you answered 1 or 2, what might help to change this problem in the community?

---

---

**48. How much of a problem is community violence (i.e. shootings, homicides)? (CIRCLE ONE)**

**A BIG PROBLEM.....1**

**SOMEWHAT OF A PROBLEM.....2**

**NOT A PROBLEM.....3**

**DON'T KNOW.....4**

49a. If you answered 1 or 2, what do you do to protect your children from becoming involved in or a victim of violence?

---

**49. How much of a problem is community violence to your personal level of stress (CIRCLE ONE)**

**A BIG PROBLEM.....1**

**SOMEWHAT OF A PROBLEM.....2**

**NOT A PROBLEM.....3**

**DON'T KNOW.....4**

**50. As a place to raise children, how would you say your neighborhood is? (CIRCLE ONE)**

**EXCELLENT .....1**

**VERY GOOD .....2**

**GOOD .....3**

**NOT TOO GOOD .....4**

**AWFUL .....5**

**51. I offer support to families who are victims of community violence**

**NEVER .....1**

**SOME OF THE TIME .....2**

**MOST OF THE TIME .....3**

**ALWAYS .....4**

**52. Community members rely on me for support during tough times**

**NEVER .....1**

**SOME OF THE TIME .....2**

**MOST OF THE TIME .....3**

**ALWAYS .....4**

**ABOUT YOUR SOCIAL SUPPORTS**

Please tell us about **YOUR** own support system.

**53. My family gives me the moral support I need**

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

**54. Most other people are closer to their family than I am**

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

**55. I rely on my family for emotional support**

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

**56. My family relies on me for emotional support**

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

**57. There is a member of my family I could go to if I were just feeling down, without feeling funny about it later**

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

58. Members of my family seek me out for companionship

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

59. I think that my family feels that I'm good at helping them solve problems

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

60. My friends give me the moral support I need

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

61. My friends enjoy hearing about what I think

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

62. Certain friends come to me when they have problems or need advice

**YES.....1**

**NO.....2**



**DON'T' KNOW.....3**

63. I rely on my friends for emotional support

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

64. I think that my friends feel that I'm good at helping them solve problems

**YES.....1**

**NO.....2**

**DON'T' KNOW.....3**

For the next two questions, on a 5-point scale, **5 meaning "true all the time"** and **0 meaning "never true"**. Please circle the number following each statement that shows how true each statement is for you.

65. If I'm feeling exhausted or depressed, like at the end of a long day, I have to cope alone. There is no one to help me.

**NEVER TRUE      0      1      2      3      4      5      TRUE ALL OF THE TIME**

66. If I need to buy a pair of shoes for my child(ren) but I am short of cash, there is someone who would lend me the money

**NEVER TRUE      0      1      2      3      4      5      TRUE ALL OF THE TIME**

67. I rely on my religious community, religious practice or my pastor for encouragement and moral support

**NEVER TRUE      0      1      2      3      4      5      TRUE ALL OF THE TIME**

68. I seek professional help, such as a counselor or therapist, when I am feeling sad or blue

**NEVER TRUE                      0           1           2           3           4           5                                   TRUE ALL OF THE TIME**

69. I practice meditation or some form of calming exercises when I’m feeling anxious

**NEVER TRUE                      0           1           2           3           4           5                                   TRUE ALL OF THE TIME**

**ABOUT YOUR CHILDHOOD NEIGHBORHOOD**

Now tell us about your **CHILDHOOD NEIGHBORHOOD**. Please circle the answer that best describes the neighborhood you remember.

70. How much of a problem was litter, broken glass or trash on the sidewalks and streets? Would you say it was a big problem, somewhat of a problem, or not a problem in your neighborhood? **(CIRCLE ONE)**

- A BIG PROBLEM .....1**
- SOMEWHAT OF A PROBLEM .....2**
- NOT A PROBLEM .....3**
- DON’T KNOW .....4**

71. How much of a problem was excessive use of force by police? **(CIRCLE ONE)**

- A BIG PROBLEM .....1**
- SOMEWHAT OF A PROBLEM .....2**
- NOT A PROBLEM .....3**
- DON’T KNOW .....4**

72. How much of a problem was community violence (i.e. shootings, homicides)? **(CIRCLE ONE)**

- A BIG PROBLEM.....1**

- SOMEWHAT OF A PROBLEM.....2**
- NOT A PROBLEM.....3**
- DON'T KNOW.....4**

**ABOUT YOUR CHILDREN**

73. Please tell us about the children you have given birth to. Indicate their sex, their birthdate and their age.

	<b>BIRTH CHILD</b>	<b>MALE</b>	<b>FEMALE</b>	<b>BIRTHDATE</b>	<b>AGE</b>
<b>A.</b>	<b>CHILD 1</b>	<b>1</b>	<b>2</b>		
<b>B.</b>	<b>CHILD 2</b>	<b>1</b>	<b>2</b>		
<b>C.</b>	<b>CHILD 3</b>	<b>1</b>	<b>2</b>		
<b>D.</b>	<b>CHILD 4</b>	<b>1</b>	<b>2</b>		
<b>E.</b>	<b>CHILD 5</b>	<b>1</b>	<b>2</b>		
<b>F.</b>	<b>CHILD 6</b>	<b>1</b>	<b>2</b>		
<b>G.</b>	<b>CHILD 7</b>	<b>1</b>	<b>2</b>		
<b>H.</b>	<b>CHILD 8</b>	<b>1</b>	<b>2</b>		
<b>I.</b>	<b>CHILD 9</b>	<b>1</b>	<b>2</b>		
<b>J.</b>	<b>CHILD 10</b>	<b>1</b>	<b>2</b>		
<b>K.</b>	<b>CHILD 11</b>	<b>1</b>	<b>2</b>		
<b>L.</b>	<b>CHILD 12</b>	<b>1</b>	<b>2</b>		
<b>M.</b>	<b>CHILD 13</b>	<b>1</b>	<b>2</b>		

If you have more than 14 children, please provide the sex, birthdate and age for the rest of your children in the lines below.

62

74. What types of things might interfere with a father not being involved in a child's life?  
(please specify)

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75. In cases where fathers are involved, what types of activities do the father and child enjoy together (SPECIFY ONLY IF YOU INDICATED FATHERS ARE INVOLVED)

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**ABOUT YOUR BACKGROUND**

The following questions will ask you about your background. You may have already answered some of them, but please answer them again.

76. In what year were you born and what is your current age?

19\_\_\_\_\_  
(YEAR)

77. \_\_\_\_\_  
(CURRENT AGE)

78. Who did you live with as a child from birth to age 14?

MOTHER.....1

FATHER.....2

BOTH BIRTH PARENTS.....3

OTHER .....4

**(IF OTHER, PLEASE STATE THE RELATIONSHIP)**

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79. What is the highest grade or year of regular school you have completed? **(CIRCLE ONE)**

- GRADE SCHOOL.....1
- SOME HIGH SCHOOL .....2
- HIGH SCHOOL DIPLOMA.....3
- GED.....4
- SOME EDUCATION BEYOND HIGH SCHOOL .....5
- AA DEGREE \_\_\_\_\_
- BA/BS DEGREE \_\_\_\_\_
- OTHER DEGREE (SPECIFY) \_\_\_\_\_

80. Which of these categories best describes your situation?

- NEVER MARRIED.....1
  - SEPARATED .....2
  - DIVORCED .....3
  - MARRIED .....4
  - WIDOWED .....5
  - DOMESTIC PARTNERSHIP .....6
  - OTHER (SPECIFY).....7
- 

81. Are you currently employed?

- YES.....1
- NO.....2

82. Are you going to school full time or part time?

**FULL TIME.....1**

**PART TIME .....2**

**NOT GOING TO SCHOOL .....3**

83. Are you and/or your child receiving cash welfare benefits?

**YES.....1**

**NO.....2**

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**ABOUT YOUR CHILDHOOD**

84. Please think about your total combined **FAMILY** income during **YOUR CHILDHOOD** for all members of the family. Include money from jobs, social security, retirement income, unemployment payments, or any other money income received, and so forth. Which of these income brackets is closest to the total household income in your childhood home? **(CIRCLE THE NUMBER)**

1 LESS THAN \$5,000

2 \$5,000 TO \$9,999

3 \$10,000 TO \$14,999

4 \$15,000 TO \$19,999

5 \$20,000 TO \$24,999

6 \$25,000 TO 29,999

7 \$30,000 TO \$34,999

8 \$35,000 TO \$39,999

9 \$40,000 TO \$49,999

- 10 \$50,000 TO \$59,999
- 11 \$60,000 TO \$74,999
- 12 \$75,000 TO \$99,999
- 13 \$100,000 OR MORE
- 99 DON'T KNOW/REFUSED

85. How old was your mother when she had her first child?

- UNDER AGE 14.....1
- AGE 14-17.....2
- AGE 18-20.....3
- OVER AGE 20 .....4

86. Was she married when she had her first child?

- YES.....1
- NO.....2

87a. If YES, did she get married before your 14<sup>th</sup> birthday?

- YES.....1
- NO.....2

87b. If NO, did your mother have a live-in boyfriend at any time during your childhood?

- YES.....1
- NO.....2

111b1. If YES, did she have more than one live-in boyfriend?

- YES.....1
- NO.....2

87. During your childhood, what was the highest grade or year of regular school your **MOTHER** completed?

**GRADE SCHOOL.....1**

**SOME HIGH SCHOOL .....2**

**HIGH SCHOOL DIPLOMA.....3**

**GED.....4**

**SOME EDUCATION BEYOND HIGH SCHOOL .....5**

**AA DEGREE\_\_\_\_\_**

**BA/BS DEGREE\_\_\_\_\_**

**OTHER DEGREE (SPECIFY)\_\_\_\_\_**

88. During your childhood, what was the highest grade or year of regular school your **FATHER** completed?

**GRADE SCHOOL.....1**

**SOME HIGH SCHOOL .....2**

**HIGH SCHOOL DIPLOMA.....3**

**GED.....4**

**SOME EDUCATION BEYOND HIGH SCHOOL .....5**

**AA DEGREE\_\_\_\_\_**

**BA/BS DEGREE\_\_\_\_\_**

**OTHER DEGREE (SPECIFY)\_\_\_\_\_**

**ABOUT YOUR EARLY SEXUAL EXPERIENCES**

89. How old were you when you had consensual sex for the first time?



<b>UNDER AGE 14.....</b>	<b>1</b>
<b>AGE 14-17.....</b>	<b>2</b>
<b>AGE 18-20.....</b>	<b>3</b>
<b>OVER AGE 20 .....</b>	<b>4</b>

90a. Have you ever had non-consensual sex?

**YES.....1**

**NO.....2**

90b. If YES, by who \_\_\_\_\_

90. Have you ever had an abortion?

**YES.....1**

**NO.....2**

91a. If YES, how many before age 20?

**1-3.....1**

**4-6.....2**

**MORE THAN 6.....3**

91. Have you ever experienced a miscarriage?

**YES.....1**

**NO.....2**

## References

- Adamsons, K., & Johnson, S. K. (2013). An updated and expanded meta-analysis of nonresident fathering and child well-being. *Journal of Family Psychology, 27*(4), 589-599.
- Adamsons, K., & Johnson, S. K. (2013). An updated and expanded meta-analysis of nonresidential fathering and child well-being. *Journal of Family Psychology, 27*, 589-599.
- Allgood, S., Beckert, T. E., & Peterson, C. (2012). The role of father involvement in the perceived psychological well-being of young adult daughters: A retrospective study. *North American Journal of Psychology, 14*(1), 95-110.
- Amato, P. R., & Gilbreth, J. (1999). Nonresident fathers and children's well-being: A meta analysis. *Journal of Marriage and the Family, 61*, 557-573.
- Aronowitz, T., & Morrison-Beedy, D. (2004). Resilience to risk-taking behaviors in impoverished African American girls: The role of mother-daughter connectedness. *Research in Nursing & Health, 27*, 29-39.
- Baruch, G., & Barnett, R. C. (1975). Implications of recent research on feminine development. *Psychiatry, 38*, 318-327.
- Belsky, J., Steinberg, L., & Draper, P. (1991). Childhood experience, interpersonal development, and reproductive strategy: An evolutionary theory of socialization. *Child Development, 62*, 647-670.
- Beltz, M., Sacks, V. H., Moore, K. A., & Terzian, M. (2015). State policy and teen childbearing: A review of research studies. *Journal of Adolescent Health, 57*, 130-138.
- Berezkei, T., & Csanaky, A. (1996). Evolutionary pathway of child development. *Human Nature, 7*(3), 257-280.
- Biller, H. B., & Kimpton, L. J. (1997). The father and the school-aged child. In M. E. Lamb, *The role of the father in child development* (pp. 143-161). Hoboken, NJ, US: John Wiley & Sons Inc.
- Bishaw, A., Semaga, J., & Bureau, U. S. (2008). *American Community Survey Reports ACS-09, Income, Earnings and Poverty Data from the 2007 American Community Survey*. US Census Bureau. Washington, DC: U.S. Government Printing Office. Retrieved from American Community Survey(ACS): <https://www.census.gov/programs-surveys/acs/>
- Black, M. M., Bentley, M. E., Papas, M. A., Oberlander, S., Teti, L. O., McNary, S., . . . O'Connell, M. (2006). Delaying second births among adolescent mothers: A randomized, controlled trial of a home-based mentoring program. *Pediatrics, 118*(4), e1087-e1099.

- Black, M., Bentley, M. E., Papas, M. A., Oberlander, S., Teti, L. O., McNary, S., . . . O'Connell, M. (2006). Delaying second births among adolescent mothers: A randomized, controlled trial of a home-based mentoring program. *Pediatrics*, *118*(4), e1087-e1099.
- Boardman, L., Allsworth, J., Phipps, M. G., & Lapane, K. L. (2006). Risk factors for unintended versus intended rapid repeat pregnancies among adolescents. *Journal of Adolescent Health*, *59*(7), e1-597 e8.
- Bogaert, A. (2005). Age at puberty and father absence in a national probability sample . *Journal of Adolescence*, *54*(1), 541-546.
- Boyce, W., Essex, M., Alkon, A., Goldsmith, H., Kraemer, H. C., & Kupper, D. J. (2006). Early father involvement moderates biobehavioral susceptibility to mental health problems in middle childhood. *Journal of American Academic Child Adolescent Psychiatry*, *45*(12), 1515-20.
- Buhi, E., & Goodson, P. (2007). Predictors of adolescents sexual behavior and intention: A theory-guided systematic review. *Journal of Adolescent Health*, *4*(1), 4-21.
- Campa, M. I., & Eckenrode, J. J. (2006). Pathways to intergenerational adolescent childbearing in a high-risk sample . *Journal of Marriage and Family* , *68*, 558-572.
- Carlson, D., McNulty, T. L., Bellair, P. E., & Watts, S. (2014). Neighborhoods and racial/ethnic disparities in adolescent sexual risk behavior. *J Youth Adolescence*, *15*(36), 1536-1549.
- Carlson, M. (2006). Family structure, father involvement and adolescent behavioral outcomes. *Journal of Marriage and Family* , *68*, 137-154.
- CDC, C. f. (2014, April 8). *Preventing Pregnancy in Young Teen*. Retrieved April 8, 2014, from Center for Disease Control and Prevention: [www.cdc.gov/vitalsigns/young-teens-pregnancy/index.html](http://www.cdc.gov/vitalsigns/young-teens-pregnancy/index.html)
- Coley, R., Votruba-Drzal, E., & Schindler, H. (2009). Fathers' and mothers' parenting predicting and responding to adolescent sexual risk behaviors. *Child Development*, *80*(3), 808-827.
- Corporation, I. (2013). *SPSS Statistics for Windows, Version 22.0*. Armonk , NY: IBM Corporation
- Cruz, J. (2013). *Marriage: More than a century of change (FP-13-13)*. Bowling Green State University. Bowling Green: Retrieved from National Center for Family & Marriage Research.
- Davis, E. C. (2001, August). Adolescent sexuality: Disentangling the effects of family structure and family context. *Journal and Family and Marriage*, *63*(4), 669-681.

- Draper, P., & Harpending, H. (1982). Father absence and reproductive strategy: An evolutionary perspective. *Journal of Anthropological Research*, 38(3), 255-273.
- Draper, P., & Harpending, H. (1988). A sociobiological perspective on the development of human reproductive strategies. In K. B. McDonald, *Sociobiological Perspectives on Human Development* (pp. 340-372). New York : Springer Verlag.
- Driscoll, A. K., & Abma, J. C. (2015). Changing sociodemographic factors and teen fertility: 1991-2009. *Maternal Child Health* , 2159-2167.
- East, P., Reyes, B., & Horn, E. (2007). Association between adolescent pregnancy and a family history of teenage births. *Perspectives on Sexual and Reproductive Health*, 39(2), 108-115.
- Elder, G. H. (1994). Time, human agency and social change: Perspective on the life course. *Social Psychology Quarterly*, 4-15.
- Elfenbein, D., & Felice, M. E. (2003). Adolescent Pregnancy. *The Pediatric Clinics of North America*, 781-800.
- Ellis, B. J. (2004). Timing of pubertal maturation in girls: An integrated life history approach. *Psychological Bulletin*, 130(6), 920-958.
- Ellis, B. J., & Garber, J. (2000). Psychosocial antecedents of variation of girls' pubertal timing: Maternal depression, stepfather presence, and marital and family stress . *Child Development*, 485-501.
- Ellis, B. J., Boyce, W. T., Belsky, J., Bakersmans-Kranenburg, M., & Ijzendoorn, M. (2011). Differential susceptibility to the environment: An evolutionary-neurodevelopmental theory. *Development and Psychopathology*, 7-28.
- Ellis, B., Bates, J. E., Dodge, K. A., Fergusson, D. M., Haywood, J., Pettit, G. S., & Woodward, L. (2003). *Does father abesence place daughters at special risk for early sexual activity and teenage preganancy?* Retrieved April 26, 2010, from National Institute of Health Public Access: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2764264/pdf/nihms146867.pdf>
- Ellis, B., Schlomer, G., Tilley, E. H., & Butler, E. A. (2012). Impact of fathers on risky sexual behavior in daughters: A genetically and environmentally controlled sibling study. *Development and Psychopathology*, 317-332.
- Fergus, S., & Zimmerman, M. A. (2005). Adolescent resilience: A framework for understanding healthy development in the face of risk. *Annual Review of Public Health*, 26, 399-419.

- Flinn, M. (1988). Step and genetic parent/offspring relationships in a caribbean village. *Ethology and Sociobiology*, 9, 335-369.
- Forehand, R., Armistead, L., Long, N., Wyckoff, S. C., Kotchick, B., Witaker, D., . . . Miller, K. S. (2007). Efficacy of a parent-based sexual-risk prevention program for African American preadolescents. *Pediatric Adolescent Medicine*, 161(12), 1123-1129.
- Francesconi, M. (2008). Adult outcomes for children of teenage mothers. *Scandanavian Journal of Economics*, 110(1), 93-117.
- Garmezy, N., & Rutter, M. (1983). *Stress, coping and development in children*. Baltimore: John Hopkins University Press.
- Garmezy, N., Masten, A. S., & Tellegen, A. (1984). The study of stress and competence in children: A building block for developmental psychopatholgy. *Child Development*, 55(1), 97-111.
- Geary, D. (2000). Evolution and proximate expression of human paternal investment. . *Psychological Bulletin* , 126, 55-77.
- Goldberg, D. (1978). *Manual of the General Health Questionnaire*. Horsham: General Practice Research Unit.
- Goodman, S., Rouse, M., Connell, A., Broth, M., Hall, C., & Heyward, D. (2011). Maternal depression and child psychopathology: Meta-analytic review. *Clinical Child and Family Psychology Review*, 14(1), 1-27.
- Hall, K. S., Kusunoki, Y., Gatny, H., & Barber, J. (2015). Social discrimination, stress, and risk of unintended pregnancy among young women. *Journal of Adolescent Health* , 330-337.
- Harris, K., Furstenberg, F., & Marmer, J. (1998). Paternal involvement with adolescents in intact families: The influence of fathers over the life course. *Demography*, 201-216.
- Hendricks, C. S., Cesario, S. K., Murdaugh, C., Gibbons, M., Servonsky, E. J., Bodadilla, R. V., . . . Tavakoli, A. (2005). The influence of father absence on the self-esteem and self reported sexual activity of rural southern adolescents: The influence of father absence on the self-esteem and self-reported sexual activity of rural southern adolescents. *The ABNF Journal*, 124-131.
- Hendrixson, L. (1979). Pregnant children: A socio-educational challenge. *Phi Delta Kappa International*, 60(9), 663-666.
- Hetherington, E. (1972). Effects of father absence on personality development in adolescent daughters. *Developmental Psychology*, 7(3), 313-326.

- HHS, U. S. Department of Health and Human Services. (2016, June 2). *Office of Adolescent Health*. Retrieved from U.S. Department of Health and Human Services: <https://www.hhs.gov/ash/oah/adolescent-health-topics/reproductive-health/teen-pregnancy/trends.html>
- Hobcraft, J., & Kiernan, K. (2001). Childhood poverty, early motherhood and adult social exclusion. *British Journal of Sociology*, 52(3), 495-517.
- Hotz, V., McElroy, S. W., & Sanders, S. G. (1997). The impacts of teenage childbearing on the mothers and the consequences of those impacts for government. In R. Maynard, *Kids Having Kids: The Economic Costs and Social Consequences of Teen Pregnancy* (pp. 56-93). Washington DC: Urban Institute Press.
- Hudson, D. B., Elek, S. M., & Campbell-Grossman, S. M. (2000). Depression, self-esteem, loneliness and social support among adolescent mothers participating in the new parents project. *Adolescence*, 35(139), 445-453.
- Ikramullah, E., Manlove, J., Carol, C., & Moore, K. (2009). Parents matter: The role of parents in teens' decisions about sex. *Child Trends Research Brief*, 1-7.
- Jackson, A., Choi, J., & Franke, T. (2009). Poor single mothers with young children: Mastery, relations with nonresident fathers and child outcomes. *Social Work Research*, 33(2), 95-106.
- Jackson, A., Preston, K., & Thomas, C. (2013). Single mothers, nonresident fathers, and preschoolers' socioemotional development: Social support, psychological well-being, and parenting quality. *Journal of Social Service Research*, 129-140.
- Kalil, A., & Kunz, J. (2002). Teenage childbearing, marital status, and depressive symptoms in later life. *Child Development*, 73(6), 1748-60.
- Kalil, A., & Ryan, R. (2010). Mothers' economic conditions and sources of support in fragile families. *Future of Our Children*, 20(2), 39-61.
- Kearney, M. S., & Levine, P. B. (2011). *Income inequality and early non-marital childbearing: An economic exploration of the "Culture of Despair"*. Cambridge: National Bureau of Economic Research .
- King, V., & Sobolewski, J. (2006). Nonresident fathers' contributions to adolescent well-being. *Journal of Marriage and Family*, 68, 537-557.
- Lamb, M. (1997). The development of father-infant relationships. In M. E. Lamb, *The Role of the Father in Child Development*, 3rd ed. (pp. 104-120). Hoboken : John Wiley & Sons, Inc.

- Lamb, M. E., Pleck, J. H., Charnov, E. L., & Levine, J. A. (2011). A biosocial perspective on paternal behavior and involvement. In J. B. Lancaster, J. Altmann, L. R. Sherrod, & L. Rossi, *Parenting across the Life Span* (pp. 111-142). New Jersey: Transaction Publishers.
- Lamb, M., & Tamis-LeMonda, C. (2004). The role of the father: An introduction. In M. Lamb, *The Role of the Father in Child Development* (pp. 1-31). Hoboken: John Wiley & Sons Inc.
- Lee, B., & George, R. (1999). Poverty, early childbearing and child maltreatment: A multinomial analysis. *21*(9/10), 755-780.
- Lie, G., & Moroney, R. M. (1992). A controlled evaluation of comprehensive social services provided to teenage mothers receiving AFDC. *Research on Social Work Practice, 2*(4), 429-447.
- Longmore, M., Manning, W. D., Giordano, P. C., & Rudolph, J. L. (2004). Self-esteem, depressive symptoms and adolescents' sexual onset. *Social Psychology, 67*(3), 279-295.
- Luong, M. (2008, May 30). Life after teenage motherhood. *Perspectives*, pp. 5-13.
- Luthar, S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child Development, 543-562*.
- Luthar, S., Doernberger, C. H., & Zigler, E. (1993). Resilience is not a unidimensional construct: Insights from a prospective study of inner city adolescents. *Developmental Psychopathology, 703-717*.
- Maciak, B., Spitz, A. M., Strauss, L., Morris, L., Warren, C., & Marks, J. S. (1987). Pregnancy and birth rates among sexually experienced US Teenagers-1974, 1980, and 1983. *Journal of American Medical Association, 258*(15), 2069-2071.
- Manlove, J., Mariner, C., & Romano, A. (2000). Subsequent fertility among teen mothers: Longitudinal analyses of recent national data. *Journal of Marriage and the Family, 62*, 430-448.
- Mare, R. D., & Maralani, V. (2006). The intergenerational effects of changes in women's educational attainments. *American Sociological Review, 71*, 542-564.
- Martin, J. H. (2013, November 14). *Births Final Data for 2012*. Retrieved November 14, 2014, from National Center for Health Statistics: <http://www.cdc.gov/nchs/data/nvrs/nvrs62>
- Martinez, G., & Abma, J. (2012). Trends and current levels in adolescent sexual risk behaviors: Data from the National Survey of Family Growth. *Teen Pregnancy Prevention Grantee Conference* (pp. 1-50). Baltimore: Center for Disease Control and Prevention.

- Mash, E., & Barkley, R. (n.d.). *Child Psychopathology* (Third ed.). New York: Guilford Press.
- McLoyd, V. (1990). The impact of economic hardship on black families and children: Psychological distress, parenting and socioemotional development. *Child Development*, 61(2), 311-346.
- McLoyd, V., & Wilson, L. (1992). Telling them like it is: The role of economic and environmental factors in single mothers' discussions with their children. *American Journal of Community Psychology*, 419-444.
- McNeely, C., Shew, M., Beuhring, T., Sieving, R., Miller, B., & Blum, R. (2002). Mothers' influence on the timing of first sex among 14 and 15-year-olds. *Journal of Adolescent Health*, 31, 256-265.
- Meade, C., Kershaw, T. S., & Ickovics, J. R. (2008). The intergenerational cycle of teen motherhood: An ecological approach. *Health Psychology*, 419-429.
- Mendle, J., Turkheimer, E., Van Hulle, C., Onofrio, B., Brooks-Gunn, J., Rodgers, J. L., . . . Lahey, B. (2009). Associations between father absence and age of first sexual intercourse. *Child Development*, 80(5), 1463-1480.
- Ngom, P., Magadi, M. A., & Owuor, T. (2003). Parental presence and adolescent reproductive health among the Nairobi urban poor. *Journal of Adolescent Health*, 369-377.
- Paquette, D. (2004). Theorizing the father-child relationship: Mechanisms and developmental outcomes. *Human Development*, 47, 193-219.
- Partington, S. N., Steber, D. L., Blair, K., & Cisler, R. A. (2009). Second births to teenage mothers: Risk factors for low birth weight and preterm birth. *Perspectives on Sexual and Reproductive Health*, 41(2), 101-109.
- Pearlin, L. I., & Schooler, C. (1978). The structure of coping. *The Journal of Health and Social Behavior*, 2-21.
- Quinlan, R. J. (2003). Father absence, parental care, and female reproductive development. *Evolution and Human Behavior*, 376-390.
- Raneri, L. G., & Wiemann, C. M. (2007). Social ecological predictors of repeat adolescent pregnancy. *Perspectives on Sexual and Reproductive Health*, 39-47.
- Ream, G. L., & Savin-Williams, R. C. (2005). Reciprocal associations between adolescent sexual activity and quality of youth-parent interactions. *Journal of Family Psychology*, 19(2), 171-179.



- Regnerus, M., & Luchies, L. B. (2006). The parent-child relationship and opportunities for adolescents's first sex. *Journal of Family Issues*, 27(2), 159-183.
- Rigsby, D., Macones, G., & Driscoll, D. (1998). Risk factors for rapid repeat pregnancy among adolescent mothers: A review of the literature. *Journal of Pediatric Adolescence*, 115-126.
- Rink, E., Tricker, R., & Harvey, M. (2007). Onset of sexual intercourse among female adolescents: The influence of perceptions, depression and ecological factors. *The Journal of Adolescent Health*, 398-406.
- Rosenberg, M. (1965). *Rosenberg self-esteem scale*. Princeton: Princeton University Press.
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 316-331.
- Shaw, M., Lawlor, D., & Najman, J. (2006). Teenage children and teenage mothers: Psychological, behavioural and health outcomes from an Australian prospective longitudinal study. *Social Science & Medicine*, 2526-2539.
- Smithbattle, L., & Leonard, V. W. (2006). Teen mothers and their teenaged children: The reciprocity of developmental trajectories. *Advances in Nursing Science*, 351-365.
- Sobolewski, J., & King, V. (2005, December). The importance of coparental relationship for nonresidential fathers' ties to children. *Journal of Marriage and Family*, 1196-1212.
- Solomon-Fears, C. (2008). *Nonmarital childbearing: Trends, reasons, and public policy interventions*. United States Congress, Domestic Social Policy Division. District of Columbia: Congressional Research Service.
- South, S. (2001). The variable effects of family background on the timing of first marriage: United States, 1969-1993. *Social Science Research*, 606-626.
- Spencer, M., Cole, S. P., Dupree, D., Glymph, A., & Pierre, P. (1993). Self-efficacy among urban African American early adolescents: Exploring issues of risk, vulnerability and resilience. *Development and Psychopathology*, 719-739.
- Sweeney, M., & Raley, R. (2014). Race, ethnicity and the changing context of childbearing in the United States. *Annual Review of Sociology*, 40, 539-558.
- Team, R. C. (2015). *R: A language and environment for statistical computing*. Retrieved from R Foundation for Statistical Computing: <http://www.R-project.org/>.

- Tither, J. M., & Ellis, B. J. (2008). Impact of fathers on daughters' age at menarche: A genetically and environmentally controlled sibling study. *Developmental Psychology, 44*(5), 1409-1420.
- Upchurch, D. M., Lillard, L., & Panis, C. (2002). Nonmarital childbearing: Influences of education, marriage and fertility. *Demography, 311-329*.
- Van Wel, F., Linssen, H., & Abma, R. (2000). The parental bond and the well-being of adolescents and young adults. *Journal of Youth and Adolescence, 29*(3), 307-318.
- Ventura, S., & Hamilton, B. M. (2014, August 20). National and state patterns of births in the united states 1940-2013. *National Vital Statistics Reports*, pp. 1-33.
- Vespa, J., Lewis, J. M., & Kreider, R. M. (2013). *America's families and living arrangements: 2012*. U.S. Department of Commerce, Economics and Statistics Administration. DC: Research Gate.
- Videon, T. (2005). Parent-child relations and children's psychological well-being: Do Dads matter? . *Journal of Family Issues, 55-78*.
- Werner, E. (1995). Resilience in development. *Current Directions in Psychological Science, 81-85*.
- Westoff, C. F., Calot, G., & Foster, A. (1983). Teenage fertility in developed nations. *International Family Planning Perspectives, 9*(2), 45-50.
- Wight, D., Williamson, L., & Henderson, M. (2006). Parental influences on young people's sexual behaviour: A longitudinal analysis. *Journal of Adolescence, 473-494*.