

DOES FATHER WARMTH/INVOLVEMENT PREDICT ADOLESCENT
RISKY SEXUAL BEHAVIOR AND INTERGENERATIONAL
TEENAGE PREGNANCY?

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A THESIS

Submitted in partial fulfillment of the requirements
for the degree of Master of Science
in the Department of Human Development & Family Studies
in the Graduate School of
The University of Alabama

TUSCALOOSA, ALABAMA

2014

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ABSTRACT

Previous studies highlight many disadvantages for adolescent mothers who experience an early pregnancy. Among these disadvantages is the high probability of single-parenthood and the likelihood that their children may experience early pregnancies as well, i.e., intergenerational teenage pregnancy. The implications of the Balance Theory suggest that the primary source of warmth for adolescent girls comes from their fathers. Adolescent girls who grow up in father-absent homes may seek this missing warmth outside of the home in intimate sexual relationships. Using data from the Mobile Youth and Poverty Study (MYPS), single mothers who reported giving birth between the ages of 12-19 and their 15-year-old daughters were chosen for the current study. It was hypothesized that adolescent girls in father-absent homes would be more likely to experience an adolescent pregnancy and engage in more risky sexual behavior. Although a small portion of the sample actually experienced an early pregnancy (n=19), levels of father warmth significantly predicted whether adolescent girls had initiated sexual intercourse by age 15 as well as frequency and recency of the sexual intercourse.

ACKNOWLEDGMENTS

First and foremost, my sincerest appreciation and gratitude are extended to my Lord and Savior Jesus Christ. I know, without a doubt, that the requirements of this research paper would not have been fulfilled without Your grace and provisions. And that the completion of my thesis is but a small part of Your divine plan. Special thanks to Betty Ray Butler, my mentor, friend, and sister in Christ. Though absent in the flesh, your spirit was with me throughout the completion of this project. I thank you for believing in me. Jason Scofield, the completion of this task would not have been possible without your advisement. I appreciate you for challenging me to think like a researcher. I would also like to thank my committee – Tricia Witte and Anneliese Bolland – for offering their support and expertise throughout this process.

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CHAPTER 1

INTRODUCTION

Several disadvantages have been identified for adolescent mothers who experience pregnancy at an early age, among these is the high probability of single-parenthood and the likelihood that their children may experience an early pregnancy as well: intergenerational teenage pregnancy (Coley & Chase-Lansdale, 1998; Ellis, Bates, Dodge, Fergusson, Horwood, Pettit, & Woodard, 2003; Corcoran, 1998). The intergenerational transmission of pregnancy is defined as the early occurrence of pregnancy spanning across at least two consecutive generations. In other words, if an adolescent experiences an early pregnancy and he or she has a mother who gave birth as a teenager, he or she is considered to be part of an intergenerational teenage pregnancy cycle. Overall, intergenerational transmissions are difficult to study because data are needed from multiple generations. Additionally, while the previously mentioned studies address predictors of teenage pregnancy and provide support for an intergenerational effect of pregnancy, these findings are inconsistent (Furstenberg et al., 1990; Hardy et al., 1998; Manlove, 1997). These inconsistencies suggest that there may be unexamined factors which impact the intergenerational teenage pregnancy cycle. Thus, it is important to identify these unexplored influences in order to address the limitations in literature regarding the intergenerational transmission of teenage pregnancy.

CHAPTER 2

LITERATURE REVIEW

Intergenerational Teenage Pregnancy

Daughters of teenage mothers are more vulnerable to adolescent pregnancy than daughters of older mothers (Whitehead, 2007; Manlove 1997; Meade, Kershaw, & Ickovics, 2008). Meade and colleagues found that daughters of teenage mothers (defined as having a child before 19 years of age) were over twice as likely to experience an early pregnancy (36%) than daughters of older mothers (16%). In a similar study, Campa and Eckenrode (2006) reported that 70% of teenage girls who became pregnant were born to adolescent parents.

One prominent study in the area of intergenerational teenage pregnancy is Johnson and Tyler's (2007) study of intergenerational early onset of sexual intercourse in a racially diverse sample of 12- to 13-year-olds. Using three consecutive generations (adolescents, their mothers, and their grandmothers), this unique study explored predictors of early onset of sexual activity, which is important to study in this area of research because sexual activity can lead to pregnancy. Johnson and Tyler found that when mothers delayed childbearing, their children were more likely to delay initiation of sexual intercourse. They also found that grandmothers who had children at later ages also had daughters who gave birth at later ages. Mothers who experienced an early pregnancy, resided in non-intact families, and who were less educated were more likely to have children who initiated sex at an earlier stage. These findings are consistent with the Life Course Adversity Model for adolescent risky sexual behavior and pregnancy (Ellis et al., 2003), which also asserts that family disruptions, like those experienced in non-intact families, can contribute to teenage pregnancy. The Life Course Adversity Model for adolescent sexual

activity and pregnancy further asserts that stressors related to single-parenting (poverty, erosion of parental monitoring, and disrupted relationships) contribute to the long term effects of teenage pregnancy for both the mother and the child. This suggests that intergenerational teenage pregnancy is more likely the outcome of factors associated with having a child as a teen, rather than the pregnancy alone.

Although these previous studies have found daughters of teenage mothers to be more likely to experience an early pregnancy, the longitudinal study conducted by Meade et al. (2008) was one of the most groundbreaking in the area of intergenerational teenage pregnancy. In this study, Meade and colleagues were able to identify unique factors between daughters born to teenage mothers and daughters born to older mothers (defined as having a child at the age of 20 years or older). Using data from the National Longitudinal Survey of Youth (1997), Meade et al. studied a sample of 1,430 adolescent females, ages 13-16. Over half the sample was Caucasian and 26% of participants reported incomes that were well below federal poverty lines. The study detailed specific risks that may contribute to an early pregnancy for daughters of teenage mothers as well as daughters of older mothers. Both groups experienced or shared some factors that influenced teenager pregnancy, including dating history, individual school performance, mother's educational attainment, marital status, and number of children. However, daughters born to teenage mothers daughters of teenage mothers were uniquely vulnerable to other factors. First, girls born to teenage mothers had a lower socioeconomic status. In addition, they were more vulnerable to deviant norms. It can be argued that girls born to teenage mothers were more likely have a predisposition for early pregnancy, because, for example, they may be more likely to perceive teenage pregnancy as acceptable or normal. Additionally, these girls were more vulnerable to low parental monitoring. There are two factors that stand out in this study and

require a deeper exploration and the current study addresses these two factors. First, Meade and colleagues concluded that there were differences in parental monitoring between the younger group of mothers and older group of mothers. More parental monitoring is characterized by setting curfews (or stricter curfews) and setting high expectations. It is important to note that differences in parental warmth, characterized by positive affirmations, physical affection, and overall involvement were not found between groups. Second, in regards to parental monitoring, the differences among the teen moms and older moms were more related to single parenting rather than inadequate parenting. Mothers who gave birth as teens did not necessarily possess poor parenting skills, but they were more likely to raise their children in single parent homes, suggesting that the absence of a father may account for some of the variation found among things groups. Thus, it would be beneficial to explore father involvement as it pertains to the intergenerational teenage pregnancy cycle.

As single-motherhood is often a common denominator among most teenage mothers, it is also important to identify factors associated with single-motherhood that may influence risk behaviors in adolescents. In single-parent homes, mothers play a dual role, that is, they have to be both the mother and the father. The Balance Theory, however, suggests that these single mothers may not adjust their roles to counterbalance the absence of the father. Because teenage mothers are less likely to become married in later life (Campa & Eckenrode, 2006), father involvement is an important concept to consider and the Balance Theory offers a unique way of looking at the way single-parenthood influences the intergenerational teenage pregnancy cycle.

The Balance Theory

Specific to the African-American community, there is a commonly used proverb that

“Mothers love their sons and raise their daughters,” (Hill & Zimmerman, 1995; Mandara & Murray 2000, 2005; McLoyd, 1990). This proverb has been studied and supported (Mandara & Murray, 2000; Mandara, Murray, & Joyner, 2005; Price-Bonham & Skeen, 1982; McLoyd) with findings that suggest that African-American mothers take a different approach in parenting their daughters than they do for their sons, where mothers tend to “favor” their sons and discipline their daughters, whereas, fathers tend to “favor” their daughters and discipline their sons. This Balance Theory suggests that African-American mothers exhibit more warmth toward and be less critical of their sons. In sharp contrast, these mothers use more strict measures (e.g., setting earlier curfews, high expectations, etc.) in order to raise competent, independent young women. One assumption of this particular parenting style is that mothers may see their daughters as more valiant and self-sufficient, and they may view their sons as being needier, especially in the absence of the father (Mandara et al.). The theory suggests that when both parents are present, the sons and daughters experience an even distribution of both parental warmth and parental monitoring, even though they are distributed by the mother and father differently. However, in a single parent household, a single mother may not alter her parental strategies even in the absence of the father.

Single mothering in the African-American community has been studied, providing support for the Balance Theory (Kapungu, Holmbeck, & Paikoff, 2006). In Kapungu and colleagues’ study, and in line with Balance Theory, adolescent girls who experienced low warmth from their mothers were more likely to initiate sexual intercourse earlier. An important finding from this study is that single parenting in African-American families is likely to have a negative effect on adolescent girl’s risky sexual behavior. Kapungu et al. suggest that when adolescent girls experienced low warmth and high monitoring environments, they were less

likely to delay sexual intercourse. Adolescent girls who do not experience maternal warmth in the absence of the father may be more likely to fill their emotional needs outside of the home in peer relationships, most often in relationships that offer intimacy (Biller, 1993). These findings suggest that father involvement is influential in regulating adolescent girls' risky sexual behavior.

Adolescent Risky Sexual Behavior

A second factor unique to teenage motherhood and single parenting is the prevalence of maternal risky sexual behaviors compared to married mothers. Adolescents who are sexually active often have mothers who were not married during the conception of their first child (Kotchick et al., 1999). Adolescents from single parent homes also participate in more risky sexual behavior than any other family structure (Davis & Friel, 2001; Kotchick et al., 1999; Whitbeck et al., 1994) which may be related to the prevalence of sexual permissiveness by single mothers. Moore and Chase-Landsdale (2002) evaluated adolescent girls' initiation of sexual activity and reported comparable results among African American adolescents (aged 15-18) and found that adolescent girls in single-mother households were almost three times as likely to initiate early sexual activities and six times more likely to experience pregnancy than those in married households. Further, adolescent girls from single parent households reported earlier initiation of sexual activity than adolescents from intact, or two-parent, homes, suggesting that in addition to being born to a teenage mother, the lack of the presence of the father and sexual promiscuity by the mother may have an effect on intergenerational teenage motherhood. While the Balance Theory does not suggest that father absence is independently responsible for adolescent girl's risk behavior, it does imply that disadvantages are present for adolescents in father-absent homes, and that lack of a father may lead to an increase in risk behaviors.

While father absence has been independently linked to early sexual encounters and unwanted pregnancies for adolescent girls (e.g., Powell & Downey, 1997), others suggest that the actual act of fathering is the significant factor, not just the physical presence of the father (e.g., Allgood, Beckert, & Peterson, 2012). That is, it is important to take into account more than just the presence or absence of a father in research studies in this field of research. Allgood et al. also suggests that mere physical presence may be negated by the lack of emotional responsiveness. Characteristics of openly responsive, or warm, fathers include showing interest in their daughters' opinions, giving praise in the event of an accomplishment, and comprehending—accurately—their daughters' emotions. Adolescent girls who grow up with fathers who are nurturing and responsive are less likely to engage in early sexual activities (Ellis et al., 2003), have higher self-esteem throughout adulthood (Allgood et al.) and are more likely to refuse unwanted sex (Katz & Van der Kloet, 2010). However, physically present, but emotionally absent fathers may contribute to the adverse socialization of their daughters (Katz & Van der Kloet). When evaluating sexual refusal behaviors by college women, Katz and Van der Kloet found that those who reported growing up with a responsive father reported refusal of unwanted sex while those who grew up with emotionally unresponsive fathers were more likely to submit to unwanted sexual intimacy. That is, evidence suggests that it is not just the physical presence of the father which is most beneficial in predicting risky behaviors, but it is the perceived emotional warmth of adolescent girls that is most influential.

Present Study

While factors that may influence the cycle of intergenerational teenage pregnancy have been identified, it remains unclear why children born to teenage mothers are more susceptible to adolescent pregnancy. To address limitations in the literature regarding risk factors for

intergenerational teenage pregnancy, the current study explored the influence of father involvement on adolescent girls born to teenage mothers. In the current study, father involvement includes physical presence and the provision of warmth. Age of adolescent is important to consider when exploring father-child relationships and initiation of sexual activity in adolescent girls. In a national probability sample, earlier onset of puberty (age of first menarche for girls and voice change for boys) was related to father absence at age 14 (Bogaert, 2005). Parental intactness was examined during puberty and Bogaert found that father absence alone predicted early onset puberty. Given that early menarche is indicative of an early sexual debut (Tither & Ellis, 2008; De Genna, Larkby, & Cornelius, 2011), sexual behavior after age 14 may provide the most conclusive information. Therefore, the current study examined adolescent girls at 15 years of age, one year after the pivotal age of 14. Of primary interest was: (1) whether daughters of teenage mothers are more likely to experience an adolescent pregnancy if they experience less father involvement, and (2) whether daughters of teenage mothers are more likely engage in risky sexual behavior if they experience less father involvement.

CHAPTER 3

METHODOLOGY

Mobile Youth Survey (MYS)

Recruitment and Survey. Data from the Mobile Youth Survey (MYS), a community-based, longitudinal study of 9.75-19.25 year-old adolescents living in extreme poverty in Mobile and Prichard, Alabama were used in this study. Derived from the 2000 census, 46.1% of Mobile's population was African-American and 22.4% lived in poverty, and in Prichard 83.3% of the population was African-American, and 44.1% lived in poverty. The survey, designed to explore effects of poverty on risk behaviors, was created in 1998, and over 12,000 adolescents (98% African-American) participated at least once in this study between 1998 and 2011. Data were first collected in 1998 from a sample of adolescents living in the 13 poorest neighborhoods in the Mobile Metropolitan Statistical Area (MSA), based on the 1990 Census. Seven of these original 13 neighborhoods were public housing developments; the other six were non-public housing. Five of the neighborhoods were located in the town of Prichard, and eight were located in the city of Mobile. A combination of active recruitment (knocking on doors and explaining the MYS to adolescents living in the home) and passive recruitment (posting flyers about the MYS and inviting adolescents to participate) strategies were utilized. Participants were encouraged and recruited to participate yearly in the MYS so long as they had parental consent and were between the ages of 9.75 and 19.25. As participants moved, researchers attempted to locate them again to participate yearly in the MYS. Participant mobility resulted in an expansion of the MYS to include 51 neighborhoods by 2011.

Survey questions were read aloud and each respondent was instructed to mark their answer choices on a scannable answer form. The majority of surveys were conducted in group settings (e.g., in community centers or elementary schools) of about 20-30 participants; however, when participants needed individual attention, surveys were conducted individually or in smaller groups. From 1998-2005, the MYS consisted of 294 questions regarding risk behaviors and attitudes regarding violence, substance use, and sex, family structure and function, feelings about self, neighborhood, and peers, and experiences in school. In 2006, the survey was expanded to include 408 questions. Participants were compensated \$10 for their time from 1998-2005, and from 2006-2011, participants were compensated \$15 for their time to complete the survey.

Adult and Family Dynamics Questionnaire (AFDQ)

As part of a larger project, the Mobile Youth and Poverty Study (MYPS), additional data were collected from participants and relatives of those participants. One such additional measure is the Adult and Family Dynamics Questionnaire (AFDQ), created in 2001 to obtain information on adults living in the home with the adolescents who participated in the MYS survey. This survey was a cross-sectional measure of attitudes, beliefs, and behaviors of adults living in the same households as identified MYS participants. These AFDQs were conducted in the homes of the participants between 2001 and 2010 and participants were compensated for their time.

Participants

In the current study, the sample was selected from inclusion criteria in both the MYS and AFDQ. First, women who gave birth to their first child as a teenager were selected from the ADFQ. Mothers were identified based on their answers to the question, “How old were you when your first child was born?” Mothers who reported first giving birth between 12-19 years old were selected for the study sample (Table 1). The identified mothers were linked to female

participants in the MYS based on names and school records. Next, data from the female participants in the MYS were selected from when the females were 15 years of age. That is, even though the MYS is a longitudinal study, in the current study, the only age of interest was 15 years, and thus, any female who was 15 years old (in any wave of data collection), whose mother participated in the ADFQ and reported first giving birth between the ages of 12 and 19 was included for analysis, resulting in 274 participants. One important note is that in many cases, mothers have multiple children, and in this study, the adolescent correspondent may not be the first child of her mother. However, in the interests of this study, any child identified by the mother, and who met all other criteria were included in the sample.

Table 1.

Age of mother at birth of first child	Frequency	Percent
12	2	.7
13	2	.7
14	18	6.6
15	41	15.0
16	68	24.8
17	48	17.5
18	54	19.7
19	41	15.0

Next, to be included in this study, MYS participants had to answer certain questions on the MYS (participants were never forced to answer questions, thus, some participants were excluded from this study due to their lack of response to relevant questions for this study). The final sample consisted of 268 15-year-old African-American adolescent girls born to teenage mothers (12-19 years of age) who responded to questions regarding paternal warmth on the MYS. Socioeconomic status was identified by school system records: 91.2% of participants received free lunch (n=250), 2.9% qualified for reduced-cost lunch (n=8), and 4.4% paid for their school lunches (n=12).

Measures

Father Warmth. Father warmth was measured on the MYS using seven items (Appendix A). First, participants were asked to identify what person was most like a father to them and were given nine choices, including “I don’t have anyone who is like a father to me.” This item was dichotomized for this analysis (0 = I don’t have anyone who is like a father to me; 1 = all other response options). Second, participants were asked to respond to six items about the closeness of the relationship between the adolescent girl and their father figure, resulting in a scale ranging from zero to six, where higher scores indicate more paternal warmth. For the current study, father warmth was recoded into three categories (0 = father absence—based on the first item regarding who is most like a father, 1 = scores of 0-5 on the father warmth scale, 2 = full warmth, or scores of 6 on the father warmth scale (Table 2). Decisions for this recoding were based on median levels of reported father warmth in this sample.

Table 2.

Father Warmth	Frequency	Percentage
0	49	18.28
1	99	36.94
2	120	44.78

Adolescent Sexual Behavior and Attitudes. Adolescent sexual behavior and attitudes were measured using nine variables (Appendix B). Respondents were asked to respond to the following questions: (1) In the past 12 months, did you get pregnant? (0 = no); (2) Have you ever had sexual intercourse? (0 = no); (3) In the past 3 months, how often did you or partner use any form of birth control? (0 = none of the time); (4) Have you ever been told by a health official that you have an STD? (0 = no); (5) Are you currently trying to get pregnant? (0 = no); (6) If a girl my age has sex, it proves she’s a woman (0 = disagree); (7) In the past year, how many different

sexual partners have you had? (0 = 0); (8) In the past 3 months, did you have sexual intercourse? (0 = no); and (9) How old were you when you first had sexual intercourse? (9 years old or younger to 18 years old, with the option to choose “I have never had sexual intercourse”).

Measures for risky sexual behavior are presented in Appendix B.

Sexual Frequency/Recency. Sexual frequency/recency is measured using four items on the MYS survey: (1) “Have you ever had sexual intercourse?” (0 = no, 1 = yes); (2) “In the past 3 months, did you have sex?” (0 = no, 1 = yes, just once, 2 = yes, more than once); (3) “In the past month, did you have sex?” (0 = no, 1 = yes, just once, 2 = yes, more than once); (4) “In the past week, did you have sex?” (0 = no, 1 = yes, just once, 2 = yes, more than once). A score of 0 on this scale indicates the participants reported never having sexual intercourse, and thus answered no to all subsequent sexual frequency/recency questions. A score of 1 indicates that participants had their sexual debut but they did not have sex at all in the past 3 months. A score of 2 indicates that participants had sex once in the past 3 months, but not in the past month. A score of 3 indicates that participants had sex more than once in the past 3 months, but not in the past month. A score of 4 indicates that participants had sex just once in the past month but not in the past week. A score of 5 indicates that participants had sex more than once in the past month but not in the past week. A score of 6 indicates that participants had sex once in the past week. A score of 7 indicates that participants had sex more than once in the past week. The higher the score, the more frequently and recently the participant engaged in sexual intercourse.

Analysis

The current study explored whether father involvement is independent of sexual behaviors and attitudes of adolescent girls born to teenage mothers. Of the 268 girls in the final sample, 263 responded to the item “Do you have any children?” and 19 (7.2%) indicated they

already had children thus making them active members of the intergenerational teenage motherhood cycle. These adolescents were included in all analyses. In order to test the first hypothesis that father warmth would affect the likelihood that an adolescent girl would experience a pregnancy, a 3×2 chi-square was run analyzing the three levels of father warmth for the item asking about pregnancy. To test the second hypothesis that father warmth would affect the likelihood that an adolescent girl would engage in risky sexual behaviors, a series of 3×2 chi-squares analyses were used to analyze the three levels of father warmth along the items measuring risky sexual behavior. Additionally, One-way ANOVAS were used to analyze continuous risky sex variables among the three levels of father warmth.

CHAPTER 4

RESULTS

Results of the analyses are presented by variable or scale.

Adolescent Pregnancy

Pregnancy. Of the 105 girls who initiated sexual intercourse by age 15, 98 responded to the question, “In the past 12 months, did you get pregnant?” (Table 3). Among these participants, 26 became pregnant in the last 12 months from their survey date (26.3%). The results show no statistically significant difference in experiencing a pregnancy between the three groups, $\chi^2(2, N=98) = 2.62, p = .269$.

Table 3.

Father Warmth	In the past 12 months, did you get pregnant?		
	No	Yes	Total
Absent	7 (26.9%)	19 (73.1%)	26 (100%)
Low- Moderate Warmth	12 (35.3%)	22 (64.7%)	34 (100%)
Present, Maximum Warmth	7 (18.4%)	31 (81.6%)	38 (100%)
Total	26 (26.5%)	72 (73.5%)	98 (100%)

Note: $\chi^2(2, N=98) = 2.62, p = .269$

Risky Sexual Behaviors

Age of Sexual Debut. All 268 participants completed the item, “Have you ever had sexual intercourse?” Of those, 105 (40%) had already initiated sexual intercourse by the age 15. Chi-square results show a statistically significant difference in the initiation of sexual intercourse among the three father warmth categories, $\chi^2(2, n=268) = 6.39, p = .41$. Subsequent chi-square analyses identified where the differences were located between groups. A 2×2 chi-square showed a significant difference between those who were father absent and those who received

low-moderate father warmth $\chi^2(1, n=148) = 5.25, p = .022$. There was also a significant difference between adolescents in the father absent group and those who received maximum warmth, $\chi^2(1, n=169) = 5.32, p = .021$. This set of analyses indicated that adolescent girls who experience the lowest amount of warmth were more likely to have had a sexual debut by the age of 15 (Table 4).

Table 4.

Father Warmth	Have you ever had sexual intercourse?		
	No	Yes	Total
Absent	22 (13.5%)	27 (25.7%)	49 (18.3%)
Low-Moderate Warmth	64 (39.3%)	35 (33.3%)	99 (36.9%)
Present, Maximum Warmth	77 (47.2%)	43 (41%)	120 (44.8%)
Total	163 (100%)	105 (100%)	268 (100%)

Note: $\chi^2(2, n=268) = 6.39, p = .041$

Of the 105 adolescent girls who reported having initiated sexual intercourse, 103 responded to the question, “How old were you when you had your first sexual encounter?” Responses ranged from 9 to 15 years old. An ANOVA revealed that the average age of first sexual encounter did not differ based on the level of reported father warmth, $F(2, 93) = .626, p = .537$. The average age of first sexual encounter among groups was 15 years old, suggesting that sexually active girls had only been active for a short period of time, due to the age of the same (15 years old).

Sexual Frequency/Recency. A one-way ANOVA revealed an overall effect for father warmth, $F(2, 263) = 5.47, p = .005$. Post hoc analyses using Bonferroni tests on all possible pairwise comparisons indicated that adolescent girls with no father warmth engaged in sexual intercourse nearly twice as frequently as girls with low-moderate warmth and as girls with high warmth, but that low-moderate warmth and high warmth did not differ on sexual

frequency/recency. Frequencies for sexual intercourse among the three groups are presented in Table 5.

Table 5.

Father Warmth	In the past 3 months, how often did you have sex?		
	N	Mean	SD
Absent	49	2.98	2.85
Present, Low-Moderate	100	1.59	2.46
Present, Maximum	117	1.66	2.59
Total	266	1.88	2.63

Note: $F(2, 263)=5.47, p<.01$.

Birth Control Use. Of the 105 girls who had already initiated sexual intercourse by age 15, 76 responded to the question, “In the past 3 months how much of the time did you or your sexual partner use any form of birth control (such as condoms, birth control pills, or spermicides) when you had sexual intercourse?” (Table 6). The results show no statistically significant difference in condom or birth control use between the three group $\chi^2(2, n=76) = .979, p = .613$.

Table 6.

Father Warmth	In the past 3 months, how often did you use birth control?		
	Less than 100% of the time	100% of the time	Total
Absent	13 (28.3%)	8 (24.2%)	21 (26.6%)
Present, Low-Moderate	17 (37.0%)	9 (27.3%)	26 (32.9%)
Present, Maximum	16 (34.8%)	16 (48.5%)	32 (40.5%)
Total	46 (100%)	33 (100%)	79 (100%)

Note: $\chi^2(2, n=76) = .979, p = .613$

STD Contraction. Of the 105 adolescent girls who had sex, 103 responded to the item, “Have you ever been told by a doctor or nurse that you had a sexually transmitted disease (sexual infection, STD) like syphilis, gonorrhea, chlamydia, or genital warts?” Seven girls (6.8%)

reported having contracted an STD (Table 7). Not surprisingly, given the small sample size, there were no statistical differences among different levels of father warmth, $\chi^2 (2, n=103) = 3.836, p = .147$.

Table 7.

Father Warmth	Have you been told you have an STD?		
	No	Yes	Total
Absent	13 (61.9%)	8 (38.1%)	21 (100%)
Present, Low-Moderate	14 (60.9%)	9 (39.1%)	23 (100%)
Present, Maximum	16 (50%)	16 (50%)	32 (100%)
Total	43 (56.6%)	33 (43.4%)	76 (100%)

Note: $\chi^2 (2, n=103) = 3.836, p = .147$.

Number of Sexual Partners. Of the 268 girls in the entire sample, 102 responded to the question, “In the past year, how many different sexual partners have you had?” (Table 8). An ANOVA revealed there was no significance difference in number of sexual partners between groups, $F(2, 99)=1.282, p > .282$. The sample sizes in each group were as follows: father absent (n=28), low-moderate warmth (n=37), and high warmth (n=37).

Table 8.

Father Warmth	In the past 12 months, how many different sexual partners have you had?		
	N	Mean	SD
Absent	28	3.00	1.19
Present, Low-Moderate	37	2.81	1.24
Present, Maximum	37	3.30	1.47
Total	102	3.04	1.32

Note: $F(2, 99)=1.282, p = .282$

Intentional Attempts at Conception. Of the 105 girls who had sex, 105 responded to the question, “Are you currently trying to get pregnant?” An overwhelming majority of the

sample reported not trying to get pregnant (Table 9). The chi-square results indicate that adolescent girl's father warmth is not statistically associated with purposefully trying to become pregnant, $\chi^2 (2, n=105) = 3.57, p = .167$.

Table 9.

Father Warmth	Are you currently trying to get pregnant?		
	No	Yes	Total
Absent	22 (81.5%)	5 (18.5%)	27 (100%)
Present, Low-Moderate	30 (85.7%)	5 (14.3%)	35 (100%)
Present, Maximum	41 (95.3%)	2 (4.7%)	43 (100%)
Total	93 (88.6%)	12 (11.4%)	105 (100%)

Note: $\chi^2 (2, n=105) = 3.57, p = .167$

Attitudes/Beliefs. Of the 268 girls in the entire sample, 265 girls responded to the question, "If a girl my age has sex, she proves that she's a woman" (Table 10). There was no significant association among group $\chi^2 (2, n=265) = .698, p = .705$.

Table 10.

Father Warmth	If a girl my age has sex, she proves she's a woman.		
	Disagree	Agree	Total
Absent	8 (17.4%)	41 (18.7%)	49 (18.5%)
Present, Low-Moderate	15 (32.6%)	83 (37.9%)	98 (37%)
Present, Maximum	23 (50%)	95 (43.4%)	118 (44.5%)
Total	46 (100%)	219 (100%)	265 (100%)

Note: $\chi^2 (2, n=265) = .698, p = .705$

CHAPTER 5

DISCUSSION

First, it was predicted that low father warmth was related to higher prevalence intergenerational teenage pregnancy. Of the 268 girls in the final sample, 263 responded to the item “Do you have any children?” Nineteen girls (7.2%) already had children thus making them active members of the intergenerational teenage motherhood cycle. Ninety-eight girls responded to the question, “In the past year, have you gotten pregnant, and 26 girls (26.3%) actually became pregnant. Though a seemingly small number, this portion of the sample provides support of an intergenerational teenage pregnancy cycle. The results, however, showed no connection between experiencing an early pregnancy and the amount of father warmth that is received. Thus, these results indicate that there may be other factors that influence the cycle of intergenerational teenage pregnancy.

It was also hypothesized that that father warmth would be related to more risky sexual behavior. For this particular sample, adolescent girls in father-absent homes were more likely to have initiated sexual intercourse by age 15 than those who grew up in father present homes. The results showed little difference between those who received low-moderate warmth from those who received high warmth, suggesting that any amount of father warmth is sufficient enough to influence the initiation of sexual intercourse for adolescent girls. In addition, a measure of sexual frequency/recency showed that those in father-absent homes engaged in sexual intercourse more frequently and recently than those who received higher levels of warmth. These findings are in support of the Balance Theory and indicate that father warmth is influential in reducing adolescent girls’ risky sexual behavior. Again, there were no differences in sexual frequency/recency between girls who received low-moderate

warmth and those who received high warmth. This suggests that any amount of father warmth is sufficient enough to influence adolescent girls' risky sexual behavior. Further, the lack of variation among these two groups may be the result of factors other than warmth. For instance, the current study included adolescent girls who identified having a father, but scored a 0 on the father warmth scale. It is possible that factors associated solely with the physical presence of the father, such as monetary support and higher parental monitoring may reduce the likelihood of risky sexual behavior among adolescent girls.

Other risky outcomes, such as birth control, condom use, and STD contraction did not vary in regards to father warmth. A possible explanation as to why some findings were null is that maternal warmth and discipline were not taken into consideration. It is possible that mothers learn to overcompensate for warmth in the absence of the father so that no differences were seen among those who participants who had absent fathers. Because maternal warmth was not a factor in this study, it is unknown whether maternal influences played a factor in the primary outcomes of this study. This study also examined attitudes and beliefs of adolescent girls born to teenage mothers. Given previous findings that adolescent girls may develop a predisposition for early pregnancy, it was expected that daughters of teenage mothers would have a more casual attitude towards teenage pregnancy. The results showed that father warmth did not influence attitudes towards sex in this sample. This suggests that there may be other protective factors that may influence their attitudes towards teenage pregnancy.

The foundation of Balance Theory lies in the assumption that African-American mothers and fathers socialize their children differently based on gender (Mandara & Murray, 2000; Mandara et al., 2005; Mandara et al., 2010). There are two parts to this theory. The

first explains the relationship between adolescent boys and their parent. This relationship is characterized by heightened warmth from their mothers and heightened discipline from their fathers. Adolescent boys were excluded from the current study; thus, the full theory was not examined. The second part of theory, which is of primary interest in the current study, explains the relationship between adolescent girls and their parents. The theory asserts that mothers impose more discipline and responsibility upon their daughters while fathers exude direct warmth to their daughters. The current study sought to examine the direct influence of father warmth and its influence on adolescent girl's risky sexual behavior. In general, girls struggle with internalizing problems, such as depression and low self-esteem (Skaggs & Jodl, 1999). Based on the theory, the relationship between fathers and daughters is characterized by high warmth or favor, which is expected to decrease adolescent girl's internalizing problems (Allgood et al., 2012). Although concepts such as self-worth and self-esteem were not factors in the current study, the results support the assumption that father warmth may influence certain risk behaviors performed by adolescent girls, which could potentially extend to impact externalizing behaviors like risky sex.

Birth order is also an integral part of the Balance Theory. In a study that explored mothers' differential treatment of sons and daughters, Mandara et al. (2010) found that the socialization of children under the assumptions of the Balance Theory differ between first born children and later born children. First born boys are similar to first born girls in that the eldest child is often given greater responsibility regardless of gender. However, later-born boys are more likely to receive the heightened mother warmth that the Balance Theory speaks of than are earlier born boys. In the Mandara et al. study, it was not necessarily increased warmth, rather a decrease in discipline, that accounted for the difference and they

concluded that birth order was able to moderate gender differences. Lacking from the Mandara et al. study, however, was an analysis including father-daughter relationships. That is, it is possible that a similar pattern exists for earlier born girls and later born girls. For example, perhaps the later born girls were more likely to receive the most warmth from their fathers. Given the secondary nature of the current study, birth order was not taken into consideration. Further, two limitations of this study have to do with father residential status. Previous studies have found differences in father-child relationships based on whether the father resided in the household with the child. Mitchell, Booth, and King (2009) examined levels of father involvement (e.g., shopping, attending social events and church with their fathers and communicating with their fathers on the phone or writing letters) among adolescents with nonresidential fathers. The study looked at father closeness based on adolescent reports, similar to the warmth questions in the current study. One of the primary goals of the Mitchell et al. study was to explore whether non-residential father involvement has a different effect on girls than it does for boys and they found that father involvement was equally distributed among sons and daughters. They also found that when differences were evident, sons experienced more involvement than daughters and the sons were more likely to spend quality time with their fathers by way of sporting events and overnight stays. Because there was often inconsistency in the reported father figure in the current study over time, father figure in one particular year was not used as a factor, because of the possibility of incorrect conclusions about the nature of father presence on the outcomes. Thus, future studies might explore whether residence of father figure in conjunction with inconsistencies of reported father figures over time are meaningful in relation to the outcomes

Another significant limitation of the current study was that timing of father absence was out of the scope of this study. Based on a national probability sample that reported father absence was able to predict early puberty at 14 years age (Bogaert), the currently study examined girls one year after this period, at 15 years of age. However, it is unclear for the current sample if fathers were consistently absent or just absent when data was collected at 15 years old. Most prominent in the field of father absence, Draper and Harpending (1982) and Hetherington (1972) propose 5 years of age to be the defining period in regards to the influence of absent fathers (biological or non-biological). Early father absence is defined as occurring before the age of 5; any time after is considered late father absence. In a longitudinal study across the United States and New Zealand, Ellis et al. (2003) examined the timing of father absence and its effect on daughter's early sexual debut and teenage pregnancy. Early father absence was defined as occurring before the age of 5, and late father absence was defined as father presence throughout the age of five, with absence occurring after the age of 5. In the Ellis et al. study, father presence was only measured up to the age of 13, suggesting that father involvement after this age may not be as influential on sexual risk behaviors that are likely to result in an early pregnancy. Thus, a future study might explore the timing of father warmth when it experienced during childhood as opposed to adolescence.

Next, previous studies in the area of intergenerational teenage pregnancy have preferred to focus solely on biological mothers in regards to the intergenerational effect (Campa & Eckenrode, 2006; Johnson & Tyler, 2007). In this study, the person most like a mother was considered in the analysis, that is, whether the adult in the mother-daughter dyads was a biological mother or a mother figure, such as grandmother, an aunt, or an older sibling was not taken into consideration. To complicate this matter, although not specifically

relevant in cross-sectional research, in this population, there are often inconsistencies in the person reported as most like a mother *and* the person reported as most like a father to the participants over time. That is, one year, a participant might identify that their biological mother is the person most like a mother to her; in the next year, she might identify that her aunt is the person most like a mother to her. This inconsistency might be more likely during teenage years when teenagers may experience more conflict with parental figures (Sentse & Laird, 2010). While possibly a limitation of this study, future studies, particularly studying this population, might take into consideration the inconsistency of parental figures and the role and influence of the community in child-rearing and thus risky outcomes. Finally, future studies may also explore maternal perspectives of experiencing motherhood as a teen and what values they instill in the own daughters that specifically encourage or discourage early pregnancy.

Policy implications

While there are several limitations in this current study, and thus possibilities for future studies, this study is still meaningful and there are implications for policy. Family based research plays an influential role in the process of designing family policies with the main goal of helping maintain family cohesion and stability. A prominent topic in the area of family policy is child support as it relates to parental involvement. The Child Support Recovery Act of 1992 makes the willful nonpayment of past due child support a federal crime punishable by imprisonment and/or a fine. Although both non-custodial mothers and fathers can be ordered to pay child support, the 2011 Census reported that only about 18.3% of custodial parents are fathers, suggesting that over 80% of all child support payments come from non-custodial fathers. This law was set in place to protect the financial welfare of

children being raised by a single parent and give non-custodial parents, most often fathers, greater incentives to contribute to their child's well-being.

Although created with the best intentions, the current child support policy places every father in the same category. However, there is a difference between fathers who are intentionally withholding funds from their children and those who simply cannot afford to pay. According to the most recent report by the Office of Child Support Enforcement (OCSE), many of these fathers live below the poverty line and do not have the financial means to pay their ordered amounts. While it is true that financial support is essential for optimal child development, the emotional context of father-child relationships is often neglected. This Recovery Act gives the impression that financial support should be the primary responsibility for all fathers. However, for fathers who cannot afford their court ordered payments, imprisonment creates a barrier for them in society and negates the relationship they can develop with their children.

The results of this study may be of particular interest to nonprofit organizations that focus on child and family policy advocacy and those interested in the need for community programs that increase involvement among fathers incarcerated due to lack of child support payments. More specifically, these findings may influence policy makers and legislators to take into account that fathers who are financially unstable can still be positive influences and contribute to their child's social and emotional development by being present and actively involved (Allgood et al., 2012; Carlson, 2006). More research is needed to understand the impact of non-custodial fathers who are not physically present, but are actively involved in their child's development.

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APPENDIX A
Measures for Father Warmth Variables

1. What person is most like a father to you? (MARK ONLY ONE ANSWER.)

I don't have anyone who is like a father to me

My father.....0

My stepfather.....1

My grandfather.....2

My uncle.....3

My foster father.....4

My mother's boyfriend.....5

My older brother.....6

Some other person.....7

Please tell us about this person who is most like a father to you.

1. I can usually count on him to help me out if I have some kind of problem.

I don't have anyone who is like a father to me.....0

Agree.....1

Disagree.....2

2. He usually keeps pushing me to do my best in whatever I do.

I don't have anyone who is like a father to me.....0

Agree.....1

Disagree.....2

3. We do fun things together.

I don't have anyone who is like a father to me.....0

Agree.....1

Disagree.....2

4. He usually helps me if there is something I don't understand.

I don't have anyone who is like a father to me.....0

Agree.....1

Disagree.....2

5. When he wants me to do something, he usually explains the reasons why.

I don't have anyone who is like a father to me.....0

Agree.....1

Disagree.....

6. He spends time just talking with me.

I don't have anyone who is like a father to me.....0

Agree.....1

Disagree.....2

APPENDIX B
Measures for Sexual Risk Variables

1. Have you ever had sexual intercourse?

Yes1
No.....0

2. In the past 3 months (90 days), did you have sexual intercourse?

No.....0
Yes, just once.....1
Yes, more than once...2

3. In the past month (30 days), did you have sexual intercourse?

No.....0
Yes, just once.....1
Yes, more than once...2

4. In the past week (7 days), did you have sexual intercourse?

No.....0
Yes, just once.....1
Yes, more than once...2

5. How old were you when you first had sexual intercourse?

I have never had sexual intercourse.....0
9 years old or younger.....1
10 years old.....2
11 years old.....3
12 years old.....4
13 years old.....5
14 years old.....6
15 years old.....7

6. In the past 3 months, how much of the time did you are your sexual partner use any form of birth control (such as condoms, birth control pills, or spermicides) when you had sexual intercourse?

None of the time.....0
Less than half of the time.....0
About half of the time.....0
Most of the time.....0
Always.....1

7. Have you ever been told by a doctor or nurse that you had a sexually transmitted disease (STD)?

Yes1

No.....0

8. In the past year (12 months), did you get pregnant or did you get someone else pregnant?

Yes1

No.....0

9. Are you currently trying to get pregnant?

Yes1

No.....0

10. If a girl my age has sexual intercourse, she proves that she is a woman.

Agree1

Disagree.....0

11. In the past year (12 months), how many different sexual partners have you had?

0.....0

1.....1

2.....2

3.....3

4.....4

5 or more.....5

12. Do you have any children?

Yes1

No.....0