ABSTRACT

Title of Dissertation: PATHWAYS TO EARLY PREGNANCY BY RACE/ETHNIC AND CLASS LOCATIONS: ADOLESCENT GIRLS' SELF-CONCEPTS AND AMBIVALENCE TOWARDS PREGNANCY

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An important paradox in adolescent pregnancy is that adolescent girls' stronger self-concepts (e.g., higher efficacy and self-esteem) are thought to reduce the likelihood of becoming pregnant: However, minority adolescents, particularly Black girls, have equal or stronger self-concepts than White girls, yet have higher pregnancy and birth rates in adolescence. Thus, the self-concept (or different components of the self) may operate differently for Black and Hispanic girls than White girls, either being positively related or unrelated to pregnancy. One way to disentangle the paradox is to focus on girls' feelings about becoming pregnant and their initial sexual decisions, which serve as more proximate determinants and occur prior to contraceptive behaviors and the occurrence of pregnancy.

Based on a theoretical framework grounded in intersectionality and symbolic interactionism and utilizing the National Longitudinal Study of Adolescent Health (Add

Health, N = 5,735), this dissertation examines the influence of adolescent girls' self-concepts, including self-efficacy, perceived mattering, self-esteem and possible selves, on two primary outcomes—feelings of ambivalence towards pregnancy and the transition to first sexual intercourse—and how these relationships vary by race/ethnicity and social class. Statistical methods include discrete-time event history analysis and OLS and logistic regression.

Results generally indicate that stronger self-concepts, in particular self-efficacy, mattering, and educational possible selves, are protective against girls' feelings of ambivalence towards pregnancy one year later. Two- and three-way interactions reveal that the relationship between educational expectations and aspirations and ambivalence varies by girls' race and class locations. Educational aspirations are protective for high-SES White girls and low-SES Black girls whereas educational expectations are protective for low-SES White and high-SES Black girls. Girls' perceived mattering is protective against an early transition to first sexual intercourse, particularly for low-SES girls. Ambivalence towards pregnancy is positively related to an early transition to first sexual intercourse and this relationship varies by race/ethnicity and class. This dissertation highlights contingencies by race/ethnic and social class locations and the complexity of the influence of girls' self-concepts in understanding the pathways leading to adolescent fertility.

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Dissertation submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
2010

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Dedication

This dissertation is dedicated to my late maternal grandparents, Hugh and Betty Sherman.

Acknowledgements

I would like to thank Melissa Milkie, Joan Kahn, Suzanne Bianchi and Reeve Vanneman for the mentorship and guidance they have given me throughout my time at Maryland. I would also like to thank Kris Marsh, Jeff Lucas, and Sandra Hofferth for serving on my dissertation committee. Also, thanks to my parents, Jay and Robin Kendig, and my aunt, Stephanie Sherman, as well as Betsy Thorn, Catherine Warner, and Amber Nelson for their advice and encouragement. Last, I would like to thank my late grandmother, Betty Sherman or Mama, an exemplar of strength, for thirty years of love and support.

This research uses data from Add Health, a program project directed by Kathleen Mullan Harris and designed by J. Richard Udry, Peter S. Bearman, and Kathleen Mullan Harris at the University of North Carolina at Chapel Hill, and funded by grant P01-HD31921 from the Eunice Kennedy Shriver National Institute of Child Health and Human Development, with cooperative funding from 23 other federal agencies and foundations. Special acknowledgment is due Ronald R. Rindfuss and Barbara Entwisle for assistance in the original design. Information on how to obtain the Add Health data files is available on the Add Health website (http://www.cpc.unc.edu/addhealth). No direct support was received from grant P01-HD31921 for this analysis.

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Chapter 1: Introduction and Overview

The sexual and reproductive behavior of adolescents continues to be a controversial topic among policymakers, researchers, and the general public. Renewed interest in the issue has been sparked with the recently reported reversal in the steady decline of the teen pregnancy and birth rates since the early 1990s (Hamilton, Martin, and Ventura 2009). Although it is too early to determine whether this increase is the start of a new trend or a two-year anomaly, this upturn, as well as the very high absolute levels of adolescent pregnancy and fertility in the U.S. compared to other nations, has called into question our existing knowledge of and strategies for addressing adolescent fertility.

Racial/ethnic and class differences persist in early reproductive outcomes with Black and Hispanic girls having higher rates of adolescent pregnancy and childbearing than White adolescents (Abma et al. 2004). An important paradox in adolescent pregnancy is the fact that adolescent girls' stronger self-concepts (e.g., higher efficacy and self-esteem) are thought to reduce the likelihood of becoming pregnant: However, minority adolescents, particularly Black girls, have stronger self-concepts than White girls, yet have higher pregnancy and birth rates in adolescence. Thus, the self-concept may be less protective against pregnancy for certain groups depending on their race/ethnicity or class. This dissertation seeks to disentangle this paradox utilizing a theoretical framework grounded in intersectionality and symbolic interactionism.

Intersectionality emphasizes the complex and interlocking nature of race, class, and gender in contemporary society. These systems of power are not independent but are strongly related to each other and work in unique ways depending on the institutional or interactional setting (King 1988; Zinn & Dill 1996). An intersectional approach can be

applied to the study of adolescent sexuality to better understand racial/ethnic and class differences in adolescents' sexual behavior, which are partially driven by factors such as differential treatment by institutions and imagery in mass media and culture that shape youths' notions of gender and sexual relations (Collins 2004).

Following symbolic interactionism, a major social psychological theory, the self-concept is both a social product and force; constrained by structure yet agentic. The self-concept motivates behavior and is particularly important for adolescents (Rosenberg 1986; Wells & Stryker 1988). Girls' self-concepts, especially self-efficacy and 'possible selves' (or who girls think they will and can become in the future) likely play a part in the pathways leading to adolescent pregnancy. The self may be more influential on girls' feelings about pregnancy and their initial sexual decisions, which serve as more proximate determinants that come prior to the occurrence of pregnancy.

A central concept employed in this dissertation is ambivalence. Rather than assuming that intention is the basis of pregnancy, this research acknowledges the ambiguity surrounding pregnancy and seeks to identify and understand why some adolescents have uncertain or conflicting feelings about becoming pregnant and others do not. Although researchers agree that moving beyond the concepts of intendedness and wantedness is necessary, the measurement of ambivalence is still in development in the adolescent pregnancy literature. The Add Health dataset does not have a perfect measure of ambivalence but it has the best measure of the concept among the nationally representative datasets. Moreover, the strength of the desire to avoid pregnancy and ambivalent and favorable feelings towards pregnancy are important for understanding adolescents' reproductive behaviors (Ryan et al., 2007; Zabin et al 1993).

Utilizing the National Study of Adolescent Health (Add Health), this dissertation's main focus is examining the influence of adolescent girls' self-concepts on their ambivalence towards pregnancy and their transition to first sexual intercourse by race/ethnicity and social class. There are two main justifications for this study: 1.) adolescent pregnancy as a social problem—including the recent upturn in and high levels of adolescent pregnancy and fertility in the U.S., persistent race/ethnic and class disparities in the pregnancy and birth rates, and the likely negative outcomes of adolescent childbearing; and 2.) a motivation in the form of understanding the paradox among selves, race, and pregnancy in the adolescent pregnancy literature. I will next review the two motivating factors and then discuss the conceptual framework for this dissertation.

Adolescent Pregnancy as a Social Problem

The first motivation for this dissertation is the high levels of and recent rise in adolescent pregnancy and childbearing in the U.S., the persistent race/ethnic and class disparities in adolescents' sexual and reproductive behaviors, and the likely negative outcomes for adolescent parents. These trends indicate that more research is needed that carefully explores the divergent pathways to pregnancy and to identify which factors matter more for girls depending on their race/ethnicity and class. Although this study will not directly examine trends in or outcomes of adolescent pregnancy, I will briefly discuss the recent trends and race/ethnic gaps in U.S. adolescent pregnancy and reasons for concern before turning to the second motivation.

The United States has the highest adolescent pregnancy and birth rates compared to other developed countries (Saenz and Conde 2009). For example, the U.S. birth rate is

eight times higher than Japan's birth rate and 1 ½ times higher than the United Kingdom. This cross-national disparity has been recently accompanied by an increase in the adolescent pregnancy and birth rates in the U.S.

The pregnancy rate for adolescents in the U.S. declined one-third since its most recent peak in the early 1990s, which has been determined to be attributable to increased contraceptive use and reduced sexual activity. However, there has been a small recent rise in the pregnancy rate from 2005 to 2006 of about three percent (Alan Guttmacher Institute, 2010). A similar pattern is found with the U.S. birth rate with a large decline since the peak in 1991 and a recent drastic slowing of the downward trend. In 2003 and 2004, the teen fertility rate declined about one percent, the smallest annual reductions since 1991 (Martin et al. 2009). The adolescent birth rate has increased five percent between 2005 and 2007 (Hamilton et al., 2009; Martin et al., 2009). Researchers have determined that the increase in the birth rate is due to a true rise in pregnancies rather than the result of fewer abortions (Santelli, 2009).

Even though it is a small increase and may not continue in future years, the recent uptick does indicate that the trends are changing and the decline in the pregnancy and birth rates has likely halted. This increase is also troubling given the already high level of pregnancy in the U.S. compared to other nations. Although some uncertainty exists as to whether this reversal is a temporary upturn or the start of a more persistent upward trend, it has renewed prevention efforts and sparked debate among policymakers, researchers, and the media with many policymakers and researchers criticizing the George W. Bush administration's emphasis on abstinence-only education (Boonstra 2007).

Also, sharp race/ethnic and class disparities in adolescent pregnancy and fertility rates persist in the U.S. In the latest available year of data, 2006, the pregnancy rates for Blacks and Hispanics are comparable—126 pregnancies per 1,000 Hispanic girls and 127 pregnancies per 1,000 Black girls—whereas the rate for White girls was much lower at 44 pregnancies per 1,000 girls (Alan Guttmacher Institute, 2010). The trends in the birth rates by race/ethnicity are similar to the pregnancy rates. However, Hispanic girls have a higher birth rate than Black girls despite having similar pregnancy rates, which is partially explained by a higher abortion rate among Blacks than among Hispanics. In 2007, the birth rate was 27.2 births per 1,000 non-Hispanic White girls, 64.3 births per 1,000 non-Hispanic Black girls, and 81.7 births per 1,000 Hispanic girls (Hamilton et al. 2009).[1]

Adolescent childbearing often results in negative health and economic outcomes for teenage parents and their children. Pregnant adolescents are more likely than older women to receive late or no prenatal care; engage in poor prenatal health behaviors; have below-healthy maternal weight gain; and have gestational hypertension and anemia (Meade and Ickovics 2005; Menacker et al. 2004; Ventura et al. 2001). In addition, pregnant teenagers are more likely to have a pre-term delivery and low birth weight baby, thus increasing the risk of infant and child developmental delay, illness, and mortality (Martin et al. 2009; Meade and Ickovics 2005; Menacker et al. 2004; Saenz and Conde 2009; Ventura et al. 2001).

[1]Also, Hispanic girls are less likely to use contraception during their first sexual intercourse than non-Hispanic White and Black girls. Also, twenty-five percent of non-Hispanic Black female adolescents were unprotected during their most recent sexual intercourse compared to ten percent of non-Hispanic White female adolescents (Abma et al. 2004).

Negative health effects for the mother and child have also been documented for unintended pregnancies (Cheng et al. 2009; Gipson et al. 2008; Hellerstedt et al. 1998). Adolescent girls have the highest proportion of unintended pregnancies with 82 percent and 78 percent of pregnancies for females less than 15 years of age and 15 to 19 years of age, respectively (Henshaw 1998). Moreover, adolescents ages 15 to 17 are the least likely (44 percent) to end their unintended pregnancies by abortion compared to females of other age groups (Henshaw 1998). Thus, there may be an additive or multiplicative effect on negative outcomes for unintended adolescent pregnancies, which constitute the majority of pregnancies among adolescents.[2]

In addition to health concerns, adolescent motherhood often affects women's socioeconomic status via an increased risk of poverty and a diminished likelihood of labor force participation and educational attainment (Driscoll et al. 2001; Furstenberg et al. 1987; Hobcraft and Kiernan 2001; Hofferth et al. 2001; Martin et al. 2009; Meade and Ickovics 2005; Saenz and Conde 2009). It is important to note that many adolescent mothers and fathers are economically and socially disadvantaged with limited opportunities *prior* to pregnancy and childbirth. However, early parenthood serves to exacerbate economic inequalities and further disadvantage these teenagers and their children, thus reproducing social inequality through generations (Driscoll et al. 2001; Furstenberg et al. 1987; Hobcraft and Kiernan 2001).

[2]Additionally, repeat adolescent pregnancy and childbearing, which is not uncommon, greatly increases the negative health and socioeconomic effects for teen parents and their children (Ventura et al. 1998). The second birth rate for adolescents stabilized at 174 second births per 1,000 adolescent females in 1999 or, in other words, about 17 of teenagers who have already had one child give birth to a second child each year (Ventura et al. 2001).

Overall, young mothers are much more likely to feel that their births are unintended, mistimed, and unwanted than older mothers (Abma et al 2004). It is clear that if early childbearing is delayed, even by a few years, it is likely to be preferable to most (but not all) girls and can help deter some negative health and economic consequences.

Given the high rates of adolescent pregnancy and childbearing relative to other developed countries, the recent upward trend in teen births in the U.S, the persistent race/ethnic disparities, and the likely negative outcomes for adolescent mothers and their children, additional research with a rethinking of theoretical frameworks is needed to assess the complexities of adolescent pregnancy and childbearing. Next, I discuss the second main motivating factor for this study that I found while integrating the literatures on the self-concept and on adolescent pregnancy—the paradox of selves, pregnancy, and race.

The Paradox of Selves, Pregnancy, and Race

The second motivating factor for this research is a possible paradox in the relationship between girls' self-concepts and pregnancy depending on race/ethnicity and class. Stronger self-concepts are thought to reduce the likelihood of becoming pregnant (Driscoll et al. 2001; Salazar et al. 2005). However, minority adolescents, particularly Black girls, have stronger (or at least equal) self-concepts compared to White girls (Lewis et al. 1999; Milkie 1999; Simmons and Rosenberg 1975); yet have higher pregnancy and birth rates in adolescence (Saenz and Conde 2009; Ventura et al. 2008). Thus, the self-concept may operate differently (i.e., either unrelated or positively related) for Blacks and

Hispanics rather than the protective effect that a strong self-concept may have for White adolescent girls.

A small body of research has examined race/ethnic differences in the relationship between particular components of girls' self-concepts and the transition to first sexual intercourse or the occurrence of pregnancy or childbirth (Bearman and Bruckner 2001; Day 1992; Driscoll et al. 2005). Overall, this research has produced varied findings. For example, some studies have found that higher self-efficacy and self-esteem are associated with a later age at sexual initiation for White and Hispanic girls but not for Black girls (Bearman and Bruckner 2001; Day 1992) yet other studies have found that these self-concept components are predictive of the transition to first sex and pregnancy for minority but not for White adolescents (Berry et al. 2000; Felton and Bartoces 2002).

Also, several studies have found that educational expectations are associated with sexual intercourse and pregnancy for Black girls whereas educational aspirations are influential for White girls (Hockaday et al. 2000; Lauritsen 1994). In contrast, Driscoll et al. (2005) found that educational expectations were protective for White and Hispanic girls but not for Black girls and Manlove (1998) found that educational plans were related to pregnancy for Black and Hispanic girls but not for White girls. However, the self-concept was not the primary focus of these studies (with the exception of Driscoll et al 2005) and thus the authors did not theoretically ground their research in theories of the self nor did they discuss these findings in detail.

This dissertation builds on this small and complex but promising line of research with a careful examination of race/ethnic and class differences in the influence of the self-concept on ambivalence and the transition to first sex. These studies (with the

exception of Driscoll et al. 2005) do not consider race/ethnic and class intersections and only control for class rather than carefully examining class differences. Furthermore, this research typically only includes self-concept measures as controls rather than explicitly focusing on the self-concept (with the exception of Driscoll et al. 2005) and only focuses on one component of the self-concept (with the exception of Day 1992). This dissertation fills this gap in the research with a focus on more proximate determinants of adolescent pregnancy including ambivalence and first sexual intercourse; comparisons across four components of the self-concept; and consideration of both race/ethnicity and class. Moreover, this dissertation is theoretically driven by symbolic interactionism and intersectionality that allows for a better understanding of the relationships among selves, race, and pregnancy.

Conceptual Framework

Figure 1.1 provides the conceptual framework for this dissertation to address the following four research questions: 1.) How do girls' self-concepts influence their feelings of ambivalence towards pregnancy? 2.) How does the relationship between girls' self-concepts and ambivalence vary by race/ethnicity and class? 3.) How do girls' self-concepts and ambivalence towards pregnancy influence their timing of first sexual intercourse? 4.) How does the influence of girls' self-concepts and ambivalence on their timing of first sexual intercourse vary by race/ethnicity and class?

[Figure 1.1 about here]

Utilizing three waves of the restricted-use dataset of the National Longitudinal Study of Adolescent Health (Add Health), the self-concept, measured at Wave I, includes four components—self-efficacy, perceived mattering, self-esteem and possible selves.

This dissertation focuses on the influence of girls' self-concepts on their feelings of ambivalence towards pregnancy one year later and their transition to first sexual intercourse between one and five years later. I also examine how the influence of girls' self-concepts on their feelings of ambivalence and the timing of first sexual intercourse varies by girls' race/ethnic and class locations. Additionally, I examine the impact of girls' feelings of ambivalence towards pregnancy on the timing of first sexual intercourse and how this may vary by race/ethnicity and class. Supplemental analyses include an examination of the influence of the self-concept and ambivalence towards pregnancy on girls' contraceptive use at first sexual intercourse and the occurrence of a pregnancy in adolescence.

I have several hypotheses about the influence of the self-concept on ambivalence and the transition to first sex and how this may vary by race/ethnicity and class. Based on symbolic interactionism which argues that the self-concept motivates feelings and may be especially pertinent for adolescents, I predict that girls with stronger self-concepts will have less ambivalent or more negative feelings towards becoming pregnant in adolescence than girls with weaker self-concepts. For example, girls who feel that they are in less control of their lives (self-efficacy) and who perceive fewer life options (possible selves) may be more ambivalent about whether they become pregnant than girls who feel efficacious and who have alternative expectations for the future. I also predict that girls with stronger self-concepts will be less likely to have an early transition to first sexual intercourse than girls with weaker self-concepts. I expect that some components of the self are likely to be more influential than others—for example, I predict that self-

esteem will have less of an impact on girls' feelings towards ambivalence and the timing of first sex than self-efficacy.

Based on intersectional theory, I predict that the influence of girls' self-concepts on their feelings of ambivalence and the timing of first sex will be stronger for middle-class, white girls than for other groups of girls. Current models of adolescent sexual behavior that tend to apply to middle-class White girls do not predict Black and Hispanic girls' behaviors well. This finding has been speculated to be the result of different sexual and gender scripts among peer groups, families, and partners by race/ethnicity and class. I also predict that girls who are ambivalent or more positive about becoming pregnant in adolescence will have an earlier transition to first sexual intercourse and that this relationship may vary by race/ethnicity and class.

Next, in Chapter 2, I discuss the theoretical frameworks of intersectionality and symbolic interactionism and review the literature on the connections between the self, ambivalence, and girls' sexual and reproductive behavior. Chapter 3 details the dataset, measurement, and analysis plan for the dissertation. The first results chapter, Chapter 4, provides results of the analysis focusing on the influence of girls' self-concepts on their feelings of ambivalence towards pregnancy and how this may vary by race/ethnicity and class. Chapter 5, the second results chapter, discusses results of the analysis of the effect of girls' self-concepts and feelings of ambivalence on the timing of first sexual intercourse as well as provides results from supplemental analyses. Chapter 6 discusses the conclusions and implications of this dissertation.

Chapter 2: Theoretical Framework and Literature Review

In this chapter, I first discuss the two theoretical perspectives that are utilized in this dissertation—intersectionality with a focus on race/ethnicity and class intersections and symbolic interactionism with an emphasis on the self-concept. Following this, I discuss the concept of ambivalence towards pregnancy and the importance of this factor in understanding adolescent pregnancy.

An Intersectional Approach: Racial/Ethnic and Class Intersections

Intersectionality

Intersectional theory is utilized in this dissertation to understand how the pathways leading to adolescent pregnancy are differentially experienced for particular groups of adolescent girls by race/ethnicity and class. Several emphases of intersectionality frame and parallel the goals of this dissertation. In particular, intersectionality emphasizes the transmission of gender and sexual ideologies through self-definition, which influence adolescents' perceptions, such as ambivalence towards becoming pregnant, and behavior, such as first sexual intercourse. Intersectionality also focuses on the intersection of race/ethnicity and class rather than privileging one identity or system over the other.

Intersectionality emphasizes the complex and interlocking nature of race, class, and gender in contemporary society. These systems of power are not independent but are strongly related to each other and work in unique ways depending on the institutional or interactional setting (King 1988; Zinn & Dill 1996). I employ McCall's (2005:1771) intercategorical approach and definition of intersectionality as, "…the relationships among multiple dimensions and modalities of social relations and subject formation."

With an initial emphasis on the unique experiences of Black women, intersectional theory emphasizes the complexity and multiplicity of the oppressed locations of marginalized groups (Collins 1993). Rather than studying race, class, and gender as separate systems of power, it is necessary to recognize these identities simultaneously, such as the positions of lower-class Hispanic girls compared to other groups. Collins (1990:18) states, "Intersectional paradigms remind us that oppression can not be reduced to one fundamental type and that oppressions work together in producing injustice." Intersectionality and standpoint theories call for the dismantling of dominant ideologies through understanding how social problems, in this case, adolescent pregnancy, are differentially experienced by various groups.

Intersectionality and Sexuality

An intersectional approach can be applied to the study of adolescent sexuality to better understand racial/ethnic and class differences in adolescent sexual behavior. Collins (2004:11) defines sexuality as "…an entity that is manipulated within each distinctive system of race, class, and gender oppression, for example, the importance of rape to patriarchy…Sexuality can also be seen as a site of intersectionality, a specific constellation of social practices that demonstrate how oppressions converge." Moreover, Collins states (2004:6) that the majority of social groups "encounter distinctive sexual politics based on their placement in systems of gender, race, and sexuality." Collins (2004) further argues that issues of gender and sexuality are deeply interlocked with social inequality, including the 'new' more hidden racism, in contemporary U.S. society.

Race/ethnic and class differences in young men and women's sexual behavior are partially driven by factors such as differential treatment by institutions and imagery in

mass media and culture that shape youths' notions of gender and sexual relations (Collins 2004). Current models of adolescent sexual behavior that apply to white girls have not predicted Black girls' behaviors well. This may be the result of this differential institutional and cultural treatment at the macro-level which exposes girls to different sexual and gender scripts among peer groups, families, and partners depending on their particular race/ethnic and class locations, which in turn influence their sexual perceptions and behaviors (Cavanagh 2004, 2007).

Regardless of race, ethnicity, and class, youth are faced with normative expectations regarding gender that impact their perceptions of masculinity, femininity, and gender relations (Collins 2004). The ways in which race, class, gender, and sexuality intersect operate at the institutional level and in social interactions (Collins 1993; King 1988; Zinn and Dill 1996). At the structural level, Collins (2004:6) explains that Black gender ideology, "…is not simply a benign set of ideas affecting individual African American women and men. Instead, it is used to justify patterns of opportunity and discrimination that African American women and men encounter in schools, jobs, government agencies, and other American social institutions."

In addition to discrimination, culture and mass media also mediate structural inequalities and the everyday oppression of particular groups. Collins (2004:17) explains, "In the post-civil rights era, Black popular culture and mass media have both grown in importance in creating ideologies of inequality…Black popular culture…is indicative of larger political and economic forces on the macro level that in turn influence the micro level of everyday behavior among African Americans." Culture is a site of resistance and domination and is shaped by material circumstances and realities. Collins

(2003:112) borrows the following definition of culture, which is composed of, "…the symbols and values that create the ideological frame of reference through which people attempt to deal with the circumstances in which they find themselves (Mullings 1986a:13)." There is no 'one' culture for a particular group of people, but rather there are multiple cultures among groups which are socially constructed and together form a collective culture (Collins 2003).

Similar to mass media, the family also mediates the relationship between structural power relations and the lives of those in marginalized groups. Power inequalities and the interlocking nature of race, class, gender and sexuality are often masked under family rhetoric that normalizes the process of sexism, racism, and capitalism (Collins 2001). Gender and age hierarchies "…not only exist within families but are deemed to be natural, normal, and necessary for family survival" (Collins 2001:12). For example, violence against women is normalized within the American family rhetoric and domination and love become enmeshed (Collins 2001). Normative gender expectations are enacted through the family and within romantic relationships. Collins (2004:257) describes Black youth's relationships where young men claim their masculinity by convincing young women to help them with their homework and to be sexual partners, but ultimately, "Their masculinity remains fragile because it is predicated upon female subordination." Also, differential treatment of sons and daughters in African American families is often the result of mothers' attempt to protect their sons from the 'realities of street culture' (Collins 2004).

Evident in Black women's culture are the forms of opposition of self-definition and self-valuation. Self-definition refers to, "…challenging the political knowledge-

validation process that has resulted in externally-defined, stereotypical images of Afro-American womanhood" (Collins 2003:106). In other words, self-definition involves recognizing and revealing the power dynamics involved in the production of stereotypes. "The insistence on Black female self-definition reframes the entire dialogue from one on determining the technical accuracy of an image, to one stressing the power dynamics underlying the very process of definition itself" (Collins 2004:106). According to Collins, self-valuation, "…stresses the content of Black women's self-definitions—namely, and replacing externally derived images with authentic Black female images" (Collins 2003:106). In other words, self-valuation attempts to alter the distorted stereotypes of Black women, especially those that were crafted to offset the "…aspects of Black female behavior seen as most threatening to white patriarchy" (Collins 2003:107). Self-valuation and self-definition in Black women's culture assist Black women in realizing their oppression and in attempting to change their circumstances (Collins 2003). These ideas and values are linked to particular practices, such as the interpersonal relationships that Black women share with each other and with their own and each other's children.

A central tenet of an intersectional approach is to treat race, class, gender, and sexuality as intersecting versus competing frameworks without ranking oppressions (Collins 2004). For example, Collins (2004:78) discusses the intersection between race and class, "Ideally, African American children growing up in middle-class neighborhoods would retain the class benefits provided by their parents. There is some evidence that passing on middle-class economic gains in the post-civil rights era may be far more difficult than originally thought…" Rather than merely controlling for race/ethnicity and

class independently or assuming that race/ethnic differences can be explained completely by differences in socioeconomic status, I carefully consider the experiences of the combinations of identities by race/ethnicity and class in understanding adolescent pregnancy.

Divergent Pathways by Race/Ethnicity and Class

It is well-known that racial/ethnic and class differences persist in early reproductive outcomes with Black and Hispanic and lower-income girls having higher rates of adolescent pregnancy and childbearing than White and higher-income adolescents (Abma et al. 2004). However, uncertainty lies in whether the process leading to adolescent pregnancy differs by race/ethnicity and class. Although an intersectional approach argues for a consideration of the unique experiences of particular groups by race, gender, and class, empirical research on the consistencies and contiguities by race/ethnicity and class in adolescent pregnancy is varied.

Although middle-class women delay marriage and especially childbearing, poor women delay or forego marriage but still have children relatively early (Edin and Kefalas 2005). Edin and Kefalas (2005) argue that, among low-income, urban single mothers (three-quarters of whom had children in their teens), class disparities are largely responsible for differences in women's experiences of and attitudes toward motherhood and marriage. The women they interviewed view children as a necessity, source of identity, and solution to problems. Children provide an opportunity to prove one's worth. These women still have high hopes for marriage, but it is not realistic given their small pool of marriage men and their difficult life circumstances. Rather than viewing a nonmarital birth as a personal failure, these women see it as an 'act of valor.' "The real

tragedy, these women insist, is a woman who's missed her chance to have children" (Edin and Kefalas 2005:6).

Although Edin and Kefalas argue that class is the real divide in behaviors and attitudes leading to nonmarital (and early) fertility, some differences by race and ethnicity were evident among the low-income women. For example, Hispanic and Black women were more likely to explicitly plan their pregnancies than White women and Black women were more likely to aspire to marriage than White and Hispanic women (Edin and Kefalas 2005). Furthermore, the problems encountered in relationships varied by race and ethnicity with Hispanic and White women experiencing more domestic violence and Black women dealing more often with their partners' incarceration and criminal behavior. Interviews with middle-class women about their experiences and views on childbearing and marriage would have strengthened the authors' argument about class differences.

Aligning with Edin and Kefalas's qualitative findings, several quantitative studies have found that neighborhood disadvantage solely or largely accounts for the racial differences found in adolescent sexual behavior (Brewster 1994; Browning et al. 2004; Browning and Burrington 2006). However, Santelli et al. (2000) found that adjusting for socioeconomic status (and family structure) only had a minimal effect on the relationship between race/ethnicity and adolescent sexual behaviors. Aneshensel et al. (1989) also found that race/ethnic differences in adolescent fertility remained strong when socioeconomic status was controlled for in a comparison of Mexican American and non-Hispanic White girls.

Furthermore, people can be selective in relating to a local context by seeking out certain opportunities and avoiding particular constraints and by choosing where and with

whom they spend their time (Entwisle 2007). For example, Harding's (2007) study finds that disadvantaged neighborhoods, more so than advantaged neighborhoods, are characterized by cultural heterogeneity in that competing and conflicting cultural scripts regarding pregnancy and romantic relationships are present within disadvantaged neighborhoods. Further, adolescents' cultural scripts are poorly predictive of their actual behavior in more heterogeneous neighborhoods (Harding 2007).

Testing propositions from Edin and Kefalas's study using data on low-income mothers, Cherlin et al. (2008) found strong support for the notion that childbearing outside of marriage is not stigmatized; but found limited support that women prefer to have children well before marriage. For example, very few women believed that having a child under the age of 20 was the best time to start having children (Cherlin et al. 2008). Also, race/ethnic differences were evident in these attitudes among low-income women; for example, African American women were more likely to support childbearing before marrying compared to Hispanic and White women (Cherlin et al. 2008).

Several additional studies have found race/ethnic differences in expectations for marriage and childbearing. East (1998) found that Hispanic girls desired rapid transitions at a young age whereas Blacks perceived a greater likelihood of nonmarital childbearing. Likewise, Crissey (2005) found that White adolescents were more likely to expect to marry in adulthood than Black adolescents. Driscoll et al. (2001) argue that class cannot completely explain differences by race/ethnicity in adolescents' sexual and reproductive attitudes and behavior and that cultural differences mediated through family and peers are partially responsible. For example, the authors discuss how the higher pregnancy and

birth rates of Hispanics may be explained by the strongly held value that motherhood is an end in itself in the Latino culture (Driscoll et al. 2001).

The influence of friendships on adolescents' sexual behavior varies by race/ethnicity and class. Cavanagh (2004) found that Hispanic and White adolescents were influenced by friendship group characteristics whereas Black adolescent girls were unaffected by their friends in regard to sexual debut. Particularly for Hispanic girls, the presence of older boys in their friendship groups was closely related to sexual debut (Cavanagh 2004). She attributes this finding to the Latina culture that reflects more traditional gender norms of machismo. Bourdeau (2008) also argues for the strong impact of machismo on adolescent girls' sexuality. Giordano et al. (1993) found that Black adolescents reported lower levels of intimacy with friends and rated having close friends as less important than reported by White adolescents.

Adolescents' idealized notions of romantic relationships differ by race, gender, and peer networks (Cavanagh 2007). Cavanagh (2007) reported that Blacks' romantic behaviors and ideals are less peer-based than Whites' romantic relationships. Similar to other studies, the proposed model in her study did not apply to Black adolescents' experiences. She argues that factors which are influential for Hispanics and Whites may not be for African Americans since they are overly sexualized in American culture. Cavanagh (2007:577) explains, "Given that…African American youth often experience weaker social norms against sexual expression, the romantic ideals…may be less salient to their actual behaviors in romantic relationships than other young people (girls and Whites) who face stronger social controls against romantic activity in general and sexual behaviors in particular..." For example, pubertal timing, which is not linked to Black

girls' sexual debut, may be less of a sign of sexualization for Black girls than it is for White and Latina girls (Cavanagh 2004). In general, Cavanagh attributes racial/ethnic differences to different sexual scripts that guide behavior, differing social meanings attached to puberty, friendships, gender, sexuality, and adolescence.

The family is a site of cultural transmission in which dominant gender ideologies impact adolescents' sexuality. Adolescents whose family members are more accepting of early pregnancy and parenthood and see these early transitions as normative are more likely to engage in behaviors leading to these outcomes (Bettie 2003; Kapinus and Gorman 2004). Adolescents in families in which older siblings have had adolescent pregnancies or births are more likely to have an early pregnancy or birth themselves. Lending to the intergenerational pattern of teenage childbearing, research has found strong evidence that siblings of teenage parents are at a very high risk of teenage pregnancy (East et al. 2009; East and Kiernan 2001; Cox et al. 1993). For example, East et al. (2009) found, during interviews with Hispanic girls, that younger sisters of older siblings who were teen parents believed that early parenting would not be a hardship and that they wanted to have a baby too.

Research has hypothesized that Black and Hispanic families, especially mothers, condone their daughters' early pregnancy and motherhood by supporting profertility norms and providing childrearing networks to their daughters (Brubaker and Wright 2006; Driscoll et al. 2001). However, evidence is varied with some studies finding that early motherhood in Black families can produce conflicts due to mothers' disapproval of their daughters' early pregnancies and decisions to not resolve the pregnancies (Brubaker and Wright 2006). However, Brubaker and Wright (2006) also noted some mothers'

ambivalence or support of their daughters' pregnancies. Milan (2006) found that Hispanic girls reported less parental pressure to use contraception and placed less importance on parental values than Black girls.

Hispanic mothers are less likely to communicate with their daughters about sexual intercourse than non-Hispanic Black and White mothers (Guilamo-Ramos et al. 2006; Pearson et al. 2006). Among non-Hispanic mothers, Black mothers discuss sex more frequently with their daughters than White mothers (Pearson et al. 2006). Additionally, the relationship between communication and sexual intercourse operates differently by race/ethnicity. Pearson et al. (2006) found that parental communication about sex was related to the initiation of sexual intercourse for White and Hispanic girls, but was unrelated to the initiation of sex for Black adolescent girls. Also, studies on African American families point to the role of parents fostering ethnic pride in reducing Black girls' risky sexual behaviors (Wills et al. 2007; Murry et al. 2005).

Race and class interact to shape intergenerational gender expectations within families (Hill and Sprague 1999; Hill 2002; Lewis 1975; Townsend 2008). Townsend (2008:432) advocates the use of intersectionality to understand adolescent girls' sexuality and explains that the impact of both racism and sexism for Black women helps create, "…a defensive stance in which resistance is essential for survival…African American women develop strategies to defend against societal threats, while socializing their daughters to develop the same defenses. Given the long history of sexual exploitation experienced by African American women, it stands to reason that this defensive stance would emerge in the sexual domain."

Similar to Collins' (2004) discussion on the intersection of race and class for youth, Bettie (2003:159) explains "The correlation of race and poverty promotes the common-sense belief that middle-class and whiteness are one and the same; as a result Mexican-American students must negotiate educational mobility with the broader social perception that this mobility represents assimilation to whiteness." Also, Cavanagh (2004:307) argues that it is necessary to, "…do more than simply add adolescents of color and control for race and ethnicity. Employing a sociodemographic lens that takes into account population-level structure and patterns of behavior can better illuminate the conditions under which microlevel developmental processes hold and suggest other factors that need to be considered for particular subpopulations."

In sum, it is important to consider the intersections of race/ethnicity and class in understanding adolescents' different pathways leading to pregnancy. Intersectionality asserts that adolescent sexuality and the pathways to pregnancy, as with other social problems, are differentially experienced among girls depending on their class and race/ethnic locations. Dominant gender and sexual ideologies are transmitted through institutional, cultural, familial, and interpersonal settings to influence adolescent girls' perceptions and behaviors leading to early motherhood.

Both quantitative and qualitative research has found evidence of race/ethnic and class differences in the expectations and perceptions of girls and women regarding early pregnancy. Moreover, studies indicate that this variation among Hispanic, White, and Black girls is likely the result of differential treatment on the macro-level (e.g., Black girls being overly sexualized in the media) enacted through varying practices in families, peer groups, and partnerships by race/ethnicity and class.

The influence of the self on ambivalence and the timing of first sex may differ among girls depending on their race and class locations. For example, Black girls' exposure to sexualized peer groups and relationships and particular notions of gender relations from family and partners (a result of differential treatment at the institutional and cultural levels) may dampen the possible protective influence of a strong self-concept against early pregnancy. Likewise, Hispanic girls' interactions with older male partners and friends who value traditional gender norms of machismo may reduce the protective effect of a strong self on early childbearing. Next, I discuss the second theoretical framework that I utilize in this dissertation, symbolic interactionism, which emphasizes the role of the self-concept in girls' lives.

A Social Psychological Framework: Girls' Self-Concepts and Pregnancy

Symbolic Interactionism and the Self-Concept

Symbolic interactionism is the second theoretical framework that is utilized in this study. Symbolic interactionism stresses the reciprocal relationship between individuals and society and argues that the self-concept is both a social product and force; constrained by structure yet agentic. The self-concept motivates behavior and is particularly important for adolescents given that their selves are more future-oriented, which has been referred to as the "forward tilt" of adolescence (Rosenberg 1986; Wells & Stryker 1988). Researchers who study the self often focus on adolescents for this reason and have found that the self is linked to key outcomes such as achievement and suicide (Elliott et al 2005). Girls' self-concepts likely influence their feelings about pregnancy and their initial sexual decisions, such as the transition to first sexual intercourse.

Symbolic interactionism, originated by George Herbert Mead (but named by Blumer), is a theoretical perspective about individuals and society that is based on the process of social interaction (Fine 1993; Turner 2003). Mead's framework emphasizes that society and self only exist in relation to one another and arise from social interaction (Stryker and Vryan 2003). Society is not static but is an ongoing process and is constantly created and recreated as individuals interact (Stryker 1980).[3] A primary emphasis is on humans' ability to create and use symbols, which is seen as the basis for social organization (Stryker 1980). Symbolic meanings are assigned to situations, thus creating definitions of the situation, which maintain the organization of behavior (Stryker and Vryan 2003, Stryker 1980). In each situation, the mind assesses and selects possible future courses of action (Blumer 1991). Actors can be defined in the situation by recognized social categories that carry certain expectations, or roles (Stryker and Vryan 2003). The self emerges through social interaction with other individuals (Blumer 1991; Mead 1934). Through the process of 'taking the role of the other' and seeing oneself from the other's perspective or standpoint, the self develops (Stryker 1980).[4]

Building from Mead's theoretical perspective, Blumer (1969) developed three premises of symbolic interactionism. First, human action towards objects is based on the meanings individuals have for the objects. The second premise is that the meaning of

[3] Mead (1934) discusses the primacy of universal symbols that refer to common meanings which enable communication and interaction between individuals and groups. Social acts are individuals' behaviors as they consider each other in the interaction process (Stryker and Vryan 2003). Gestures emerge within social acts that enable actors to anticipate each other's future actions and adjust to each other (Blumer 1991; Mead 1934). Those that are mutually understood by both parties are significant symbols, which actors experience as objects with particular shared meanings (Mead 1934).

[4] Mead (1934) outlines the formation of the self via role-taking in various interactional stages throughout development: the play stage by taking the role of other specific individuals; the game stage by taking the role of specific organized groups; and lastly by taking the role of the abstract community, i.e., the 'generalized other'. The self constitutes the individual becoming an object to him or herself (Blumer 1991).

objects is derived from the social interaction between individuals. Lastly, meanings are dealt with and modified by individuals' interpretations of the objects with which they are interacting (Blumer 1969). Stryker (1980) outlined a structural symbolic interactionism that emphasizes the reciprocal relationship between the society and the individual. This relationship is seen as operating through the social context in which interaction takes place (Stryker 1980). Overall, symbolic interactionism stresses meaning-making, social interaction, and a reciprocal relationship between society and the individual.

A central aspect of symbolic interactionism, the self-concept is seen as a social product and force in that it is influenced by and influences social interaction (Blumer 1991; Owens 2003). Utilizing Rosenberg's conception, the self-concept is defined as "…the totality of an individual's thoughts and feelings having reference to himself as an object" (Rosenberg 1986:7). The four broad principles that outline Rosenberg's self-concept theory are reflected appraisals, social comparisons, self-attributions, and psychological centrality (Owens 2003; Rosenberg 1986). Individuals begin to see themselves as others see them and incorporate others' attitudes toward them (i.e., reflected appraisals) into their own self-concepts. Social comparisons refer to the process when individuals judge and evaluate themselves in comparison to other individuals or groups of people. Individuals also draw conclusions about themselves (i.e., self-attributions) by observing their own behaviors and outcomes. Lastly, psychological centrality refers to the hierarchical organization of the self-concept in that some identities and evaluations are more salient and important than others. These principles highlight the assertion that the self and social world are interdependent with one not being able to exist without the other (Blumer 1991).

According to Rosenberg's definition, the self-concept is comprised of an individual's thoughts and feelings about oneself as an object. An individual's thoughts are comprised of identities, which are categories used by people to specify who they are and to locate themselves relative to other people (Owens 2003). Identities hold expectations for others and oneself as to how an individual should behave presently and in the future (Owens 2003). An individual's feelings are comprised of self-evaluation processes, namely self-esteem, efficacy, and perceived mattering as well as possible selves.

Classic theories of the self-concept have been criticized for failing to acknowledge power relations and social constraints that affect the self and behavior (Oyserman and Markus 1993). The self is socially embedded and shaped by the social contexts in which the individual resides. However, the self is also an active force which can influence and negotiate the social environment. Contexts differ in complexity, importance, power, and authority for the self (Oyserman and Markus 1993). For example, an individual with a subordinate, stigmatized status is often faced with powerful, authoritative contexts that place constraints on and communicate conflicting messages to the self (Oyserman and Markus 1993).

Structural symbolic interactionism and the self-concept complement the study of adolescent sexuality (Giordano 2003; Giordano, Longmore, and Manning 2006; Longmore 1998; Manning, Giordano, and Longmore 2006) and can lend insight into racial/ethnic and class differences in the pathways leading to early pregnancy. This dissertation seeks to disentangle the paradox that adolescent girls' stronger self-concepts (e.g., higher efficacy and self-esteem) are thought to reduce the likelihood of becoming

pregnant: However, minority adolescents, particularly Black girls, have stronger self-concepts than White girls yet have higher pregnancy and birth rates in adolescence. Thus, the self-concept may be less protective against pregnancy for certain groups of girls by race/ethnicity or class. I will next discuss each of the four self-concept components--self-efficacy, perceived mattering, self-esteem and possible selves—including definitions, their relationship to girls' sexual and reproductive behaviors, and how each component varies by race/ethnicity.

Self-Efficacy

A first key self-concept component for adolescents' reproductive outcomes is perceived self-efficacy. Perceived self-efficacy is defined as "…beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura 1997:3). In other words, self-efficacy refers to an individual's sense of personal control over events and situations that occur in their lives (Gecas and Burke 1995). Low self-efficacy (general and domain-specific) is predictive of unprotected sexual intercourse, pregnancy, and parenthood in adolescence (Bourdeau et al. 2008; Carvajal et al. 1999; Impett et al. 2006; Kowaleski-Jones and Mott 1998; Longmore et al. 2003; Pearson 2006; Plotnick 1992; Ryan et al. 2007; Salazar et al. 2004; Salazar et al. 2005; Young et al. 2001; Young et al. 2004). For example, utilizing a qualitative approach with teenage mothers, Burns (1999) found that themes of 'handing it over to fate' and 'lacking a plan' contributed to the decision to engage in unprotected sexual intercourse.

Researchers have hypothesized that racial/ethnic and socioeconomic variations in adolescent pregnancy can be partially explained by differences in efficacy (Driscoll et al.

2001; Singh et al. 2001; Young et al. 2004). Driscoll et al. (2001) argue that (but do not test whether) adolescents with few resources may feel powerless to influence the direction of their lives through their own actions and decisions. Research has found racial/ethnic differences in efficacy among adults with White adults having higher levels of self-efficacy than non-White adults (Hughes and Demo 1989). However, among adolescents, Longmore et al. (2003) found that domain-specific self-efficacy does not differ among adolescents of different racial groups and Lewis et al. (1999) found that Black adolescents have higher self-efficacy than White adolescents, after controlling for other factors.

Since Black and Hispanic adolescents' self-efficacy is expected to be higher or equal to White adolescents' self-efficacy and given that Black and Hispanic adolescents are more likely to have ever been pregnant than Whites, the relationship between self-efficacy and pregnancy may operate differently (i.e., either unrelated or positively related) for Blacks than the negative relationship that likely operates for White adolescents. As discussed in the introduction, a few studies have examined differences by race/ethnicity in the relationship between self-efficacy and the transition to first sex. Day (1992) found that higher self-efficacy was associated with a later transition to first intercourse among Hispanic and White girls whereas the association did not apply for Black girls. Felton and Bartoces (2002) found that higher self-efficacy was associated with an earlier age at first sex for Black girls but not for White girls. The self-concept was not the primary focus of these studies and thus the authors did not theoretically ground their research in theories of the self nor discuss these findings in detail. Also,

these studies do not explicitly consider class differences or consider other outcomes such as ambivalence.

Possible Selves

A second key self-concept component for adolescents' sexual and reproductive behavior is "possible selves." Possible selves are individuals' notions of what they expect to become; what they would like and hope to become; and what they fear becoming (Markus and Nurius 1986). Possible selves can be positive and negative. For this dissertation, positive possible selves include educational expectations and aspirations and negative possible selves tap into the notion of a lack of hope and even whether any possible selves are perceived for the future with a measure of whether adolescents believe that they will live until age 35.

Markus and Nurius (1986) assert that possible selves act as incentives for future behavior and provide a context in which the self and behavior is interpreted and evaluated. For example, individuals are motivated to act in ways that avoid becoming what they fear and that support what they would like to become. Possible selves are formed by past experiences and social comparisons and may change throughout the life course (Markus and Nurius 1986). Adolescents are particularly likely to base their behavior on their future possible selves, which Wells and Stryker (1988) refer to as the "forward tilt" of adolescence.

Research on the relationship between possible selves and adolescent pregnancy and childbearing mainly examines the influence of academic expectations and aspirations, often referred to as potential 'opportunity costs' in the demographic and economic literatures, on adolescents' sexual behavior and their likelihood of pregnancy.

Adolescents who perform poorly in school and have low educational expectations for themselves are more likely to initiate early sexual intercourse; to engage in risky sexual behaviors including unprotected sex and inconsistent contraceptive use; to become pregnant; to decide against resolving the pregnancy; and to have a repeat pregnancy than those who perform well and have high aspirations and expectations (Arai 2003; Bettie 2003; Corcoran et al. 2000; Driscoll et al. 2005; Driscoll et al. 2001; Hockaday et al. 2000; Kalil and Kunz 1999; Kapinus and Gorman 2004; Manlove 1998; Meade and Ickovics 2005; Plotnick 1992; Young et al. 2001, 2004). In a longitudinal study, Young et al. (2004) found that eighth-grade adolescents' educational expectations and confidence in graduating from high school were the most powerful predictors of teenage pregnancy and childbearing. Adolescents who had low educational expectations, less confidence that they would graduate, and expected a traditional occupation were more likely to become pregnant (Young et al. 2004).

Most researchers hypothesize that Black, Hispanic, and disadvantaged adolescents have lower academic-oriented possible selves than White or advantaged adolescents. Minority adolescents located in disadvantaged social structural positions face limited opportunities and a myriad of constraints while being equipped with few resources. These adolescents and those around them in similar disadvantaged positions are likely to have fewer expectations, life options, and positive possible selves to select from for the future. Without the opportunities and support to achieve occupational or educational success, low-status adolescents may opt for alternative transitions to adulthood, namely via parenthood. Contrary to this conception, some research has found that Black and Hispanic adolescents have higher or equal academic possible selves as White adolescents.

For example, Simmons and Rosenberg (1975) found that Black adolescent girls have higher academic aspirations and expectations than their White peers. East (1998) found that Hispanic adolescent girls had lower school and career aspirations than did Black, White, and Asian adolescent girls. Day (1992) found that Black girls had higher occupational desires for when they would be age 35 than did White and Hispanic girls.

Some research has found that disadvantaged adolescents view early parenthood as an acceptable marker of adulthood with few associated economic and social costs given their already limited opportunities and resources (Bettie 2003; Driscoll et al. 2005; Driscoll et al. 2001; Kapinus and Gorman 2004; Singh et al. 2001). In his discussion of the relationship between life options and racial variations in teen pregnancy and birth rates, Furstenberg (2003) mentions a well-known advocate for children, Marion Wright Edelman, as having "…once observed that hope is the best form of contraception" (Furstenberg 2003:33). Bettie (2003:69) explains about disadvantaged girls, "Regardless of how a girl becomes pregnant (which occurs for a variety of reasons, including the use of birth control that fails), after the fact, having a baby can be a marker of adult status (just as sexuality was), and girls recognized it as such." Likewise, Dogan-Ates and Carrion-Basham (2007:565) explain "For Latinas, pregnancy may signify the accomplishment of a planned goal—namely, becoming an adult."

Although the above research partially attributes non-White adolescents' higher likelihood of pregnancy to lower educational aspirations and expectations, some research has found that the relationship between possible selves and pregnancy operates differently by race/ethnicity. For example, Manlove (1998) found that high postsecondary educational plans were associated with a reduced risk of pregnancy for

Black and Hispanic adolescents, but not for White adolescents. Day (1992) found that higher occupational desire was associated with the transition to first sex for Chicano and White adolescent girls but not for other Latina and Black girls.

Driscoll et al. (2005) found that high educational expectations protect White and Hispanic adolescents residing in low-opportunity neighborhoods from having a teen birth whereas educational expectations did not protect Black adolescents. The authors explain that despite low-opportunity black neighborhoods being more disadvantaged than low-opportunity White neighborhoods, Black and White adolescents were equally as likely to have high educational expectations (Driscoll et al. 2005). They attribute the lack of protection that high expectations have for Black adolescents to the likelihood that their expectations are more optimistic than their actual opportunities should warrant (Driscoll et al. 2005). Since Hispanic adolescents were protected by high educational expectations from a teen birth, Hispanics may have more realistic expectations than non-Hispanic adolescents.

Moreover, educational expectations may be related to pregnancy differently than educational aspirations. Hockaday et al. (2000) found that pregnancy was predicted for Black adolescent girls by lower educational expectations whereas pregnancy was predicted for White adolescent girls by higher educational aspirations and lower educational expectations. Hispanic adolescents are likely to be positively affected by high educational expectations, but perhaps not by educational aspirations. Hockaday et al. (2000:435) explains that "…aspirations may play a protective role with adolescents, but confidence in one's ability to achieve those goals is ultimately important." For example, Lauritsen (1994) found that education aspirations were influential for White

females whereas the perceived inability to achieve educational goals was influential for Black females' sexual activity. This small body of research (especially Driscoll et al. 2005), points to the need to carefully examine how the influence of possible selves on ambivalence and first sexual intercourse may vary for girls at particular race/ethnic and class intersections.

Perceived Mattering

A third self-concept component that is important to consider when studying adolescent fertility is perceived mattering. Mattering is the degree to which we feel we matter to others and gain the interest and notice of others (Owens 2003; Rosenberg and McCullough 1981). Mattering consists of three components including attention, importance, and dependence. Received mattering refers to the first two components. Attention is the feeling that an individual commands the interest or notice of others (Rosenberg and McCullough 1981). Secondly, mattering involves the feeling that we are important to others and an object of concern to others (Rosenberg and McCullough 1981). Even though mattering, especially the importance component, and perceived social support seem similar, the two concepts are distinct. Mattering is more general, "…involving others' continual interest in one's welfare beyond the provision of specific forms of support. It is possible to know that we matter to others, even when specific needs are not at issue…" (Elliott et al. 2005: 224). In contrast, perceived social support is, "…a sense that others will provide for specific needs that one experiences, such as emotional support during difficult times or information required to accomplish a task" (Elliott et al. 2005: 224).

Rosenberg and McCullough (1981) discuss how mattering is especially influential and pertinent for adolescents. The authors discuss how, "The adolescent, on the other hand, is something of a sociological superfluity, an irrelevance" (Rosenberg and McCullough 1981:180). Since adolescents are not often depended upon to provide financial or social contributions to their families and larger society, they may be more likely to perceive low levels of mattering (Rosenberg and McCullough 1981). Received mattering from family, friends, and teachers may serve as a protective factor that deters early pregnancy. Mattering motivates behavior since mattering is an important human need (Owens 2003). Adolescent girls who feel that they matter little to family and peers may seek mattering from a male partner and possibly a child, thus encouraging behaviors that will likely lead to adolescent pregnancy and parenthood. Although many adolescent girls who feel that they do not matter to others may not necessarily want to become pregnant or have a child, they may be more likely to engage in unprotected sexual intercourse, and thus increase their likelihood of pregnancy, in order to receive or maintain a feeling of mattering from a male partner.

Some research has indicated that adolescent mothers view childbearing as a way to be loved and wanted (Arai 2003; Davies et al. 2003; Rosengard et al. 2006). In recent qualitative studies examining the perceived benefits of teen childbearing among expectant adolescent mothers, young women reported advantages including having someone to love; being close in age with the child; and receiving support from their families and partners (Afable-Munsuz et al. 2006; Brubaker and Wright 2006; Rosengard et al. 2006). Childbearing also gives some adolescents a sense of purpose by having to be a responsible and mature mother to their child (Afable-Munsuz et al. 2006; Bettie 2003;

Brubaker and Wright 2006; Rosengard et al. 2006). When asked for the reasons for having a baby, one adolescent girl explained, "You feel like you are not loved, you are insecure about yourself and you think a baby will change that" (Afable-Munsuz et al. 2006:272). Mattering varies by socioeconomic status in that disadvantaged adolescents are less likely to feel that they matter than advantaged teenagers (Rosenberg and McCullough 1981).

Perceived social support is related to adolescent pregnancy. Lower levels of emotional proximity to peer relations as defined by fewer friends, interpersonal difficulties, and lower quality friendships were positively related to adolescent pregnancy (Pereira et al. 2005; Scaramella et al. 1998). High perceived social support, including family support, increases the likelihood of utilizing contraception after having an adolescent pregnancy and/or birth, reduces the risk of adolescent pregnancy and risky sexual behavior (Browning et al. 2004; Meade and Ickovics 2005; Miller et al. 2001).

Studies have not examined how the influence of perceived mattering on sexual or reproductive outcomes may vary by race/ethnicity or class. However, Pearson et al. (2006) found that measures of parental involvement were unrelated to sexual debut for Black and Hispanic adolescents, but were significantly related to sexual debut for White adolescents. Cox (2006) found that maternal supervision increased the likelihood of condom use for Black adolescents but decreased the likelihood of condom use for White adolescents. This research points to the possibility that the role of mattering in adolescent sexual behavior may vary by race/ethnicity and class.

Self-Esteem

A last self-concept component that will be examined in this dissertation is self-esteem. Self-esteem refers to feeling positively or negatively about oneself and represents one's sense of self-worth (Gecas and Burke 1995; Owens 2003). A recent review of the literature on the relationship between self-esteem and adolescent sexual behavior and pregnancy concluded that most studies did not find a significant association (Goodson et al. 2006). Moreover, higher quality studies were less likely to report significant findings than lower quality studies (Goodson et al. 2006). Also, Longmore et al. (2004) and Shrier et al. (2001) found that self-esteem was not predictive of sexual onset once depression was considered. However, Rink et al. (2007) found that self-esteem was predictive for delaying first sex. Another study concluded that self-esteem was a significant factor in Black girls' self-efficacy which, in turn, predicted pregnancy (Salazar et al. 2005).

Although self-esteem is often a weak predictor of sexual behaviors and behaviors in general, it is a popular explanation in popular culture and among policymakers for adolescent pregnancy. Additionally, most of the previous studies on self-esteem and sexual behavior have utilized White samples or samples of disadvantaged Black girls, which prevents the ability to identify variations by race/ethnicity and class. For these reasons, it is worth revisiting the factor to determine whether self-esteem is a predictor for ambivalence or the transition to first sexual intercourse for some adolescents depending on their race/ethnicity and class locations.

The majority of research finds that Black adolescent girls have higher self-esteem than White and Hispanic adolescent girls (Ge et al. 2001; Salazar et al. 2004; but see Day

1992). Some research has found variations of the impact of self-esteem on sexual behavior by race/ethnicity. For example, Berry et al. (2000) found that self-esteem was protective against teen pregnancy for Hispanics and Blacks, but not for Whites. Also, Day (1992) found the self-esteem contributed to age of first sexual intercourse for White and Hispanic adolescent females, but this relationship did not hold among Black females. Bearman and Bruckner (2001) found that self-esteem was not a factor in Black girls' transition to first sex, but was influential for girls of other races. These few studies have examined how the relationship between self-esteem and adolescents' transition to first sex and pregnancy may vary by race/ethnicity. However, the self-concept was not the primary focus of these studies and the authors did not discuss these findings in detail within the theoretical framework of the self. Also, they do not explicitly consider class differences or consider other components of the self-concept.

In sum, the self-concept motivates behavior and is particularly important for adolescents. Girls' self-concepts may influence their ambivalence towards pregnancy and their transition to first sexual intercourse. Also, the influence of the self on these outcomes may vary by race/ethnicity and class. A few previous studies have found race/ethnic variations, however the results are mixed as to how race matters for girls' outcomes.

Although it is thought that adolescent girls' stronger self-concepts are protective against early pregnancy, minority adolescents, particularly Black girls, have stronger self-concepts than White girls yet have higher pregnancy and birth rates in adolescence. Thus, the self-concept may be less protective against pregnancy for certain groups of girls by race/ethnicity or class. This dissertation seeks to disentangle this paradox by

investigating the varying contribution of four self-concept components—self-efficacy, possible selves, perceived mattering and self-esteem—on ambivalence and the transition to first sex for particular groups of adolescent girls by race/ethnicity and class. The next section introduces the concept of ambivalence and how it may be useful in explaining race/ethnic and class differentials in the "self" pathways leading to early pregnancy.

Ambivalence towards Pregnancy: "…as neither Planned nor Unplanned…"

Defining Ambivalence

Ambivalence towards pregnancy is a central concept that is employed in this dissertation. Figure 1.1 displays the potential influence of girls' self-concepts on their feelings of ambivalence towards pregnancy as well as the influence of ambivalence towards pregnancy on the timing of first sexual intercourse. I focus on girls' feelings about pregnancy, which serve as more proximate determinants, that come prior to decisions and actions that lead to the occurrence of an adolescent pregnancy. This focus may help disentangle the paradox between selves, race, and pregnancy and determine where divergences occur among different groups of girls depending on their race/ethnic and class locations in the process leading to early pregnancy.

Some adolescents may be ambivalent towards becoming pregnant; neither actively seeking nor actively avoiding pregnancy. Rather than assuming that intention is the basis of pregnancy, it is important to acknowledge the ambiguity surrounding pregnancy and to identify and understand why some adolescents are more indifferent towards becoming pregnant and others are not. Feelings of ambivalence towards pregnancy captures the idea that pregnancy may be viewed "…as neither planned nor unplanned but somewhere in between" (Edin and Kefalas 2005:37). There may be both

negative and positive aspects about pregnancy and feelings in between "I definitely don't want to get pregnant," and "I definitely do want to get pregnant."

Although researchers agree that moving beyond the concepts of intendedness and wantedness is necessary, the measurement of ambivalence is still in development in the adolescent pregnancy literature. Qualitative studies have explored notions of ambivalence and researchers, including Barber, Axinn and Couper (2010), are currently developing better measures of the concept. The concept to ambivalence is utilized in the research on intergenerational relations within families, usually in reference to contradicting or polarized feelings or thoughts (Luscher 2002; Luescher & Pillemer 1998; Sarkisian 2006). However, researchers in this field also call for further development and clarification of the measurement and definition of ambivalence (Bengtson et al. 2002; Luscher 2002; Luescher & Pillemer 1998).

The Add Health dataset does not have a perfect measure of ambivalence but it has the best measure of the concept among the nationally representative datasets. Appendix Table 2.1 details the previous studies that have utilized the Add Health items that measure adolescents' feelings about becoming pregnant. There is variation in the measures and labels employed across studies. Bruckner et al (2004) and Jaccard et al (2003a) use the label ambivalence and define it as 'neutral' or the 'least defined' feelings as measured by 'neither agree nor disagree' or the lack of disagreement to items. Although it is commonly interchanged with indifference or a lack of feelings about a subject, the definition of ambivalence is having simultaneous and contradictory feelings toward a subject, both negative and positive.

I use five items to measure ambivalence, “Getting pregnant at this time in your life is one of the worst things that could happen to you,” “It wouldn’t be all that bad if you got pregnant at this time in your life,” “If you got pregnant it would be embarrassing for your family,” “If you got pregnant it would be embarrassing for you,” and “If you got pregnant you would be forced to grow up too fast.” Several other possible items are available in Add Health including “If you got pregnant you would have to quit school”; If you got pregnant you might marry the wrong person just to get married”; “If you got pregnant, you would have to decide whether or not to have the baby, and that would be stressful and difficult”; “If you got pregnant, you would consider getting an abortion.” I did not include these items in this analysis as they seem to measure more specific consequences of pregnancy and whether the adolescent would consider having an abortion rather than more general feelings towards pregnancy.

Although the measure that I use does not capture adolescents who have both positive and negative feelings about becoming pregnant, it does capture the ‘in between’ feelings with the first two items as well as the perceived consequences of pregnancy with the last three items. Also, the items capture how the adolescent feels about a pregnancy occurring in her life rather than measuring global attitudinal measures of adolescent pregnancy. Despite the imperfect Add Health measure, researchers argue that the strength of the desire to avoid pregnancy and ambivalent and favorable feelings towards pregnancy are important for understanding adolescents’ reproductive behaviors (Ryan et al., 2007; Zabin et al 1993).

Qualitative Work on Ambivalence

In their qualitative study of low-income young women, Edin and Kefalas found that almost half of the mothers characterized their most recent birth neither planned nor unplanned. Racial differences in these ambivalent feelings were evident with 34 percent of Puerto Rican women, 46 percent of Black women, and 56 percent of White women reporting their birth was in between planned and unplanned. In interviews, young mothers responded when asked whether they had planned to get pregnant, "…It wasn't like I cared if I did or didn't. It wasn't like a matter of, 'Oh my God, if I get pregnant, I'm dead.' It was just—if I did, I did" and "…No, not really. In a way I did, in a way I didn't." (Edin and Kefalas 2005:39-41).

Some additional qualitative studies have explored the ways in which women view becoming pregnant. Fischer et al. (1999) found that definitions varied substantially among pregnant women and differed by social and cultural influences. The authors found that the classifications of wanted/unwanted and planned/unplanned were conceptually distinct. Stevens-Simon et al. (1996) found that one of the most frequent reasons among pregnant adolescents for why they did not use contraception prior to conception was "I didn't mind getting pregnant." These qualitative studies reveal that pregnancy is not a black-and-white issue for many adolescents; but rather is associated with both positive and negative feelings (Rosengard et al. 2006).

In one study, the authors found that while only three percent of sample reported that they actually wanted to become pregnant, only 48 percent indicated they wanted to remain non-pregnant (Stevens-Simon et al. 2005). The authors concluded that many of the adolescent girls were unsure that pregnancy would affect them negatively and were

ambivalent towards pregnancy. Specifically, they found that believing that a boyfriend wanted a baby and the anticipated effect of childbearing on five aspects of life explained 63 percent of the variance in the desire to remain non-pregnant (Stevens-Simon et al. 2005).

Based on interviews with pregnant teenage girls, Spear (2004) concluded that decisions about pregnancy were made without much consideration and that many girls were rather ambivalent. One teen explained, "Me and my boyfriend talked about getting pregnant. I wouldn't say I planned it, but I did say I wanted one when I was 17" (Spear 2004). Based on an urban clinical sample of African American adolescent girls, Crump and colleagues (1999) concluded that respondents felt that although it was better to delay pregnancy and childbearing until they were older, that early pregnancies were "common and manageable experiences." Shanok and Miller (2007) found that, among pregnant adolescent girls, only a few of them had planned to have a baby but most of them were pleased to discover their pregnancies. The authors explain that pregnancy gave the girls a sense of purpose (Shanok and Miller 2007). Also, Afable-Munsuz and colleagues (2006) found that young women perceived pregnancy as an opportunity to assert responsibility, become closer to their families, and achieve greater intimacy with their boyfriends.

Ambivalence as a Predictor

Several studies have examined whether ambivalence towards sex and pregnancy can predict sexual onset and pregnancy (Cuffee et al. 2007; Rink et al. 2007; Rostosky et al. 2003). Cuffee et al. (2007) found that pregnancy attitudes did not predict transition to first sex. Utilizing Add Health, Jaccard et al. (2003a) examined the influence of ambivalence on the occurrence of pregnancy. Between 15 and 30 percent of adolescent

females reported some degree of ambivalence towards pregnancy and these attitudes were predictive of pregnancy one year later (Jaccard et al. 2003a). In contrast, Bruckner et al. (2004), using Add Health did not find that pregnancy attitudes were linked to subsequent pregnancy. However, Afable-Munsuz et al. (2006) found that a positive orientation toward early motherhood independently increased the likelihood of girls experiencing an unintended pregnancy. Likewise, Rosengard et al. (2004) found that pregnancy intentions were associated with pregnancy six months later.

Although the predictive ability of ambivalence on pregnancy is unclear, there is strong and consistent evidence that pregnancy attitudes influence contraceptive use (Davies et al. 2006; Higgins et al. 2008; Kalmuss et al. 2003; Kerns et al. 2003; Schwarz et al. 2007; Wingood and DiClemente 2000). Adolescents who are ambivalent towards pregnancy are less likely to use contraception and use it consistently than those who have negative views of pregnancy (Bruckner et al. 2004; Frost et al. 2007; Ryan et al. 2007; Sieving et al. 2007). Crosby et al. (2002a) and Davies et al. (2006) found that ambivalence towards or desire for pregnancy resulted in less frequent use of contraception among African American adolescent girls. Thus, ambivalence towards pregnancy among adolescents is not uncommon and is probably predictive of their sexual and reproductive behaviors.

Race/Ethnic and Class Differences in Ambivalence

Variations in ambivalence towards pregnancy are evident by race/ethnicity and class. Edin and Kefalas (2005) attribute feelings of ambivalence about pregnancy to class differences that result in disadvantaged women seeing fewer costs associated with having children early than women who are more advantaged. The authors argue, “A poor girl

who gets pregnant just a year or so sooner than planned reacts far differently than a middle-class girl who gets pregnant a decade or two before she'd intended to." (Edin and Kefalas 2005:47). Disadvantaged women often lack a pool of alternative pathways for their future to choose from, such as higher education or a career. Although these women may perceive some difficulties and hardship associated with early childrearing, they feel uncertain about how they feel about becoming pregnant early since few other choices are available or within reach.

Following Edin and Kefalas' argument about class differences in ambivalence based on their qualitative study, some researchers have studied the neighborhood effect, often by racial and class composition, on ambivalence (Baumer and South 2001; Browning and Burrington 2006; Cherlin et al. 2008; Harding 2007). As discussed previously, Harding (2007) found considerable heterogeneity in pregnancy frames among adolescents in disadvantaged neighborhoods rather than a pervasive cultural norm that deviates from mainstream views on early pregnancy. In these more culturally heterogeneous neighborhoods, adolescents' ambivalence towards pregnancy was poorly predictive of their actual likelihood of becoming pregnant (Harding 2007).

Disadvantaged and non-White girls are more likely to be ambivalent towards pregnancy compared to more advantaged and White girls. Bruckner et al. (2004) found that antipregnancy attitudes were positively associated with socioeconomic status. Independent of class differences, racial/ethnic differences in childbearing attitudes have been found among adolescent girls (Browning and Burrington 2006; East 1998). Browning and Burrington (2006) found that Black girls were more likely than Hispanic and White girls to agree that the best age to have a first baby is less than 20 years of age.

Additional studies have also found race/ethnic and class differences in pregnancy attitudes. Cuffee et al. (2007) found that Black adolescents perceived less shame and guilt with pregnancy than White adolescents. Also, a significant interaction by race and gender indicated that White adolescent boys and girls were similar in their pregnancy perceptions whereas Black boys perceived more guilt and shame with pregnancy than Black girls (Cuffee et al. 2007). Jaccard et al. (2003a) found that Whites and Asian American girls had more negative attitudes toward getting pregnant than Black and Hispanic girls. Also, adolescents who were more disadvantaged socioeconomically and those who were currently in a romantic relationship had less negative attitudes than those who were not in a relationship or who were more advantaged (Jaccard et al. 2003a). Milan et al. (2006) also found racial differences in feelings towards pregnancy with Puerto Ricans holding less negative feelings about pregnancy than African Americans. Kapinus and Gorman (2004) found that Black and Hispanic girls were more positive about the consequences of pregnancy than White girls.

The Self-Concept and Ambivalence

Few studies have examined the role of the self-concept in ambivalence towards pregnancy among adolescents. The self-concept components of possible selves and self-efficacy are probably most closely tied to ambivalence towards pregnancy. As discussed above, adolescents who feel that they have a greater number of possible selves available to them and that they are efficacious in selecting from among them may be less ambivalent about becoming pregnant.

Jumping-Eagle et al. (2008) found that, among sexually active teenagers who were inadequate contraceptive users, most had educational and vocational goals but they

did not think pregnancy was an impediment to achieving these goals. The adolescent girls in Spear's (2004:340/341) study were similar with one girl saying, "It won't be easy, but I know I can make it. I will graduate from high school..." and another girl saying, "I just wanna be a nurse. I'm gonna have a great life if I do what I say. I'm gonna be a wealthy person." East (1998) found that future schooling and job aspirations were associated with a later desired age at first birth, an effect which was stronger for Whites than for Hispanics and Blacks.

Studies have not examined the link between self-efficacy and ambivalence, however it is likely that self-efficacy is negatively associated with ambivalence. In other words, adolescents who feel less efficacious about their lives are more likely to be indifferent to becoming pregnant. Regarding domain-specific self-efficacy, Davies et al. (2003) found that perceiving greater barriers to condom use (i.e., contraceptive self-efficacy) was related to pregnancy desire but Kapinus and Gorman (2004) did not find a link between contraceptive self-efficacy and pregnancy attitudes.

The self-concept component of perceived mattering has not been explored, but measures of perceived closeness with and support from friends and family may speak to the possible link between perceived mattering and ambivalence. Some studies have found that adolescents who are more satisfied with their relationships with their mothers; report being close with their mothers; or who perceive high family support have more negative attitudes about pregnancy (Bruckner 2004; Davies et al. 2003; Jaccard et al. 2003b). However, Stevens-Simon et al. (1996) did not find a link between perceived family support and ambivalence. Bruckner (2004) also found that girls who were socially isolated were more likely to have ambivalent or propregnancy attitudes. Rosengard et al.

(2006) notes, compared to non-Hispanic adolescent girls, Hispanic adolescent girls placed more emphasis on enhancing connections with others as an advantage to having a child in adolescence.

Kapinus and Gorman (2004) concluded that adolescents' perceptions of their parents' attitudes about their educational achievement and sexual activity, rather than closeness to parents, were related to perceptions of the consequences of pregnancy. The higher perceived disapproval of sexual activity and higher expectations for educational attainment of parents for their adolescent children, the more likely adolescents were to perceive negative consequences of pregnancy (Kapinus and Gorman 2004).

In terms of self-esteem, some studies have assessed its' role in understanding ambivalence. Davies et al. (2003) found that pregnancy desire was associated with having low self-esteem. Bruckner et al. (2004) found that girls with high antipregnancy attitudes had higher self-esteem than other girls.

In sum, ambivalence is likely to be a crucial construct in understanding race/ethnic and class differences in the pathways leading to early pregnancy. Feelings of ambivalence are not uncommon in adolescence and disadvantaged and minority adolescents are more likely to be ambivalent towards pregnancy than more advantaged and White adolescents. Also, ambivalence is predictive of adolescents' sexual and reproductive behavior. The self-concept may influence girls' ambivalence towards pregnancy since it is a more proximate and attitudinal determinant than behaviors.

Girls who feel that they are in less control of their lives (self-efficacy) and who perceive fewer life options (possible selves) may be more ambivalent about whether they become pregnant. Also, girls who perceive that they matter less to others and who have

lower self-worth may be ambivalent about pregnancy. The paradox among selves, race, and pregnancy may be better understood when ambivalence is considered. Although ambivalence is not perfectly measured in Add Health, it is the best measure available and is likely a powerful factor in understanding girls' decisions and behaviors leading to pregnancy.

Summary

The recent rise in, high rates of, and persistent race/ethnic and class disparities in adolescent pregnancy and fertility in the U.S., coupled with the likely negative consequences of adolescent parenthood, necessitates a reexamination of our strategies for addressing and understanding adolescent pregnancy and childbearing. Moreover, a paradox in the relationships among selves, race, and pregnancy exists in that strong self-concepts are thought to be protective against pregnancy: However, minority adolescents have stronger (or at least equal) self-concepts compared to White girls yet have higher rates of pregnancy. Thus, the self-concept must be differentially related to pregnancy among girls by race/ethnicity and class locations. The research to date does not systematically frame or assess the relationships among selves, pregnancy, and race in this key way. Building from a promising but small body of research, this dissertation fills a research gap by focusing on the influence of four self-concept components, self-efficacy, perceived mattering, self-esteem, and possible selves on ambivalence towards pregnancy and the transition to first sexual intercourse and how this influence differs for particular groups of girls by race/ethnicity and class.

Grounded in the theoretical frameworks of intersectionality and symbolic interactionism, this dissertation addresses four research questions: 1.) How do girls' self-

concepts influence their feelings of ambivalence towards pregnancy? 2.) How does the relationship between girls' self-concepts and ambivalence vary by race/ethnicity and class? 3.) How do girls' self-concepts and ambivalence towards pregnancy influence their timing of first sexual intercourse? 4.) How does the influence of girls' self-concepts and ambivalence on their timing of first sexual intercourse vary by race/ethnicity and class?

Utilizing three waves of the restricted-use dataset of the National Longitudinal Study of Adolescent Health (Add Health), the self-concept, measured at Wave I, includes four components—self-efficacy, perceived mattering, self-esteem and possible selves. This dissertation focuses on the influence of girls' self-concepts on their feelings of ambivalence towards pregnancy one year later and their transition to first sexual intercourse between one and five years later. I also examine how the influence of girls' self-concepts on their feelings of ambivalence and the timing of first sexual intercourse varies by girls' race/ethnic and class locations. Additionally, I examine the impact of girls' feelings of ambivalence towards pregnancy on the timing of first sexual intercourse and how this may vary by race/ethnicity and class. Supplemental analyses include an examination of the influence of the self-concept and ambivalence towards pregnancy on girls' contraceptive use at first sexual intercourse and the occurrence of a pregnancy in adolescence.

I have several hypotheses about the influence of the self-concept on ambivalence and the transition to first sex and how this may vary by race/ethnicity and class. Based on symbolic interactionism which argues that the self-concept motivates feelings and may be especially pertinent for adolescents, I predict that girls with stronger self-concepts

will have less ambivalent or more negative feelings towards becoming pregnant in adolescence than girls with weaker self-concepts. I also predict that girls with stronger self-concepts will be less likely to have an early transition to first sexual intercourse than girls with weaker self-concepts. I expect that some components of the self are likely to be more influential than others—for example, I predict that self-esteem will have less of an impact on girls' feelings towards ambivalence and the timing of first sex than self-efficacy.

Based on intersectional theory, I predict that the influence of girls' self-concepts on their feelings of ambivalence and the timing of first sex will be stronger for middle-class, white girls than for other groups of girls. Current models of adolescent sexual behavior that tend to apply to middle-class White girls do not predict Black and Hispanic girls' behaviors well. This finding has been speculated to be the result of different sexual and gender scripts among peer groups, families, and partners by race/ethnicity and class. I also predict that girls who are ambivalent or more positive about becoming pregnant in adolescence will have an earlier transition to first sexual intercourse and that this relationship may vary by race/ethnicity and class. Next, I turn to Chapter 3, which details the dataset, measurement, and analysis plan for the dissertation.

Chapter 3: Data and Methods

Dataset and Sample

For this study, I utilize the restricted-use data of Waves I, II, and III of the National Longitudinal Study of Adolescent Health (Add Health) (Harris 2009). Add Health is a school-based, longitudinal study of the health-related behaviors of adolescents and their outcomes in young adulthood. Beginning with an in-school questionnaire administered to a nationally representative sample of students in grades 7 through 12 in the 1994-1995 academic year, the study continues with a series of in-home interviews of the students approximately one, two, and six years later. The Wave I in-home interview contains information collected from April 1995 through December 1995. Wave II was collected in from April 1996 to August 1996 when students were in 8^{th} to 12^{th} grades. Wave III was collected from July 2001 to April 2002 when respondents were 18-26 years of age at the time of interview. A fourth wave of data, collected in January 2008 – February 2009 when respondents are 24-32 years of age, was recently released but is not utilized in this dissertation.

A sample of 80 high schools and 52 middle schools were selected with an unequal probability of selection. Using systematic sampling methods, the sample is representative of U.S. schools in terms of region, urbanicity, school size, school type, and ethnicity (Harris et al., 2009). Specifically, 80 high schools were selected from a sampling frame of 26,666 schools sorted by size, school type, census region, level of urbanization, and percent White. Of these 80 schools, 52 were eligible and agreed to participate. The remaining 28 schools were replaced by similar high schools by sorting the frame by the above five factors and grade span, percent Black, and census division.

Among the 80 selected high schools, 71 were public, 3 were Catholic, and 6 were other private schools. By region, 17 of the high schools were in the West, 19 in the Midwest, 27 in the South, and 17 schools were in the Northeast region of the U.S. By metropolitan status, 42 of the 80 high schools were in suburban areas compared to 14 in rural and 24 in urban areas of the country (Harris et al, 2009).

High schools that did not include 7th or 8th grades were asked to provide names of middle schools that contributed students to the incoming class (i.e., feeder schools that were expected to provide at least five students to the entering class of the high school). For each of these high schools, a single feeder was selected with a probability proportional to the percentage of the high school's entering class that came from that feeder school, resulting in 52 middle schools (Chantala, 2006; Harris et al., 2009). In total, there were 132 schools (52 middle schools and 80 high schools) in the core sample.

The study began with an in-school component in which 90,118 students from the 132 schools completed a 45-minute questionnaire. Each school was also asked to complete a school administrator questionnaire about the educational setting and environment of the school. All students who were listed on the schools' rosters (regardless of whether they completed the in-school questionnaire) were eligible for selection into the core in-home sample. Students in each school were stratified by grade and sex with approximately 17 students randomly selected from each stratum resulting in about 200 students selected from each school. The total core sample consisted of 12,105 adolescents.

In addition to the core sample, several oversamples were drawn. Adolescents could qualify for more than one sample (Harris et al., 2009). First, ethnic oversamples

based on self-reported data from the in-school questionnaire include 1,038 black adolescents from well-educated families (i.e., with a parent with a college degree), 334 Chinese adolescents, 450 Cuban adolescents, and 437 Puerto Rican adolescents. Second, an oversample of 589 students who had physical disabilities based on self-reported data from the in-school questionnaire were drawn. Third, saturation samples were drawn for social network analyses, in which all enrolled students in 16 schools (two large schools and 14 small schools) were selected for in-home interviews. Lastly, genetic samples consist of pairs of siblings living in the same households including full siblings, identical twins, fraternal twins, and half siblings. Also, non-related pairs including step-siblings, foster children, adopted (non-related) siblings were sampled. Most of the full-sibling pairs entered into the sample by chance (disproportionately drawn from the 14 small school saturation samples) (Chantala and Tabor 1999; Harris et al 2009).

It is important to note that the adolescents selected for Add Health were sampled for two different purposes: 1.) To provide national estimates of the health-related behaviors of U.S. adolescents and 2.) For specialized genetic analyses (Chantala and Tabor 1999; Chantala, Kalsbeek, & Andraca, 2009). Adolescents chosen for the first purpose were selected with a known probability and thus have valid sampling weights. Adolescents in the genetic sample do not have valid sampling weights since a convenience sample of some siblings were selected outside of the sampling frame to increase the sample size of pairs (Chantala et al., 2009). At Wave I, 20,745 students participated in the in-home interviews but only 18,924 of these adolescents have valid sampling weights. At Wave II, 14,738 adolescents completed in-home interviews with 13,570 having valid sampling weights. At Wave III, 15,197 young adults completed in-

Home interviews and 14,322 of these respondents had valid sampling weights (Chantala 2006).

For this study, I focus on adolescents who completed in-home interviews at Wave I, II and III who have valid sampling weights and thus represent a nationally representative sample of adolescents, resulting in a sample size of 10,828 adolescents (Chantala 2006). The response rate for Wave I is 78.9 percent; for Wave II, the response rate is 88.2 percent; and the response rate is 77.4 percent for Wave III (Harris et al, 2009). Non-response in Waves I, II and III resulted in a total bias that rarely exceeded one percent for measures after estimates are adjusted with the final sampling weights (Chantala et al., 2009). Chantala et al. (2009) argue that the Wave III sample adequately represents the same population as the Wave I sample when sampling weights are applied.

The Wave I in-home survey, conducted between April and December 1995, was interviewer-administered with sensitive topics administered via ACASI, an audio computer-assisted self interview. Written informed consent was obtained from the parent or legal guardian and the adolescent. A parent, usually the resident mother, of each adolescent was also asked to complete a questionnaire. If the adolescent's mother did not reside in the household, the first person who lives with the student was selected as follows: stepmother, other female guardian, father, stepfather, other male guardian. Among the 20,745 adolescents who completed the in-home interviews (both the genetic and non-genetic samples), 17,669 parents completed the parent-specific portion of the survey and 17,713 parents completed the child-specific portion of the parent questionnaire (Harris et al. 2009).

The Wave II sample was primarily drawn from the pool of participants in Wave I however the majority of 12th grade respondents were removed since they exceeded the grade eligibility requirement (12th graders who were part of the genetic sample were retained). Also, respondents who were only in the Wave I disabled sample were not re-interviewed. The Wave II sample contains a small number (n=65) of adolescents who did not participate in the Wave I in-home interview who were members of the genetic sample and were recruited at Wave II (Harris et al., 2009). There was no parent interview conducted at Wave II but there was a follow-up school administrator survey. The Wave II in-home interview took place between April 1996 and August 1996 and was similar to the Wave I administration.

The Wave III sample consists of Wave I respondents who were 18 years of age or older and who could be located and re-interviewed (plus 27 Wave II special genetic respondents) during the fieldwork period, July 2001 to April 2002. Wave I respondents who were out of the country were omitted from Wave III and efforts were made to re-interview respondents located in correctional facilitates. In addition, a sample of romantic partners of Wave III respondents was interviewed. The criteria for inclusion in the sample included that a partner be current, of the opposite sex, at least 18 years old and in a relationship with the original respondent for at least three months. Among the 15,197 young adults who completed the Wave III in-home interviews (both the genetic and non-genetic samples), 1,507 romantic partners were interviewed (Harris et al., 2009). The sample consisted of one-third married, one-third cohabiting, and one-third dating partners. Similar to the in-home interviews for Waves I and II, the Wave III survey was

interviewer-administered with sensitive questions administered via ACASI. Biological measures were added to Wave III.

This study focuses only on adolescent girls and thus male adolescents are dropped from the sample of 10, 828 adolescents with valid sampling weights who were interviewed in Waves I, II, and III. There were gender discrepancies across interview waves for 20 cases (Harris et al. 2009). Eighteen of these inconsistent cases were confirmed at Wave III as being correct. For one case, a female was incorrectly coded as male in Waves I and II but correctly coded as female in Wave III. In the last case, a male was incorrectly coded as female in Wave III and thus was dropped from this sample. Thus, among the 10,828 respondents with valid sampling weights across all three waves, 5,093 were male resulting in a sample of 5,735 adolescent girls.

Two analytic samples are selected for the two primary dependent variables in this project—ambivalence towards pregnancy and age at first sexual intercourse. The selection and description of each sample are discussed within the results chapters. Sample selection is also detailed in Appendix Table A3.1. Also, I assess potential biases introduced through the selection of the analytic samples compared to the larger sample of 5,735 girls who completed the three interview waves.

[Appendix Table A3.1. about here]

Dependent Variables

Ambivalence towards Pregnancy

The dependent variable in the first results chapter is girls' ambivalence towards becoming pregnant in adolescence. Feelings of ambivalence towards pregnancy at Wave II is measured with 5 statements (H2RP5): "Getting pregnant at this time in your life is

one of the worst things that could happen to you"; (H2RP6) "It wouldn't be all that bad if you got pregnant at this time in your life"; (H2MO8) "If you got pregnant it would be embarrassing for your family"; (H2MO9) "If you got pregnant it would be embarrassing for you"; (H2MO12) "If you got pregnant you would be forced to grow up too fast."[5] The response choices for each statement range from 1 = strongly agree to 5 = strongly disagree. The second question was reverse-coded so that, aligning with the other questions, a higher score indicates more ambivalence. Principal Component Analysis (PCA) was performed and one underlying factor was extracted. A scree plot of the eigenvalues confirmed that one meaningful factor was identified.[6] The standardized Cronbach Alpha is 0.81, above the threshold of .70 for an acceptable scale (DeVellis 2003). Respondents missing on all five items were dropped from the analysis. If respondents were missing on fewer than five items, the average is based on the remaining items. A scale was created that is composed of the average score for each respondent across the five items, which ranges from 1 = low ambivalence (or more negative feelings towards pregnancy) to 5 = high ambivalence (or more positive feelings towards pregnancy).[7,8]

[5]See Appendix Table A2.1 for previous studies that have utilized the Add Health measures of ambivalence and Chapter 2 for a discussion of the advantages and disadvantages of this scale.

[6]Several other possible items were dropped during exploratory factor analysis since they did not load well onto the identified factor and were poorly correlated including "If you got pregnant you would have to quit school"; If you got pregnant you might marry the wrong person just to get married"; "If you got pregnant, you would have to decide whether or not to have the baby, and that would be stressful and difficult"; "If you got pregnant, you would consider getting an abortion." These items seem to measure more specific consequences of pregnancy and whether the adolescent would consider having an abortion rather than more general feelings towards pregnancy.

[7]Alternative specifications of the ambivalence measure were tested including log ambivalence, categorical measures of ambivalence, and difference scores of individual items comprising the scale. These specifications are discussed in Chapter 4.

[8]For the second results chapters, Chapter 5, ambivalence is an independent variable measured at Wave I and is a comparable measure to the Wave II scale described here. However, one important difference is that the items comprising the ambivalence scale were only asked of respondents 15 years of age or older at the Wave I interview whereas the items were asked of respondents of all ages at the Wave II interview.

Age at First Sexual Intercourse

The dependent variable for the second results chapter is girls' age at first sexual intercourse. Measured at Wave III, respondents were asked, (H3SE1) "Have you ever had vaginal intercourse? (Vaginal intercourse is when a man inserts his penis into a woman's vagina.)," with response choices for 1 = yes and 0 = no. If respondents responded affirmatively to having had sex, they were then asked, (H3SE2) "How old were you the first time you had vaginal intercourse?" This variable ranges from 10 years of age through 25 years of age.[9] Respondents who were missing on either variable or who reported inconsistent data were dropped from the analysis.[10]

Independent Variables

Self-Concept

Self-Efficacy

Self-efficacy at Wave I is measured with five statements: (H1PF8) "When you get what you want, it's usually because you worked hard for it"; (H1PF18) "When you have a problem to solve, one of the first things you do is get as many facts about the problem as possible"; (H1PF19) "When you are attempting to find a solution to a problem, you usually try to think of as many different ways to approach the problem as possible"; (H1PF20) "When making decisions, you generally use a systematic method for judging and comparing alternatives"; (H1PF21) and "After carrying out a solution to a problem, you usually try to analyze what went right and what went wrong." The response choices for each statement range from 1 = strongly agree to 5 = strongly

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Thus, the sample of girls must be restricted to those 15 years of age or older for the analyses in Chapter 5 that use ambivalence as an independent variable.

[9]The construction of the person-year file for this dependent variable is detailed in Chapter 5.

[10]Before the analysis plan, I include a discussion of how inconsistent data were dealt with and lay out a series of decision rules that were employed for adjustments to the sexual histories of the respondents.

disagree. All questions are reverse-coded so that a higher score indicates higher self-efficacy. Principal Component Analysis (PCA) was performed and one underlying factor was extracted. A scree plot of the eigenvalues confirmed that one meaningful factor was identified. The standardized Cronbach Alpha is 0.73, above the threshold of .70 for an acceptable scale (DeVellis 2003). Respondents missing on all five items were dropped from the analysis. If respondents were missing on fewer than five items, the average is based on the remaining items. A scale was created that is composed of the average score for each respondent across the five items, which ranges from 1 = low self-efficacy to 5 = high self-efficacy.[11]

Perceived Mattering

Perceived mattering at Wave I is measured with seven items: (H1PR1) "How much do you feel that adults care about you?"; (H1PR2) "How much do you feel that your teachers care about you?"; (H1PR3) "How much do you feel your parents care about you?"; (H1PR4) "How much do you feel that your friends care about you?"; (H1PR8) "How much do you feel that your family pays attention to you?"; (H1PF36) "You feel loved and wanted."; and (H1PF35) "You feel socially accepted." The response choices for the first five questions range from 1 = not at all to 5 = very much. The latter two statements have response choices from 1= strongly agree to 5 = strongly disagree, which were reversed coded so that a higher score indicates higher perceived mattering. Principal Component Analysis (PCA) was performed and one underlying factor was extracted. A scree plot of the eigenvalues confirmed that one meaningful factor was

[11]These items may be more indicative of rational decision-making or problem-solving than self-efficacy scales commonly used in the social psychological literature. However, the scale seems to tap into adolescents' sense of personal control and may be important for their outcomes.

identified. The standardized Cronbach Alpha is 0.75, above the threshold of .70 for an acceptable scale (DeVellis 2003). Respondents missing on all seven items were dropped from the analysis. If respondents were missing on fewer than seven items, the average is based on the remaining items. A scale was created that is composed of the average score for each respondent across the seven items, which ranges from 1 = low perceived mattering to 5 = high perceived mattering.

Self-Esteem

Self-esteem at Wave I is measured with four statements: (H1PF30) "You have a lot of good qualities"; (H1PF32) "You have a lot to be proud of"; (H1PF33) "You like yourself just the way you are"; (H1PF34) and "You feel like you are doing everything just about right". The response choices for each statement range from 1 = strongly agree to 5 = strongly disagree. All questions are reverse-coded so that a higher score indicates higher self-esteem. Principal Component Analysis (PCA) was performed and one underlying factor was extracted. A scree plot of the eigenvalues confirmed that one meaningful factor was identified. The standardized Cronbach Alpha is 0.81, above the threshold of .70 for an acceptable scale (DeVellis 2003). Respondents missing on all four items were dropped from the analysis. A scale was created that is composed of the average score for each respondent across the four items, which ranges from 1 = low self-esteem to 5 = high self-esteem.

Possible Selves

Possible selves are assessed with three separate measures. Educational aspirations are measured with the item, (H1EE1) "On a scale of 1 to 5, where 1 is low and 5 is high, how much do you want to go to college?" Educational expectations are

measured with the question, (H1EE2) “On a scale of 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college?” The third measure captures the expectation of having any possible selves in the future with the question, (H1EE12) “What do you think are the chances that each of following things will happen to you?…You will live to age 35.” with response choices ranging from 1 = almost no chance to 5 = almost certain. Respondents missing on the items were dropped from the analysis**.** A low score on each measure indicates more negative possible selves whereas a higher score equals more positive possible selves.

Race/Ethnicity and Class

Race/Ethnicity

Race/ethnicity is measured with two questions, “Are you of Hispanic or Latino origin?” with response choices 0 = no and 1 = yes and “What is your race? You may give more than one answer” with response choices 0 = not marked and 1 = marked for White, Black or African American, American Indian or Native American, Asian or Pacific Islander, and Other. Respondents missing on the race and ethnicity were dropped from the analysis. Recoded dummy variables were created for Hispanic, Non-Hispanic White, and Non-Hispanic Black. An additional dummy variable was constructed for “other/multiple races” consisting of respondents who reported being Asian or Native American, who marked ‘Other,’ or who selected multiple racial categories. The “other/multiple” category is not easily interpretable given the diversity of respondents in this category. Non-Hispanic White respondents are excluded as the reference category for the regressions. Girls are referred to as White, Black, or Hispanic in subsequent discussion to simplify terminology.

Mothers' Educational Attainment

Social class is captured by self-reported measures of mothers' educational attainment and household income. Both questions were asked of the parent, usually the resident mother, during the in-home parent interview at Wave I. Maternal education is measured with the question, "How far did you go in school?" with response choices ranging from 1 = 8th grade or less to 9 = professional training beyond a 4-year college or university. If the resident father or other parent-figure was interviewed, their self-reported education was utilized. Primarily due to the fact that some adolescents did not have a completed parent interview, 690 cases of the 5,735 girls (12.0 percent) were missing on this question. Missing cases were first replaced with the adolescent report of her resident mother's educational attainment if available (589 cases). Remaining missing classes were replaced with the adolescent report of her resident father's education if available (40 cases). Next, remaining missing cases were replaced with the adolescent report of her nonresident mother's educational attainment if available (37 cases).[12] The remaining missing cases (less than 0.5 percent) were dropped from the analysis. Some girls in the sample (less than 4 percent) have a measure of their fathers' educational attainment (his report if he was the respondent for the parent interview or the girl's report of her resident father's education) rather than their mothers' education attainment. A dichotomous variable was created for mother is a college graduate versus mother is a non-college graduate.[13] Girls whose mothers are college graduates are referred to as

[12] This approach to handling the missing cases for maternal education in Add Health is similar to the approaches taken in other studies (Cavanagh 2008; Longmore et al 2003; Meier 2003; Pearson et al 2006; Schoen et al. 2009)

[13]I also explored additional specifications for maternal education including a four-category variable (less than high school, high school graduate, some college, and college graduate) and an alternate two-category variable (some college or more vs. less than some college). Multivariate results were comparable with different measurements utilized. Thus, I chose the dummy variable for college graduate vs. non-college

high-SES (i.e., socioeconomic status) and girls whose mothers are non-college graduates are referred to as low-SES in subsequent discussion to simplify terminology.

Household Income

Household income is measured in the parent interview with the question, "About how much total income, before taxes did your family receive in 1994? Include your own income, the income of everyone else in your household, and income from welfare benefits, dividends, and all other sources." Income is measured in thousands of dollars and ranges from $0 to $999,000. Twenty-three percent of the cases (1,318 of 5,735 girls) were missing on income, partially due to adolescents with a missing parent interview at Wave I. Missing cases were imputed with the mean income of the remaining cases (46.4 thousand dollars) and a dummy variable was created to flag missing cases. The flag for missing cases is not statistically significant in the models in this analysis. Given the skewed distribution of the income measure, log household income was utilized for the analyses. [14,15,16]

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graduate since there were adequate sample sizes and a two-category variable simplified the interactions and analyses by race and class groups.

[14]I also explored additional specifications for income including a categorical variable based on income quartiles with a category for missing income. Multivariate results were comparable with different measurements utilized. I chose a log continuous variable with a flag for missing cases aligning with several previous studies.

[15]This approach to dealing with the large percentage of missing cases for household income in Add Health is comparable to the approach taken by other studies (Brown 2006; Giordano et al 2005; Longmore et al 2004). Some studies using Add Health (e.g., Crosnoe et al., 2008) have excluded an income measure in their analyses due to the large proportion of missing cases. However, household income is statistically significant for certain analyses in this study so I chose to utilize this measure. Also, the flag for missing cases is not statistically significant in the models in this analysis.

[16] For the regressions, class is measured by maternal education and household income. For race and class comparisons and interactions, maternal education (mother is a college graduate vs. mother is a non-college graduate) is utilized to split the groups by class. I chose to use maternal education as the primary indicator of socioeconomic status, similar to other studies (e.g., Amato & Booth 1997, Schoen et al. 2009, Wildsmith & Raley 2006). It is important to note that the interactions provide the moderation effect of maternal education while holding household income and other characteristics constant. Thus, the interactions are more conservative estimates of class moderation. To facilitate the presentation of results, the six comparison groups are referred to as high-SES Whites, high-SES Blacks, high-SES Hispanics, low-SES Whites, low-SES Blacks, and low-SES Hispanics.

Control Variables[17]

Age of Adolescent

Age is a continuous variable that is calculated by subtracting the self-reported date of birth from the date of the interview. This calculation results in the adolescent's age in days. This number is divided by 365.25 to obtain the adolescent's age in years. Two cases were imputed with the mean age (15 years of age).

Early Menarche

Early menarche is captured by a self-report measure of, "How old were you when you had your very first menstrual period?" Girls who report having their first menstrual period before age 12 are considered to have had early pubertal timing whereas girls who had their first menstrual period at or after age 12 are considered to have had on-time or late pubertal timing (Cavanagh 2004; Cavanagh et al., 2007; Ge et al 2001; Regnerus & Luchies 2006). A dummy variable was constructed for early menstruation versus on-time or late menstruation. About 9 percent of the sample had never menstruated yet and were coded as on-time or late. Also, two percent of the sample of 5,735 girls were missing on age at menstruation and were imputed with the mean, slightly over 12 years of age, and thus were coded as on-time or late menstruation.

Adolescent in Romantic Relationship in Last 18 months

During the Wave I interview, respondents completed relationship rosters and detailed histories of these relationships. To create the roster, the interviewer asks, "In the

[17]The controls used in this dissertation were selected because they are commonly utilized in the literature on adolescent sexual and reproductive attitudes and behaviors and have been found to be related to these outcomes (Aneshensel et al. 1989; Bearman and Bruckner 2001; Browning and Burrington 2006; Cavanagh et al. 2008; Cooksey et al. 2002; Cuffee et al. 2007; Harding 2007; Hockaday et al. 2000; Hogan and Kitawaga 1985; Kahn and Anderson 1992; Kapinus and Gorman 2004; Lauritsen 1994; Manlove et al. 2006; Pearson et al. 2006; Plotnick 1992)

last 18 months—since [month, year]—have you had a special romantic relationship with any one?" Respondents who did not report having any romantic relationships in the romantic relationship roster are asked about any "liked" relationships. Identifying "liked" relationships consists of the following questions, "In the last 18 months, did you ever hold hands with someone who was not a member of your family?" In the last 18 months, did you ever kiss someone on the mouth who was not a member of your family?" "In the last 18 months, did you ever tell someone who was not a member of your family that you liked or loved them?" If the respondent reported 'yes' to all three questions, they were asked, "Did you do these things with the same person?" If the respondent reported 'yes' to this question, they were considered to have a "liked" relationship in the past 18 months. Respondents were then asked about their romantic relationship histories with their romantic or "liked" partners. A dummy variable was constructed for romantic relationship in the last 18 months versus no romantic relationship in the last 18 months. Respondents who reported having a "liked" relationship (522 cases) were coded as having a romantic relationship.[18] Missing cases (0.5 percent) were coded as not having a romantic relationship.

Mother's Age at Respondent's Birth

Mother's age at first birth is not available in Add Health. Thus, I follow Harding's (2007) use of mother's age at adolescent's birth as a proxy measure for intergenerational childbearing.[19] Mother's age at the adolescent's birth is calculated by subtracting the adolescent's age from the mother's current age, obtained from the parent

[18] This is a similar approach taken by previous studies using relationship status in Add Health (Joyner and Udry 2000; Meier 2003, 2007)

[19] It is also not possible in Add Health to determine whether any of the respondent's older siblings have had early pregnancies or births.

interview. Almost 25 percent of the sample (1,423 of 5,735 girls) was missing on biological mothers' age, largely due to adolescents who did not have a parent who completed the parent interview or the parent interviewed was not the biological mother. Missing cases were imputed with the mean (25.8 years of age at the adolescent's birth) and a dummy variable was created to flag the missing cases. The flag for missing cases is not statistically significant in the models in this analysis.

Family Structure

Family structure is constructed from the adolescent's report of the household roster which identifies each person and their relationship to the respondent. Five dummy variables were created for residing with two biological parents, biological single mother, biological mother and stepfather, biological father (single or with a stepmother), or no biological parents in the household. There were no missing cases for this variable. One respondent reported living with her biological mother, biological father, and stepfather and was coded as living with two biological parents. Living with two biological parents is excluded as the reference category in the regressions.

Inconsistencies and Adjustments to Girls' Sexual and Pregnancy Histories[20,21]

Across the three waves of Add Health data, there are inconsistencies in girls' reports of their sexual and pregnancy histories. In order to correctly define the analytic samples, girls' virginity and pregnancy statuses had to be identified at each of the three waves. For example, the first analytic sample with ambivalence towards pregnancy as the dependent variable, consists of girls who were never pregnant at Waves I and II and, the second analytic sample with the age at first sex as the dependent variable, consists of girls who were virgins (and who were never pregnant) at Wave I.

In Waves I and II, respondents are asked about their romantic relationship histories with up to three romantic or "liked" partners. Also, respondents provide detail on up to three 'non-relationship' sexual partners. For each partner (romantic, liked, or 'non-relationship'), female respondents mark whether a series of events occurred including, "I got pregnant." Also, in a later section on female physical development and pregnancy history, girls who report having had sexual intercourse are asked whether they

[20]Several previous studies have examined the accuracy of survey respondents' reports of age at first sexual intercourse (Alexander et al. 1993; Lauritsen and Swicegood, 1997; Rodgers, Billy, and Udry 1982; Siegel, Aten, & Roghmann 1998; Upchurch et al., 2002). These studies found that adolescent girls were more likely to provide accurate reports than adolescent boys in several surveys, including Add Health (Upchurch et al. 2002). Inconsistencies in reporting appear to be largely random and do not have a significant impact on estimates of age at first sex or on the influence of demographic or socioeconomic predictors of age at first sex (Lauritsen and Swicegood, 1997; Upchurch et al., 2002; Wu, Martin, and Long 1999). Upchurch et al. (2002), using Wave I and Wave II of the Add Health dataset, found comparable conclusions across seven analyses of age at first sexual intercourse, each based on a different assumption about which reported date of first sexual intercourse was considered true. Also, the use of ACASI, with information about sexual and pregnancy experiences collected using laptops and headsets, likely increases confidentiality and reduces interviewer and social desirability biases among Add Health respondents (Tourangeau, Rips, & Rasinski 2000).

[21]There is variation in the ways that previous studies have coded virginity and pregnancy status and dealt with inconsistencies in the sexual and pregnancy histories of Add Health respondents. Some studies have incorporated questions asked in the relationship histories of the girls (e.g., Ream 2006) whereas other studies have only considered the non-contextual 'have you ever' questions (e.g., Longmore et al., 2004). Also, several studies adjust for the discrepancies in the timing of sex or pregnancy (e.g., Sieving et al 2007) whereas other studies exclude all inconsistent cases (e.g., Cavanagh 2004).

have ever been pregnant and the month and year that this pregnancy began.[22,23] If girls report having gotten pregnant with any partner in the relationship or non-relationship history sections or if they report having ever been pregnant in the pregnancy history section, I consider them to have ever been pregnant at that wave.[24] In Wave III, respondents identified any romantic or sexual relationships they had since the summer of 1995 (the end of the Wave I interview) and whether a pregnancy occurred within each relationship. If a pregnancy occurred, respondents were asked to provide the month and year in which the pregnancy ended. From the relationship history of each respondent, I identified the respondent's first pregnancy as the measure of interest for whether the respondent had ever been pregnant at Wave III.

Similar to the questions on pregnancy, questions on sexual intercourse are asked in the relationship history sections and a non-contextual question is asked in another section. In Waves I and II, respondents are asked a question about whether and when (month and year) they ever had sexual intercourse within the contraception section.[25] In the relationship and non-relationship history sections, for each partner (romantic, liked, or 'non-relationship'), girls mark whether a series of events occurred including, "We had sexual intercourse." A follow-up question verified vaginal intercourse.[26,27] If girls report

[22]The question asks, "Have you ever been pregnant? Be sure to include if you are currently pregnant and any past pregnancy that ended in an abortion, stillbirth, miscarriage, or a live birth after which the baby died."
[23]Girls are more likely to report having gotten pregnant with a partner than to report that they had ever been pregnant in the pregnancy history section (Add Health codebook).
[24]For example, at Wave I, 335 of the 5,735 girls report having ever been pregnant and an additional 4 girls report having gotten pregnant with a partner. Thus, 339 girls (6.3 percent) have ever been pregnant at Wave I. At Wave II, 513 girls report having ever been pregnant and an additional 96 girls report having gotten pregnant with a partner. Thus, 609 girls (10.6 percent) have ever been pregnant at Wave II.
[25]The question asks, "Have you ever had sexual intercourse? When we say sexual intercourse, we mean when a male inserts his penis into a female's vagina."
[26] The question asks,"When you had sexual intercourse with {partner's initials}, did he insert his penis into your vagina?" For non-relationship, non-romantic partners, a question asks, "Have you had sexual intercourse with {partner's initials}?"

having had sexual intercourse with any partner or if they report having ever had sexual intercourse in the contraception section, they are considered non-virgins at that wave.[28] In Wave III, respondents were asked whether they have ever had vaginal intercourse and their year of age at which they first had intercourse (this is a general question not asked within the relationship history).

Adjustments were made, with a 12-month window of time to allow for recall error, for most discrepancies in respondents' reporting of pregnancies and sexual intercourse. One example is that if girls reported that they had never been pregnant at Wave I but reported that they had been pregnant at Wave II or Wave III and provided a month and year that occurred at least 12 months prior to their Wave I interview, these girls were coded as having ever been pregnant at Wave I. Another example is that if girls reported having ever been pregnant at Wave I and at Wave II, they were coded as having ever been pregnant at Wave III. [29] Similar adjustments were made to girls' sexual histories. For example, if a girl reported that she was a virgin at Wave I and Wave II but reported at Wave III that she had sexual intercourse a year prior to her Wave I interview, she is coded as being a non-virgin at Wave I and Wave II.[30]

After adjustments, girls who had never been pregnant at Waves I and II were selected for the first analytic sample with ambivalence as the dependent variable. Girls

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[27]Girls are more likely to report having ever had sexual intercourse with a partner than to report that they had ever had sexual intercourse in the contraception section (Add Health codebook).
[28]Add Health utilized the same criteria, using the contextual partner questions and the 'have you ever' question, to identify respondents who had sexual intercourse for the skip patterns in the survey.
[29]Another example is that if a girl reported having never been pregnant at Wave I and was missing on the pregnancy measure for Wave II but reported at Wave III that she had a pregnancy at least 12 months after her Wave II interview, she was recoded as having never been pregnant at Wave II.
[30]Total adjustments include: at Wave I, 18 girls were adjusted from non-pregnant to pregnant (n = 339 to 357); at Wave II, 23 girls were adjusted from non-pregnant to pregnant (n = 609 to 634); at Wave III, 54 girls were adjusted from non-pregnant or missing to pregnant (n = 2016 to 2070). For virginity: at Wave I, 103 girls were adjusted from virgin or missing to non-virgin; At Wave II, 81 girls were adjusted from virgin or missing to non-virgin; at Wave III, 43 girls adjusted from virgin or missing to non-virgin.

who were virgins and were never pregnant at Wave I were selected for the second analytic sample with age at first sexual intercourse as the dependent variable. Some remaining inconsistent and missing cases were excluded from this sample.[31] Next, I outline the analysis plan for the two analytic samples and associated dependent variables.

Analysis Plan

This dissertation includes two chapters presenting the results of this study. In each chapter, I discuss the selection of each analytic sample and discuss potential biases introduced by this selection. I next describe the sample and provide descriptive statistics and bivariate relationships of the key dependent and independent variables and variations by race/ethnicity and class. Following this, I discuss the multivariate results and any alternative specifications that were performed. I conclude each chapter with a summary of results.

All analyses in this study are weighted with a sampling weight (GSWGT3) that is designed for the longitudinal analysis of participants interviewed at Waves I, II, and III (Chantala, 2006). Also, given that Add Health has a clustered, school-based sampling design with unequal probability of selection, it is necessary to adjust the analyses using the proc survey commands in SAS. Accounting for the complex sampling design with appropriate strata and cluster variables provides unbiased estimates of the standard errors that would otherwise be underestimated, thus leading to more Type I errors if unadjusted.

[31] Inconsistent cases are excluded if they report having ever been pregnant at Wave III but report being virgins at Wave III and if they report being non-virgins at Wave II and virgins at Waves I and III. Missing cases are excluded if girls are missing on the Wave III sex measure and do not report having had sex at earlier waves. Missing cases are also excluded if respondents are missing on their age at first sexual intercourse reported at Wave III (or reported at Wave II for adjusted Wave III measures).

Domain analyses were also performed to adjust correctly for subgroup analyses and comparisons.

Chapter 4 summarizes findings on an analysis assessing the impact of girls' self-concepts on ambivalence towards pregnancy one year later at Wave II and how this impact may differ by girls' race/ethnic and class locations. OLS regression is utilized for this analysis. I run two stepwise models that include: 1) measures of race/ethnicity, class, and controls; 2.) addition of self-concept measures. I also test for two- and three-way interactions between race*self-concept, class*self-concept, and race*class*self-concept to test for possible moderation effects of race and class on the relationship between the self-concept and ambivalence towards pregnancy.[32] To aid in interpreting the interaction effects found in the interactive models, I compute and plot predicted regression lines of the interactions holding other factors constant. I also run separate models for race/ethnic and class samples to better interpret the significant interactions in the full sample models.

Chapter 5 examines, among girls who are virgins at Wave I, the influence of the self-concept on the timing of first sexual intercourse between Wave I and Wave III, approximately a six-year span of time. A second analysis further restricts the sample to girls 15 years of age and older at Wave I to examine the effect of girls' ambivalence towards becoming pregnant on the timing of first sexual intercourse between Waves I and

[32]For the regressions, class is measured by maternal education and household income. For race and class comparisons and interactions, maternal education (mother is a college graduate vs. mother is a non-college graduate) is utilized to split the groups by class. I chose to use maternal education as the primary indicator of socioeconomic status, similar to other studies (e.g., Amato & Booth 1997, Schoen et al. 2009, Wildsmith & Raley 2006). It is important to note that the interactions provide the moderation effect of maternal education while holding household income and other characteristics constant. Thus, the interactions are more conservative estimates of class moderation. To facilitate the presentation of results, the six comparison groups are referred to as high-SES Whites, high-SES Blacks, high-SES Hispanics, low-SES Whites, low-SES Blacks, and low-SES Hispanics.

III.[33] I use event history analysis, namely a discrete-time method for unrepeated events of a single kind (Allison 1982, 1984; Brown 1975; Yamaguchi 1991).[34] I create a person-year file and utilize logistic regression to test the influence of the self-concept and ambivalence on the hazard rate of age at first sexual intercourse.[35]

Similar to the plan outlined above for Chapter 4, I run two stepwise models in Chapter 5 that include: 1) measures of race/ethnicity, class, and controls; 2.) addition of self-concept measures. In the second analysis in Chapter 5, I include a third model that adds ambivalence towards pregnancy to the regression. I test for two- and three-way interactions between race*self-concept, class*self-concept, and race*class*self-concept to test for possible moderation effects of race and class on the relationship between the self-concept and the timing of first sexual intercourse. For the second analysis in Chapter 5, I test for two-way and three-way interactions between ambivalence, race, and class on the timing of first sexual intercourse. To aid in interpreting the interaction effects found in the interactive models, I compute and plot predicted regression lines of the interactions

[33]This age restriction is necessary due to the fact that the items that comprise the scale measuring ambivalence towards pregnancy are only asked of respondents 15 years of age or older at the Wave I interview.

[34] Event history analysis considers the timing of an event (e.g., first sexual intercourse) and models the duration of time until the event occurs rather than only considering the occurrence of an event as a standard logistic regression would capture (Allison 1982, 1984). Moreover, standard linear regressions with age at first sexual intercourse as a continuous dependent variable are inappropriate given that age at first sex is not known for all respondents (i.e., dependent variable is right-censored) (Allison 1982; Long et al. 1993, Yamaguchi 1991). At Wave III, approximately 18 percent of girls have never had sexual intercourse. If these censored cases (i.e., the respondent has not experienced the event by the end of the data collection) are ignored, estimates will be biased (Yamaguchi 1991). Thus, survival analysis is employed. Among survival analysis methods, semi-parametric discrete-time hazard models (Allison 1982, 1984; Brown 1975; Yamaguchi 1991) were chosen since the data are only measured in discrete intervals (in this case, years of age, given that respondents are asked to provide their age at first sexual intercourse ranging from 10 to 25 years of age) (Allison 1982, 1984). It is inappropriate to treat the dependent variable as continuous (Allison 1982). Some researchers employ Cox proportional hazard models, a non-parametric continuous time-method; however, Allison (1982, 1984), Long et al. (1993), and Ku et al. (1993) advocate for the use of the discrete-time method, which yields very comparable results to proportional hazard models.

[35] Further detail on the construction of the person-year file and the logistic models of the hazard rates are provided in Chapter 5.

holding other factors constant. I also run separate models for race/ethnic and class samples to better interpret the significant interactions in the full sample models.

Chapter 4: The Influence of Adolescent Girls' Self-Concepts on Feelings of Ambivalence towards Pregnancy

This first results chapter examines the influence of girls' self-concepts on their feelings of ambivalence towards becoming pregnant in adolescence and how this relationship varies by race/ethnicity and class. This analysis focuses on understanding the complexity of girls' feelings towards early pregnancy rather than assuming dichotomous constructs such as unplanned versus planned or unintended versus intended pregnancies. Focusing on the feelings that occur prior to pregnancy is one way to disentangle the paradox between race, selves, and pregnancy. The primary research questions addressed in this part of the dissertation are: 1.) How do girls' self-concepts influence their feelings of ambivalence towards pregnancy? 2.) How does the relationship between girls' self-concepts and ambivalence vary by race/ethnicity and class?

As discussed in Chapter 2, I have several hypotheses about the influence of the self-concept on ambivalence and how this may vary by race/ethnicity and class. Based on symbolic interactionism which argues that the self-concept motivates feelings and may be especially pertinent for adolescents, I predict that girls with stronger self-concepts will have less ambivalent or more negative feelings towards becoming pregnant in adolescence than girls with weaker self-concepts. Some components of the self are likely to be more influential than others—for example, I predict that self-esteem will have less of an impact on girls' feelings towards ambivalence than self-efficacy. Also, I predict the protective effect of a strong self-concept will be stronger for middle-class White girls than for other groups of girls.

I examine the influence of girls' self-concepts, including self-efficacy, perceived mattering, self-esteem, and possible selves, at Wave I on feelings of ambivalence towards pregnancy at one year later at Wave II using OLS regression. I also test two- and three-way interaction effects among race/ethnicity, class, and self-concept on ambivalence towards pregnant. First, I describe the sample and provide descriptive results on the bivariate relationships; then I turn to the multivariate results.

Sample Selection and Description

The analytic sample for this analysis consists of adolescent girls who were interviewed in all three waves, who were never pregnant, and who were not missing on the main dependent and independent variables (N = 4,892). Appendix Table A3.1 details the selection of the first analytic sample. As discussed in Chapter 3, although 20,745 respondents were originally interviewed during the Wave I in-home component of Add Health, only 10,828 respondents completed Waves I, II, and III and have valid sampling weights. Of these 10,828 respondents, 5,735 are female respondents, which is our starting sample for the first analytic sample.

Among the 5,735 female respondents who completed all three waves and who have valid weights, 688 girls reported having ever been pregnant at Wave I or at Wave II. Girls who are currently or have ever been pregnant are excluded from the analysis resulting in a sample size of 5,047 girls. Ninety three girls were missing on the dependent variable, a five-item composite scale of ambivalence ranging from 1 to 5 measured at Wave II. Also, 62 girls were missing on one or more of the main independent variables (race/ethnicity, class, or self-concept measures) as detailed in Appendix Table A3.1. The final sample size for the first analytic sample is 4,892 girls.

A comparison of the larger sample of 5,735 girls interviewed at all three waves and the first analytic sample of 4,892 girls who were never pregnant and who were not missing responses on the dependent and independent variables is provided in Table 4.1. The first column provides weighted means and percentages of all variables for the analytic sample and the second column provides comparable statistics for the full sample of girls. Table 4.1 provides a general description of the first analytic sample and can also be used to assess the potential biases introduced through the exclusions that led to this subsample.

[Table 4.1 about here]

The dependent variable, ambivalence, ranges from 1, indicating low ambivalence or more negative feelings towards pregnancy to 5, indicating high ambivalence or more positive feelings towards pregnancy. Among the 4,892 girls in the first analytic sample, the mean ambivalence is 1.89, on the low end of the scale, indicating that girls, on average, are less ambivalent and more negative towards becoming pregnant in adolescence.

Approximately 68 percent of girls in the first analytic sample are White, 13 percent are Black, 11.4 percent are Hispanic and 7.8 percent are 'multiple or other races.' About 24 percent of girls have mothers with a college degree or higher compared to about 76 percent of girls with mothers who are non-college graduates. In other words, about one-quarter of girls are considered to be high-SES and three-quarters are low-SES in this sample. The mean of log family income is 3.61 with approximately 19 percent of respondents missing on this measure.

Each self-concept measures range from 1, weaker or lower self-evaluations to 5, stronger or higher self-evaluations. Overall, the girls' self-concepts average on the high end, indicating that girls have relatively strong self-concepts. Girls' mean self-esteem is 3.98 and their mean self-efficacy is 3.79. Mattering and the possible selves measures are higher (means ranging 4.32- 4.56) than the self-esteem and self-efficacy measures indicating that girls have, on average, high perceived mattering and positive possible selves pertaining to college and whether they are likely to live to age 35.

The average age of the first analytic sample is approximately 15 years of age. About one-quarter of the girls (26.1 percent) have reached menarche early, prior to age 12, compared to about 74 percent who have never menstruated yet or who have reached menarche on-time or late (age 12 and older). The average age that girls' mothers gave birth to them was about 26 years of age with 19.7 percent of girls missing on this measure. Fifty-nine percent of girls in the first analytic sample live with both biological parents, 25 percent live in single-mother homes, 7.5 percent live with their biological mother and a stepfather, 4.2 percent live with their biological father (single or with a stepmother present) and 4.3 percent live with no biological parents in the household.

Comparing the girls in the first analytic sample to the full sample of 5,735 girls in the second column of Table 4.1, it is evident that the girls in the full sample have a higher mean score on ambivalence (2.00 vs. 1.89). Given that the full sample contains girls who have been pregnant or are currently pregnant in adolescence, it makes sense that they would have ambivalent or more positive feelings towards becoming pregnant compared to the analytic sample that only includes girls who were never pregnant. There are also slight differences in demographic characteristics between the samples with the analytic

sample slightly more likely to be high-SES White and live with two biological parents. Girls in the analytic sample are also slightly less likely to be in a romantic relationship. Lastly, girls in the analytic sample have slightly stronger self concepts, particularly for the educational possible selves measures, than the full sample of girls. These differences correspond with expectations that adolescent pregnancy is correlated with socioeconomic status, relationship status, and the self-concept.

It is evident that that selection filters did introduce some biases that are important to consider when interpreting the results. Given that the girls in the analytic sample are less likely to be ambivalent about becoming pregnant in adolescence, the estimates of the effects of the self-concept on ambivalence are likely conservative.

Further description of the first analytic sample of 4,892 girls is provided in Table 4.2. Table 4.2 displays the means and percentages of family income and the control variables by race/ethnic and class samples. As discussed in Chapter 3, maternal education (mother is a college graduate vs. mother is non-college graduate) is considered the primary indicator of social class in this analysis and is used to split the sample into race/ethnic and socioeconomic status (SES) groups. There are six samples being compared in the analyses: High-SES White girls (n=747), high-SES Black girls (n=275), high-SES Hispanic girls (n=77), low-SES White girls (n= 1,934), low-SES Black girls (n=649), and low-SES Hispanic girls (n=652). Significance results are provided (at the $p<.05$ level) for comparisons between high-SES White girls and the other groups (comparisons a-e) and low-SES Black girls and the other groups (comparisons f–i).

[Table 4.2 about here]

Referring to the weighted percentages, about one-half of the first analytic sample (49.5 percent) consists of low-SES White girls. The next largest category, 18.4 percent of the sample, are high-SES White girls. About 11 percent of the sample consists of low-SES Black girls, 10.2 percent are low-SES Hispanic girls, 2.3 percent are high-SES Black girls, and 1.2 percent of the sample consists of high-SES Hispanic girls. Family income aligns with maternal education in distinguishing groups by socioeconomic status. For example, White girls with college-graduate mothers have a significantly higher mean household income (log income of 4.08) compared to other girls. Black girls with non-college graduate mothers have a significantly lower mean household income (log income of 3.16) than other girls (except compared to low-SES Hispanic girls who have a higher mean but the difference is not statistically significant).

Comparing race/ethnic and class groups across characteristics, average age is comparable for all girls, at approximately 14.8 to 15.0 years of age. High-SES White girls are significantly less likely to have menstruated early (21 percent) than other girls (except high-SES Hispanic girls who have a higher percentage but the difference is not statistically significant). The percentage of girls in romantic relationships is similar across groups, however high-SES White girls are significantly more likely to report being in a romantic relationship than low-SES Hispanic girls.

High-SES mothers of White girls are significantly more likely to have had given birth to their daughters at a later age than other mothers. Also, high-SES mothers of Black girls have a higher mean age at their daughters' births than low-SES mothers of Black girls (26.38 vs. 25.24). Comparing groups across family structures, high-SES White girls are the most likely to reside with both biological parents (69.4 percent vs.

33.7-61.2 percent). Low-SES Black girls are the least likely to live with both biological parents (33.7 percent vs. 47.6–69.4 percent) and the most likely to live with a single mother (48.8 percent vs. 17.5–35.5 percent). High-SES White girls are significantly less likely to live with a single mother compared to other girls (except low-SES Hispanic girls who have a higher percentage but the difference is not statistically significant).

In sum, Table 4.2 indicates that there are differences in girls' characteristics across the race/ethnic and class groups, particularly in household income, mothers' age at respondent's birth, and family structure. There is some variation in the timing of menstruation but the girls' ages and relationship statuses are relatively comparable across groups.

Do Girls' Ambivalence and Self-Concepts Vary by Race/Ethnicity and Class?

Tables 4.3 and 4.4 provide the means of ambivalence and the self-concept measures among girls by race/ethnicity and class. Table 4.3 displays comparisons separately by class and then by race whereas Table 4.4 displays comparisons across each of the six race/ethnic and class groups. Significance tests of differences between the means of ambivalence towards pregnancy and the self-concept measures are provided for every comparison. All measures range from 1, indicating a low score, to 5, indicating a high score, on ambivalence and the self measures.

Referring to Table 4.3, the first comparison of the first two columns is between high-SES and low-SES girls (comparison a). Low-SES girls are significantly more ambivalent or positive towards becoming pregnant than high-SES girls (1.65 vs. 1.96). There are also class differences in girls' self-concepts with low-SES girls having lower scores on every component of the self except for self-efficacy. For example, low-SES

girls are significantly less likely to want to go to college, to feel that they are likely to go to college, and to feel that they are likely to live to age 35 than high-SES girls. Also, low-SES girls feel that they matter less to others and they have lower self-esteem than high-SES girls.

[Table 4.3 about here]

The next comparisons in Table 4.3 are by race/ethnicity with White girls compared to Black girls (comparison b), White girls compared to Hispanic girls (comparison c) and Black girls compared to Hispanic girls (comparison d). When comparing White and Black girls, Black girls are significantly more ambivalent or positive about becoming pregnant than White girls (2.12 vs. 1.83). Black girls have higher self-efficacy and self-esteem than White girls and do not differ from White girls in their levels of mattering and educational possible selves (want to go to college and likely will go to college). However, Black girls are less likely to feel that they will live to age 35 than White girls (4.15 vs. 4.55).

Comparing White girls to Hispanic girls in Table 4.3, as indicated by the significance results marked for (c), Hispanic girls are more ambivalent or positive towards becoming pregnant in adolescence than White girls (2.03 vs. 1.83). Hispanic girls also score significantly lower on each possible selves measure (want to go to college, likely will go to college, and likely will live to age 35). However, Hispanic girls do not differ in their levels of self-efficacy, mattering, and self-esteem compared to White girls.

Comparing Black girls to Hispanic girls in Table 4.3, as indicated by the significance results marked for (d), the only significant differences are for self-esteem

and the educational possible selves. Hispanic girls have significantly lower self-esteem, educational expectations, and educational aspirations than Black girls. Although Hispanics also score lower than Blacks on ambivalence, self-efficacy, and mattering, these differences are not statistically significant.

Overall, Table 4.3 reveals that, aligning with expectations and previous literature, there strong class differences in ambivalence and the self-concept components (except efficacy) among girls. High-SES girls are less ambivalent towards pregnancy and have stronger selves than low-SES girls. Race/ethnic differences in ambivalence are evident with Black and Hispanic girls being more ambivalent towards pregnancy than White girls. Paralleling previous literature, Black girls have equal or stronger selves than White girls (except for the possible selves measure of live to age 35). Hispanic girls have lower educational aspirations and expectations than White and Black girls, lower self-esteem than Black girls, and feel less likely to live to age 35 than White girls.

Table 4.4 compares the means of ambivalence and the self-concept measures across the six race/ethnic and class groups. Letters indicate each comparison with a key at the bottom of the table. For example, comparison (a) is between high-SES White girls and high-SES Hispanic girls.

[Table 4.4 about here]

Focusing on the differences in the means of ambivalence by race/ethnic and class groups, high-SES White girls are significantly less ambivalent or more negative about becoming pregnant in adolescence than other girls (except high-SES Hispanic girls who have a higher mean but the difference is not statistically significant). Also, high-SES Black girls have significantly lower ambivalence towards pregnancy than low-SES Black

girls (1.83 vs. 2.19). High-SES Hispanic girls are less ambivalent about pregnancy than low-SES Black girls and low-SES Hispanic girls. Low-SES White girls are less ambivalent about pregnancy than low-SES Black and low-SES Hispanic girls.

Low-SES Black girls have significantly higher self-efficacy than high-SES White girls (3.89 vs. 3.78) and low-SES White girls (3.89 vs. 3.77). High-SES White girls have significantly higher perceived mattering than low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. There are no other significant differences in self-efficacy and mattering between groups of girls by race/ethnicity and class. Low-SES Black girls have significantly higher self-esteem than other girls (except high-SES Black girls). Low-SES White girls have significantly lower self-esteem than high-SES White girls and high-SES Black girls. Also, high-SES Black girls have higher self-esteem than low-SES Hispanic girls.

Comparing groups on the possible selves measures, it is evident that there are more differences by race/ethnicity and class than for the efficacy, mattering, and self-esteem components of the self-concept. High-SES White girls have higher educational aspirations (want to go to college) than other girls (except high-SES Black girls). High-SES Black girls have higher educational aspirations than other girls (except high-SES White girls).

High-SES White girls also have higher educational expectations (likely will go to college) compared to other groups of girls (except high-SES Black girls). High-SES Black girls have higher educational expectations than low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. Also, high-SES Hispanic girls have higher educational expectations than low-SES White girls, low-SES Black girls, and low-SES

Hispanic girls. Low-SES Hispanic girls have lower educational expectations than low-SES White girls and low-SES Black girls.

Lastly, low-SES Black girls have lower expectations that they will live to age 35 than other girls (except low-SES Hispanic girls). High-SES White girls have higher expectations that they will live to age 35 than high-SES Black girls, low-SES White girls, and low-SES Hispanic girls. High-SES Hispanic girls have higher expectations that they will live to age 35 than high-SES Black girls and low-SES Hispanic girls. Also, low-SES White girls have higher expectations that they will live to age 35 than low-SES Hispanic girls.

In sum, Table 4.4 indicates that there are differences by race/ethnicity and class in girls' ambivalence towards pregnancy. High-SES White girls are the least likely to have ambivalent or positive feelings about becoming pregnant whereas low-SES Black girls are most likely to be ambivalent compared to other girls. Differences across the groups of girls are also evident for the self-concept measures with less variation for self-efficacy and mattering and more pronounced differences for the possible selves measures.

Do Girls' Self-Concepts Influence Ambivalence towards Pregnancy?

Table 4.5 provides a correlation matrix of ambivalence towards pregnancy and the self-concept measures for the first analytic sample. Referring to the first column, it is evident that each self-concept measure is significantly negatively correlated with girls' feelings towards becoming pregnant in adolescence. The correlations between the self-concept components range from .095 to .697 with most correlations falling around .15 to .30.

[Table 4.5 about here]

Figure 4.1 depicts the bivariate relationship between the self-concept measured at Wave I and feelings of ambivalence towards pregnancy measured one year later at Wave II. It is evident that girls' self-concept is negatively related to feelings of ambivalence. For each measure, girls with weaker self-concepts feel more ambivalent or positive towards pregnancy than girls with stronger self-concepts. Also, it appears that the strongest relationships are between the educational possible selves measures and ambivalence in that as girls' expectations and aspirations to attend college increase, their feelings towards early pregnancy become less ambivalent or more negative. Self-esteem has the weakest influence on ambivalence as indicated by the less steep slope in the figure.

[Figure 4.1 about here]

Table 4.5 and Figure 4.1 displayed the bivariate relationships between the self-concept and ambivalence towards pregnancy. Now, I turn to the multivariate results to determine whether the girls' self-concepts influence their ambivalence towards pregnancy one year later while accounting for race/ethnicity and class and holding constant other factors. These factors include the age of the girl, whether she has reached menarche early, whether she has been in a romantic relationship in the last 18 months, her mother's age at her birth, and her family structure.

Table 4.6 provides OLS regressions of ambivalence towards pregnancy by girls' self-concepts, race/ethnicity, class, and control variables. Model 1 shows the effect of race/ethnicity and class while controlling for other factors. Model 2 adds the self-concept measures and is the full model. Referring to Model 1, Blacks are more likely to be ambivalent or more positive towards pregnancy White girls. High-SES girls (i.e.,

mothers with more education and higher family income) are significantly less ambivalent or feel more negative towards pregnancy than low-SES girls. In terms of control variables in Model 1, mothers' age at the respondent's birth is negatively related to ambivalence and girls who live with their biological father or no biological parents are more ambivalent towards pregnancy than other girls.

[Table 4.6 about here]

In Model 2 of Table 4.6, Black girls remain significantly more likely to be ambivalent or positive towards pregnancy than White girls. High-SES girls remain significantly less likely to be ambivalent towards pregnancy than low-SES girls. However, the inclusion of the self-concept variables in Model 2 slightly reduces the negative effects of class on ambivalence as evidenced by the small decrease in the coefficients for maternal education and log family income between Model 1 and Model 2. This suggests that some of the difference in ambivalence between low-SES and high-SES girls can be explained by girls' self-concepts. In addition, the total variation that is explained by the models increases from .06 to .11 as indicated by R squared, with the addition of the self-concept measures in Model 2.

Self-efficacy, mattering, and the educational possible selves of likely will go to college and want to go to college are significantly negatively related to ambivalence towards pregnancy (Model 2). Girls who have higher self-efficacy and perceived mattering and who feel that they are likely to and want to go to college are less ambivalent or more negative towards becoming pregnant in adolescence than girls with lower self-efficacy and mattering and who feel that they do not want to or are less likely to go to college. Self-esteem and the possible selves measure of likely will live to age 35

are not significantly related to feelings of ambivalence towards pregnancy. In terms of controls in the full model, mothers' age at the adolescent's birth remains significantly negatively related to ambivalence. All other controls are non-significant in the full model.[36]

Does the Influence of Girls' Self-Concepts on Ambivalence Vary by Race/Ethnicity and Class?

Given that it is evident that girls' self-concepts influence their ambivalence towards pregnancy as shown in Table 4.6, the next step is to determine whether the effect of girls' self concepts on ambivalence varies by race/ethnicity and class. Table 4.7 provides OLS regressions of ambivalence by the self-concept measures, controls, and the addition of race and class interactions. Model 1 tests interactions between the significant self components identified in Table 4.6 (Model 2), including efficacy, mattering, want to go to college, and likely will go to college, and race/ethnicity on girls' feelings of ambivalence towards pregnancy. Model 2 tests interactions between the four significant self components and maternal education (as the primary measure of social class) on girls' ambivalence. Model 3 tests interactions between educational possible selves and both

[36]I also tested alternative specifications for the ambivalence measure including difference scores of individual items comprising the scale, categorical measures of ambivalence, and log ambivalence. First, I created measures of difference scores of individual items comprising the scale in an attempt to capture respondents' feelings of both negative and positive aspects of pregnancy. The first difference score was between items "Getting pregnant at this time in your life is one of the worst things that could happen to you" and "It wouldn't be all that bad if you got pregnant at this time in your life." The second difference score was between items "If you got pregnant it would be embarrassing for your family" and "If you got pregnant it would be embarrassing for you." The difference scores ranged from 1-4 with a higher score indicating more contradictory feelings about becoming pregnant. The two difference scores were very weakly correlated at .04 and were moderately correlated with ambivalence at about .20-.30. Secondly, I ran logistic regressions with several categorical dependent variables: ambivalent (score of 3.0-3.8, 1=486); pro-pregnancy (score of 3.8 or higher, 1=127); and ambivalent/pro combined (90th percentile/score of 3 or higher, 1=613). Lastly, given the skewed distribution of the dependent variable, I ran models with ambivalence logged. I found comparable results so I chose to not transform the measure for the analysis since logged measures are less easily interpretable.

race and class on ambivalence.[37] In other words, Model 1 tests whether race is a moderator in the relationship between the self-concept and ambivalence; Model 2 tests whether class (i.e., mothers' education) is a moderator in the relationship between the self-concept and ambivalence; and Model 3 tests whether race *and* class together moderate the relationship between the self-concept and ambivalence.

[Table 4.7 about here]

In Model 1 in Table 4.7, one interaction effect between being Black and the possible selves measure of likely will go to college approaches significance ($p<.10$). This interaction suggests that the effect of educational expectations on ambivalence towards pregnancy differs for Black and White girls. To better interpret this interaction, I plot regression lines predicting mean ambivalence based on the different values of likely will go to college while holding other factors constant in Figure 4.2. In Figure 4.2, for White girls, educational expectations are protective against ambivalent or positive feelings towards pregnancy whereas, for Black girls, ambivalence is only slightly affected at different values of likely will go to college.

[Figure 4.2 about here]

Table 4.8 displays five regressions of the full model first by class and then by race. The moderating effect of race on the relationship between girls' educational expectations and ambivalence is confirmed by comparing the separate models for White

[37]To facilitate the presentation of results, Table 4.7 only displays the interactions for the self-concept components that were significant in the full model in Table 4.6. I also tested two- and three-way interactions for the other self-concept components including esteem and likely to live to age 35 and three-way interactions for efficacy and mattering. Two additional interactions were significant between being Black, having a college graduate mother, and likely to live to age 35 and between having a college graduate mother, being Hispanic, and likely to live to age 35.

girls and for Black girls in Table 4.8. There is a strong negative effect of likely will go to college on ambivalence for White girls and a non-significant relationship for Black girls.

[Table 4.8 about here]

Referring back to Table 4.7, Model 2 tests for interactions between four self concept components (efficacy, mattering, want to go to college, likely will go to college) and mothers' education on girls' ambivalence towards pregnancy. An interaction effect between having a college graduate mother and want to go to college approaches significance ($p<.10$) in Model 2. This finding suggests that the effect of educational aspirations on feelings of ambivalence towards becoming pregnant differs for high-SES and low-SES girls.

To make sense of this interaction, I graph regression lines predicting mean ambivalence based on the different values of want to go to college while holding other factors constant in Figure 4.3. [38] In Figure 4.3, for high-SES girls, educational aspirations are strongly protective against ambivalent or positive feelings towards pregnancy whereas the effect of educational aspirations on ambivalence is not as strong as indicated by the less steep slope among low-SES girls.

[Figure 4.3 about here]

The moderating effect of mothers' education, as an indicator of social class, on the relationship between educational aspirations and ambivalence is confirmed by separate regressions for high-SES and low-SES girls in Table 4.8. There is a

[38]It is important to note that the class interactions provide the moderation effect of maternal education while holding household income and other characteristics constant. Thus, the interactions are more conservative estimates of class moderation.

significantly negative effect for want to go to college on ambivalence for high-SES girls and a non-significant (at the .05 level) negative relationship for low-SES girls.

Referring back to Table 4.7, Model 3 tests for three-way interaction effects among race, class, and self on ambivalence to determine whether race and class are moderators in the relationship between the self-concept and ambivalence. I find two significant interaction effects—likely will go to college*Black*college graduate mother and want to go to college* Black*college graduate mother. This finding suggests that the effect of educational aspirations and educational expectations on feelings of ambivalence towards becoming pregnant differs among girls by both race and class locations.

I graph regression lines predicting mean ambivalence based on the different values of likely will to go to college while holding other factors constant in Figure 4.4 in order to better understand the likely will go to college*Black*college graduate mother interaction. There are four plotted regression lines for high-SES White girls, high-SES Black girls, low-SES White girls, and low-SES Black girls. For low-SES White girls and high-SES Black girls, educational expectations are protective against ambivalent or positive feelings towards pregnancy. For low-SES Black girls and high-SES White girls, educational expectations are unrelated or slightly positively related to ambivalence.

[Figure 4.4 about here]

Table 4.9 provides six regressions of ambivalence by the self-concept and controls for the following groups: high-SES White girls, high-SES Black girls, high-SES Hispanic girls, low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. The moderating effect of race and class on the relationship between girls' educational expectations and ambivalence is confirmed by comparing the separate models for high-

SES White girls, high-SES Black girls, low-SES White girls, and low-SES Black girls in Table 4.9. Paralleling Figure 4.4, likely will go to college is significantly negatively related to ambivalence for low-SES White girls and high-SES Black girls and is not significantly related to ambivalence for high-SES White girls and low-SES Black girls.

In Model 3 in Table 4.7, the second significant three-way interaction effect is for want to go to college*Black*college graduate mother. I graph regression lines predicting mean ambivalence based on the different values of want to go to college while holding other factors constant in Figure 4.5 in order to better understand this interaction. There are four plotted regression lines for high-SES White girls, high-SES Black girls, low-SES White girls, and low-SES Black girls. For low-SES Black girls and high-SES White girls, educational aspirations are protective against ambivalent or positive feelings towards pregnancy. For low-SES White girls and high-SES Black girls, educational aspirations are unrelated or slightly negatively related to ambivalence.

[Figure 4.5 about here]

Referring to Table 4.9, the moderating effect of race and class on the relationship between girls' educational aspirations and ambivalence is confirmed by comparing the separate models for high-SES White girls, high-SES Black girls, low-SES White girls, and low-SES Black girls. For high-SES White girls, want to go to college is significantly negatively related to ambivalence paralleling Figure 4.5. For high-SES Black girls, low-SES White girls, and low-SES Black girls, educational aspirations are not significantly related to ambivalence according to the separate regressions in Table 4.9.[39]

[39]I also ran three sets of alternative specifications to test the distinction between educational expectations and aspirations for Tables 4.6, 4.7, and 4.9—only including likely will go to college in the models; only including want to go to college in the models; and including a combined variable of want to and likely will go to college with the following categories: high want/high likely (excluded category), low want/low likely,

Summary of Results

A summary of significant results for this first analysis is provided in the first row in Table 4.10. The table displays an overall summary of significant results for all of the analyses completed in the dissertation including details on the sample, dependent variable, and significant main and interaction effects.

[Table 4.10 about here]

Most components of girls' self-concepts are protective against feelings of ambivalence towards becoming pregnant in adolescence one year later. Self-efficacy, perceived mattering, and the educational possible selves of likely will go to college and want to go to college are significantly negatively related to ambivalent or more positive feelings towards pregnancy one year later. Girls who feel efficacious, that they matter to others, and aspire and expect to attend college are more negative about becoming pregnant in adolescence than other girls. Girls' self-esteem and the possible selves measure of likely will live to age 35 are not significantly related to ambivalence. This aligns with expectations that girls' self-concepts influence their feelings towards pregnancy and that the some components of the self matter more than others.

Consistent with intersectional theory, there are differences by girls' race/ethnic and class locations in the influence of the self on ambivalence. Two- and three-way

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low want/high likely, high want/low likely, middle want/middle likely. Results indicated that want to go to college was slightly less significant with likely will go to college in the model, however it was still significant at the $p<.01$ level. The model with the combined variable indicated that all of the categories of want/likely were positively related to ambivalence compared to high want/high likely (results differed depending on the excluded category). Separate models by race and class indicated that, for low-SES Blacks, neither educational aspirations nor expectations seem as influential for ambivalence as they do for other groups of girls. It is important to note the possible impact of the shared variance of expectations and aspirations when interpreting the results with both measures in the model (i.e., the effect of each variable is the remaining effect after controlling for the other variable). However, I chose to include the two separate measures of want to and likely will go to college in the models since I would argue that educational aspirations and expectations are distinct conceptually and empirically.

interactions reveal that the effect of girls' educational possible selves on ambivalence towards pregnancy varies by race and social class. The effect of educational expectations on ambivalence is different for Black and White girls. Educational expectations are protective against ambivalent or positive feelings for White girls, but are statistically unrelated to ambivalence for Black girls. Three-way interactions among race, class, and the self on ambivalence show that educational expectations are significantly negatively related to ambivalence for low-SES White girls and high-SES Black girls only.

The effect of educational aspirations on ambivalence is different for low-SES and high-SES girls. Educational aspirations are protective against ambivalent feelings towards pregnancy for high-SES girls, but statistically unrelated to ambivalence for low-SES girls. Upon closer examination with three-way interactions, it is evident that educational aspirations are significantly negatively related to ambivalence for high-SES White girls and low-SES Black girls only.

The moderating effects of race and class in the relationship between educational possible selves and ambivalence suggest that educational aspirations and expectations may serve as substitutes rather than complements to each other in their protective role against ambivalence. Among the four groups of girls (high-SES White girls, low-SES White girls, high-SES Black girls, low-SES Black girls), it seems that the most privileged girls, high-SES White girls, and least privileged girls, low-SES Black girls, are more influenced by expectations to attend college whereas the middle two groups, low-SES White girls an high-SES Black girls, are more affected by college aspirations.

It may be that the presumably most privileged girls, high-SES White girls, have high expectations for themselves and from their parents that they will attend college so

variation in their educational aspirations is what matters for ambivalence. Likewise, the least privileged girls, low-SES Black girls, may have low educational expectations for themselves and from their parents so again variation in their aspirations matters for ambivalence. However, low-SES White girls and high-SES Black girls, variation in their educational expectations is influential for ambivalence towards pregnancy. The interactions between educational possible selves, race and class on ambivalence partially support my prediction that stronger self-concepts will be more protective for high-SES white girls than for other girls. However, it is evident that race and class differences in the relationship between educational possible selves and ambivalence are more complex than expected.

Chapter 5: The Influence of Adolescent Girls' Self-Concepts and Ambivalence towards Pregnancy on Age at First Sexual Intercourse

The second results chapter examines the influence of girls' self-concepts and their feelings of ambivalence towards becoming pregnant in adolescence on the timing of first sexual intercourse and how this influence varies by race/ethnicity and class. This analysis focuses on understanding the role of girls' selves and feelings in their initial decisions to engage in sexual intercourse. The primary research questions addressed in this part of the dissertation are: 3.) How do girls' self-concepts and ambivalence towards pregnancy influence their timing of first sexual intercourse? 4.) How does the influence of girls' self-concepts and ambivalence on their timing of first sexual intercourse vary by race/ethnicity and class?

I have several hypotheses about the influence of girls' self-concepts and ambivalence on the timing of first sexual intercourse and how this may vary by race/ethnicity and class, as discussed in Chapter 2. I predict that girls with stronger self-concepts will be less likely to transition to first sexual intercourse at an earlier age than girls with weaker self-concepts. Similar to Chapter 4, I also expect that some components of the self, such as self-esteem, will be less influential on the timing of first sex than other components, such as self-efficacy. Also, I predict that the protective effect of a strong self-concept will be stronger for middle-class White girls than for other groups of girls. Last, girls who feel ambivalent or more positive about pregnancy are likely to have an earlier transition to first sex and this relationship may vary by their race/ethnic and class locations.

This chapter is divided into two analyses. First, I examine, among girls who are virgins at Wave I, the influence of the self-concept on the timing of first sexual

intercourse between Wave I and Wave III, approximately a six-year span of time. Second, I further restrict the sample to girls 15 years of age and older at Wave I to examine the effect of girls' ambivalence towards becoming pregnant on the timing of first sexual intercourse between Waves I and III.[40] Given that ambivalence at Wave I is only asked of girls 15 years of age or older, the second analysis greatly reduces my sample size and restricts the age range of girls who I can capture transitioning from virgin to non-virgin status. I also test two- and three-way interaction effects among race/ethnicity, class, and self-concept and ambivalence on the age at first sexual intercourse.

This chapter uses discrete-time event history analysis for unrepeated events of a single kind. First, a person-year file is created for each respondent with records for ages 10 to 27—each respondent had a total of 18 records (i.e., person-years). Records were censored from the file if the age of the record was prior to the respondent's age at the Wave I interview and if the age of the record was after the respondent's age at the Wave III interview. Thus, each respondent had records for the ages that occurred from Wave I through Wave III, resulting in an average of 7 person-years per respondent. Each record was given a 0 if first intercourse did not occur during this age. If first sex did occur during a particular age, the record received a 1. After a respondent received a 1 for the age in which she transitioned from virgin to non-virgin, subsequent records were censored (i.e., were marked as missing). For example, if a respondent was interviewed at Wave I at age 14 and had sex for the first time at age 17, her records for 14-16 are

[40]Recall that in the analysis in Chapter 4, I focused on the influence of the self concept measured at Wave I on ambivalence measured at Wave II since I wanted to take advantage of the temporal ordering. For Chapter 5, I have a different sample composed of virgins and I focus on how the self-concept at Wave I influences the transition to first sex between Waves I and III. Then, I restrict the sample to girls 15 years and older to test the effect of ambivalence, this time measured at Wave I, on the transition to first sex.

marked 0; the record for age 17 is marked 1, and the records for 18-20 (20 being her age at the time of the Wave III interview) are censored (i.e., marked as missing). If the respondent never had sexual intercourse between Waves I and III, each record receives a 0. Next, I utilize logistic regression to examine the influence of the self-concept, race/ethnicity and class on the hazard rate of age at first sexual intercourse using the person-year file. The hazard rate is the probability that first sexual intercourse will occur within a particular person-year for those girls who have not yet had sexual intercourse. The time-varying covariate of year of age (i.e., person-year) is included in the models.

In this chapter, I first describe the sample and provide descriptive results on the bivariate relationships for the first analysis among all girls who are virgins at Wave I. Next, I provide the multivariate results for the first analysis on the influence of girls' self-concepts on the transition to first sexual intercourse. Lastly, I turn to the multivariate results for the second analysis where I restrict the sample to girls 15 years of age or older to examine the influence of ambivalence on the timing of first sexual intercourse.

Sample Selection and Description

The analytic sample for this analysis consists of adolescent girls who were interviewed in all three waves, who are virgins at Wave I (and who had never been pregnant at Wave I) and who were not missing on the main dependent and independent variables (N = 3,485). Appendix Table A3.1 details the selection of the second analytic sample. The starting sample for the second analytic sample is the 5,735 female respondents who completed all three waves and have valid sampling weights.

Among the 5,735 girls, 2,155 girls reported having ever been pregnant at Wave I or report having ever had sex (i.e. being non-virgins) at Wave I. These girls are excluded

from the analysis resulting in a sample size of 3,580 girls who have never been pregnant and are virgins at Wave I. Sixty two girls were missing or have inconsistent data on the dependent variable, age at first sexual intercourse as reported in Wave III. An additional 33 girls were excluded who were missing on race/ethnicity, class, or the self-concept measures. The final sample size for the first analytic sample is 3,485 girls.

Table 5.1 compares the second analytic sample of 3,485 girls who were virgins and never pregnant at Wave I and who were not missing responses on the dependent and independent variables to the larger sample of 5,735 girls who were interviewed at all three waves. The first column provides weighted means and percentages of all variables for the second analytic sample and the second column provides comparable statistics for the full sample of girls. Table 5.1 provides a general description of the second analytic sample and can also be used to assess the potential biases introduced through the sample restrictions.

[Table 5.1 about here]

The dependent variable for this chapter is age at first sexual intercourse reported at Wave III. The median age of first sexual intercourse among the second analytic sample of 3,485 girls is 17 years of age. The mean age of first sexual intercourse is 17.19. At the time of the Wave III interview, 17.9 percent of girls reported never having had sexual intercourse and remain virgins.

Almost 70 percent of the second analytic sample are White (69.5 percent) with 10.6 percent being Black, 11.9 percent being Hispanic, and 8 percent being 'multiple or other races.' Approximately 26.3 percent of girls have mothers with college degrees or higher compared to 73.7 percent of girls with mothers who are non-college graduates. In

other words, over one-fourth of girls are considered to be high-SES and about three-fourths of girls are considered to be low-SES. The mean of log family income is 3.64 with approximately 18 percent of the sample missing on this measure.

Each self-concept measure ranges from 1, a lower score to 5, a higher score. Overall, the girls' self-concepts average on the high end, indicating that girls have relatively strong self-concepts. Girls' mean self-esteem is 4.02 and their mean self-efficacy is 3.82. Mattering and the possible selves measures are higher (means ranging 4.28-4.65) than the self-esteem and self-efficacy measures indicating that girls have, on average, high perceived mattering and positive possible selves pertaining to college and whether they are likely to live to age 35.

Focusing on the control variables, the average age of the second analytic sample is 14 years of age. About one-quarter of girls (24.3 percent) have reached menarche early, prior to age 12, compared to 75.7 percent who have never menstruated yet or who have reached menarche on-time or late (age 12 and older). The average age that mothers gave birth to their daughters was about 26 years of age with 18.1 percent of girls missing on this measure. About 64 percent of girls in the second analytic sample live with two biological parents, 22.5 percent live only with their biological mother, 6.5 percent live with their biological mother and a stepfather, 3.7 percent live with their biological father (single or with a stepmother present) and 3.1 percent live with no biological parents in the household.

Comparing the girls in the second analytic sample to the full sample of 5,735 girls in the second column of Table 5.1, it is evident that the girls in the full sample have a lower mean and median age at first sexual intercourse. The full sample also has a lower

percentage of girls reporting that they have never had sexual intercourse at the time of the Wave III interview. Given that the full sample contains girls who are non-virgins at Wave I, it makes sense that they would, on average, have sex for the first time at an earlier age and that a smaller percentage would be virgins at Wave III compared to the second analytic sample that only includes girls who are virgins at Wave I.

There are also slight differences in demographic characteristics between the samples with the second analytic sample being more likely to be high-SES White and live with two biological parents. Girls in the second analytic sample are slightly younger at Wave I, are less likely to be in a romantic relationship, and their mothers were slightly older at their births than the full sample of girls that includes non-virgins. Lastly, girls in the second analytic sample have slightly stronger self concepts, particularly for the educational possible selves measures, than the full sample of girls. These differences correspond with expectations that a younger age at first sex is correlated with lower socioeconomic status, being in a romantic relationship, and having a weaker self-concept.

It is evident that that selection filters did introduce some biases that are important to consider when interpreting the results. The selection effect is likely greater for the oldest adolescents in the sample for whom virginity is less common than among younger adolescents. Also, I am unable to examine the adolescents who have sex prior to Wave I. However, the advantages of temporal ordering outweighed the costs associated with restricting the sample to virgins at Wave I for this analysis.

Table 5.2 provides descriptive statistics of the second analytic sample of 3,485 girls broken down by race and class. Weighted means and percentages of family income and the control variables by race/ethnic and class samples are displayed for six groups:

High-SES White girls (n=597), high-SES Black girls (n=187), high-SES Hispanic girls (n=54), low-SES White girls (n=1,389), low-SES Black mothers (n=370), and low-SES Hispanic girls (n=474). Significance results are provided (at the $p<.05$ level) for comparisons between high-SES White girls and the other groups (comparisons a-e) and low-SES Black girls and the other groups (comparisons f–i).

[Table 5.2 about here]

About 20 percent of the girls in the second analytic sample (weighted percentage 19.6) are high-SES White girls and almost one-half of the girls (48.8 percent) are low-SES White girls. Eleven percent of the girls are low-SES Hispanic girls, 8.4 percent are low-SES Black girls, 2.3 percent are high-SES Black girls, and 1.5 percent are high-SES Hispanic girls. Family income aligns with mothers' educational attainment in distinguishing groups by socioeconomic status. For example, White girls with college-graduate mothers have a significantly higher mean household income (log income of 4.11) compared to other girls. Black girls with non-college graduate mothers have a significantly lower mean household income (log income of 3.14) than other girls (except compared to low-SES Hispanic girls who have a higher mean but the difference is not statistically significant).

Comparing race/ethnic and class groups across characteristics, average age is comparable for all girls, at around 14.5 years of age. High-SES Black girls are more likely to have menstruated early (41.8 percent) than other girls (except high-SES Hispanic girls who have a higher percentage but the difference is not statistically significant). High-SES White girls are more likely to report being in a romantic relationship than low-SES Black and low-SES Hispanic girls. Low-SES Black girls are

also less likely to report being in a romantic relationship than low-SES White girls (38.4 vs. 50.2 percent).

High-SES mothers of White girls are significantly more likely to have had given birth to their daughters at a later age than other mothers. Also, high-SES mothers of Black girls have a higher mean age at their daughters' births than low-SES mothers of Black girls (26.73 vs. 25.71). Comparing groups across family structures, high-SES White girls are the most likely to reside with both biological parents (except high-SES Hispanic girls who have a lower percentage but the difference is not statistically significant). Low-SES Black girls are the least likely to live with both biological parents (36.9 percent vs. 54.9–74.3 percent) and the most likely to live with a single mother (50.7 percent vs. 14.9–30.8 percent). High-SES White girls are significantly less likely to live with a single mother compared to other girls (except high-SES Hispanic girls who have a higher percentage but the difference is not statistically significant).

In sum, Table 5.2 indicates that there are differences in girls' characteristics across the race/ethnic and class groups, particularly in household income, mothers' age at respondent's birth, and family structure. There is some variation in the timing of menstruation and girls' relationship statuses across groups.

Do Girls' Age at First Sex and Self-Concepts Vary by Race/Ethnicity and Class?

Tables 5.3 and 5.4 provide the means and medians of age at first sex and the means of the self-concept measures among girls by race/ethnicity and class. Table 5.3 displays comparisons separately by class and then by race whereas Table 5.4 displays comparisons across each of the six race/ethnic and class groups. Significance tests of

differences between the means of age at first sexual intercourse and the self-concept measures are provided for every comparison.

Referring to Table 5.3, the first comparison of the first two columns is between high-SES and low-SES girls (comparison a). Low-SES girls have a lower median age at first sex than high-SES girls (17 vs. 18 years of age). Low-SES girls also have a significantly lower average age at first sex than high-SES girls (17.05 vs. 17.61). A lower percentage of low-SES girls have never had sexual intercourse at the time of the Wave III interview than high-SES girls (15.4 percent vs. 24.9 percent). There are also class differences in girls' self-concepts with low-SES girls having lower scores on every component of the self except for self-efficacy and self-esteem. Low-SES girls are significantly less likely to want to go to college, to feel that they are likely to go to college, and to feel that they are likely to live to age 35 than high-SES girls. Also, low-SES girls feel that they matter less to others than high-SES girls.

[Table 5.3 about here]

The next comparisons in Table 5.3 are by race/ethnicity with White girls compared to Black girls (comparison b), White girls compared to Hispanic girls (comparison c) and Black girls compared to Hispanic girls (comparison d). When comparing White girls to Black girls, Black girls do not significantly differ from White girls in their median or mean age at first sexual intercourse. However, a significantly lower percentage of Black girls are still virgins at the time of the Wave III interview compared to White girls (11.0 percent vs. 18.8 percent). Black girls have higher self-efficacy and self-esteem than White girls and do not differ from White girls in their levels of mattering and educational possible selves (want to go to college and likely will go to

college). However, Black girls are less likely to feel that they will live to age 35 than White girls (4.15 vs. 4.60).

Comparing White girls to Hispanic girls in Table 5.3, as indicated by the significance results marked for (c), Hispanic girls do not significantly differ from White girls in their age at first sexual intercourse or the percentage of girls who remain virgins at Wave III. However, Hispanic girls do have a higher median age at first sex than White girls (18 vs. 17 years of age). Hispanic girls score significantly lower on perceived mattering and on each possible selves measure (want to go to college, likely will go to college, and likely will live to age 35). However, Hispanic girls do not differ in their levels of self-efficacy and self-esteem compared to White girls.

Comparing Black girls to Hispanic girls in Table 5.3, as indicated by the significance results marked for (d), Black girls have a lower median age at first sex than Hispanic girls (17 vs. 18 years of age). Black girls also have a significantly lower average age at first sexual intercourse (16.96 vs. 17.63) than Hispanic girls and a lower percentage of Black girls remain virgins at Wave III (11.0 percent vs. 18.1 percent). Hispanic girls have significantly lower self-esteem and educational expectations than Black girls. Although Hispanics also score lower than Blacks on self-efficacy, mattering, and educational aspirations, these differences are not statistically significant.

Overall, Table 5.3 reveals that, aligning with expectations and previous literature, there are strong class differences in age at first sexual intercourse and the self-concept components (except efficacy and self-esteem) among girls. High-SES girls are have a later age at first sex and have stronger selves than low-SES girls. Age at first sexual intercourse is similar across race/ethnic groups with the only difference being between

Black and Hispanic girls. Paralleling previous literature, Black girls have equal or stronger selves than White girls (except for the possible selves measure of live to age 35). Hispanic girls have lower possible selves and mattering than White girls and lower self-esteem and educational expectations than Black girls.

Table 5.4 compares the means and medians of age at first sex and the means of the self-concept measures across the six race/ethnic and class groups. Letters indicate each comparison with a key at the bottom of the table (except for the first comparison between high-SES white and high-SES black girls). For example, comparison (a) is between high-SES White girls and high-SES Hispanic girls.

[Table 5.4 about here]

Focusing on the differences in age at first sexual intercourse by race/ethnic and class groups, high-SES White girls, high-SES Hispanic girls, and low-SES Hispanic girls have a median age at first sex of 18 years of age whereas high-SES Black girls, low-SES White girls, and low-SES Black girls have a median age at first sex of 17 years of age. Referring to the mean age at first sex, high-SES White girls have a significantly higher mean age at first sex than high-SES Black girls, low-SES White girls, and low-SES Black girls. High-SES Hispanic girls have a higher mean age at first sex than low-SES White girls and low-SES Black girls. Also, low-SES Hispanic girls have a higher mean age at first sex than low-SES White girls.

Now, focusing on differences in the percentages of girls who remain virgins at the Wave III interview, a higher percentage of high-SES White girls have never had sex than low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. A lower percentage of low-SES Black girls remain virgins at Wave III than high-SES Black girls,

low-SES White girls, and low-SES Hispanic girls. Lastly, high-SES Black girls have a higher percentage of girls who remain virgins than low-SES White girls.

Comparing groups of girls on the self-concept measures, there are no significant differences between the groups of girls in levels of self-efficacy. For mattering, high-SES white girls have higher levels of perceived mattering than low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. In terms of self-esteem, high-SES Black girls have higher self-esteem than high-SES Hispanic girls, low-SES White girls, and low-SES Hispanic girls. Low-SES Black girls have higher self-esteem than other girls (except high-SES Black girls).

Comparing groups on the possible selves measures, it is evident that there are more differences by race/ethnicity and class than for the efficacy, mattering, and self-esteem components of the self-concept. High-SES White girls have higher educational aspirations (want to go to college) than low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. High-SES Black girls have higher educational aspirations than other girls. High-SES Hispanic girls have higher educational aspirations than low-SES Hispanic girls.

High-SES White girls also have higher educational expectations (likely will go to college) compared to other groups of girls (except high-SES Black girls). High-SES Black girls have higher educational expectations than low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. Also, high-SES Hispanic girls have higher educational expectations than low-SES White girls, low-SES Black girls, and low-SES Hispanic girls. Low-SES Hispanic girls have lower educational expectations than low-SES White girls and low-SES Black girls.

Lastly, comparing groups on likely will live to age 35, high-SES White girls have higher expectations that they will live to age 35 than other girls (except high-SES Hispanic girls). High-SES Hispanic girls have higher expectations that they will live to age 35 than other girls (except high-SES White girls). Also, low-SES White girls have higher expectations that they will live to age 35 than high-SES Black girls, low-SES Black girls, and low-SES Hispanic girls.

In sum, Table 5.4 indicates that there are differences by race/ethnicity and class in girls' age at first sexual intercourse. High-SES White girls and high-SES and low-SES Hispanic girls have older ages at first sexual intercourse whereas low-SES White and low-SES Black girls have younger ages at first sexual intercourse compared to other girls. Differences across the groups of girls are also evident for the self-concept measures with less variation for self-efficacy and mattering and more pronounced differences for the possible selves measures.

Do Girls' Self-Concepts Influence their Age at First Sexual Intercourse?

Table 5.5 provides a correlation matrix of age at first sex and the self-concept measures for the second analytic sample. Referring to the first column, it is evident that each self-concept measure is significantly positively correlated with later age at first sexual intercourse except for likely to live to age 35, which has a negative sign and not statistically significant. The correlations between the self-concept components for this sample range from .06 to .68 with most correlations falling around .15 to .30.

[Table 5.5 about here]

Figure 5.1 depicts the bivariate relationships between the self-concept components measured at Wave I and girls' age at first sexual intercourse between Waves

I and III. Self-efficacy and self-esteem are positively related to a later age at first sex. In other words, girls with weaker self-concepts are more likely to have sex for the first time at an earlier age than girls with stronger self-concepts. The possible selves measure of likely will live to age 35 is unexpectedly negatively related to age at first sexual intercourse. Girls who feel that they are more likely to live age 35 have sex at an earlier age than those who feel that they are less likely to live to age 35. The self-concept components of mattering, educational aspirations and educational expectations do not appear to be linearly related to girls' age at first sexual intercourse.

[Figure 5.1 about here]

Table 5.5 and Figure 5.1 displayed the bivariate relationships between the self-concept and age at first sexual intercourse. Now, I turn to the multivariate results to determine whether the girls' self-concepts influence the timing of first sexual intercourse using event history analysis and while accounting for race/ethnicity and class and holding constant other factors. These factors include the age of the girl, whether she has reached menarche early, whether she has been in a romantic relationship in the last 18 months, her mother's age at her birth, and her family structure. A time-varying covariate 'year of age' is also included for each person year.[41]

Prior to presenting the hazard models, Table 5.6 depicts a life table that indicates the survival estimates of age at first sex among person-years for the second analytic sample of girls. For each age interval indicated in the first column, the number of girls who transitioned to first sexual intercourse, the conditional probability of transitioning to

[41]I tried models with and without a control for the respondent's age at Wave I because I was worried about multicollinearity between respondent's age and year of age. I found that the models were comparable so I included the age control; however, it is not easily interpretable given that it represents more of a cohort effect than an age effect.

first sex, the cumulative proportion of remaining virgins and the cumulative proportion of non-virgins are provided among person-years. For example, 658 girls transitioned to first sex at age 18. Among person-years, the conditional probability of transitioning to first sex at age 18 is .144, the cumulative proportion of virgins by age 18 is .833, and the cumulative proportion of non-virgins by age 18 is .167.

[Table 5.6 about here]

Table 5.7 provides discrete-time logistic regressions of the hazard rate of the age at first sexual intercourse by girls' self-concepts, race/ethnicity, class, and control variables among person-years. The hazard rate is the conditional probability that a girl will have sexual intercourse for the first time within a particular person-year given that she is still a virgin at that time. Estimated coefficients and odds ratios are shown for each model. A positive coefficient indicates acceleration whereas a negative coefficient indicates postponement of the timing of first sexual intercourse. The odds ratios express the ratio of the odds of transition from virginity to nonvirginity in person-years for a one-unit change in the independent variable. An odds ratio greater than 1.00 indicates an elevated risk of early intercourse and an odds ratio less than 1.00 indicates a reduced risk of early intercourse.

Model 1 shows the effect of race/ethnicity and class while controlling for other factors. Model 2 adds the self-concept measures and is the full model. Referring to Model 1, Non-Hispanic Blacks are more likely to transition to first sex at an earlier age than non-Hispanic white girls. High-SES girls (i.e., mothers with more education) are significantly less likely to have sex for the first time at an earlier age than low-SES girls.

[Table 5.7 about here]

In Model 2 of Table 5.7, Non-Hispanic black girls remain significantly more likely to transition to first sex earlier than Non-Hispanic white girls. High-SES girls remain significantly less likely to have an early age at first sex than low-SES girls. Mattering is significantly negatively related to the hazard rate of age at first sexual intercourse. Girls who feel that they matter more to other people are more likely to transition to non-virgin at a later age than girls who feel that they matter less to others. The possible selves measure of likely to live to age 35 is unexpectedly related to an elevated risk of early first sexual intercourse. Self-efficacy, self-esteem, and the educational possible selves of want to go to college and likely will go to college are not statistically significantly related to the timing of sexual intercourse.[42]

In terms of control variables in Model 1 and the full model, the time-varying covariate 'year of age' is significantly related to an elevated risk of an early transition to first sexual intercourse. Girls who are in a romantic relationship in the last 18 months or who live with their single mother or with their biological father (single or with a stepfather) at Wave I are more likely to have sex for the first time at an earlier age than other girls. Mothers' age at the respondent's birth is also significantly negatively related to an early transition to first sex.

Does the Influence of Girls' Self-Concepts on the Age of First Sexual Intercourse Vary by Race/Ethnicity and Class?

Since some components of girls' self-concepts, mattering and likely to live to age 35, influence their age at first sexual intercourse as shown in Table 5.7, the next step is to determine whether the effect of girls' self concepts on the age at first sex varies by

[42]I also ran alternative models with the self-concept measures squared and as categorical variables given the suggested non-linearity in Figure 5.1. The results were comparable to Table 5.6 with only mattering and likely will live to age 35 being significant.

race/ethnicity and class. Table 5.8 provides logistic regressions of the hazard rate of the age at first sex by the self-concept measures, controls, and the addition of race and class interactions. Model 1 tests interactions between the significant self components identified in Table 5.7 (Model 2), including mattering and likely to live to age 35, and race/ethnicity on girls' timing of first sexual intercourse. Model 2 tests interactions between the two significant self components and maternal education (as the primary measure of social class) on girls' timing of first sex. Model 3 tests interactions between mattering and likely will live to age 35 and both race and class on the transition to first sex.[43] In other words, Model 1 tests whether race is a moderator in the relationship between the self-concept and the timing of first sex; Model 2 tests whether class (i.e., mothers' education) is a moderator in the relationship between the self-concept and timing of first sex; and Model 3 tests whether race *and* class together moderate the relationship between the self-concept and timing of first sex.

[Table 5.8 about here]

In Model 1 in Table 5.8, one interaction effect between being Black and the possible selves measure of likely will live to age 35 approaches significance ($p<.10$). This interaction suggests that the effect of likely to live to age 35 on the transition to first sexual intercourse differs for Black and White girls. To better interpret this interaction, I plot regression lines predicting probabilities based on the different values of likely will live to age 35 while holding other factors constant in Figure 5.2. In Figure 5.2, for White

[43]To facilitate the presentation of results, Table 5.8 only displays the interactions for the self-concept components that were significant in the full model in Table 5.7. I also tested two- and three-way interactions for the other self-concept components including efficacy, esteem, want to go to college, and likely will go to college. Two additional interactions approached significance at the $p<.10$ level, between being Black and want to go to college and between having a college graduate mother, being Hispanic, and self-esteem.

girls, likely to live to age 35 is positively related to a higher probability of transitioning to first sex at an earlier age. For Black girls, timing of first sexual intercourse is only slightly affected at different values of likely will go live to age 35.

[Figure 5.2 about here]

Table 5.9 displays five regressions of the full model for the following groups by class and then by race. The moderating effect of race on the relationship between the possible selves measure of likely will live to age 35 and the transition to first sex is confirmed by comparing the separate models for White girls and for Black girls in Table 5.9. Paralleling Figure 5.2, there is a positive effect of likely will live to age 35 on the risk of an early transition to first sexual intercourse for White girls and a non-significant relationship for Black girls.

[Table 5.9 about here]

Referring back to Table 5.9, Model 2 tests for interactions between mattering and likely will live to age 35 and mothers' education on the timing of first sexual intercourse. An interaction effect between having a college graduate mother and mattering is statistically significant ($p<.05$) in Model 2. This finding suggests that the effect of mattering on the transition to first sexual intercourse differs for high-SES and low-SES girls.

To make sense of this interaction, I graph regression lines predicting probabilities of the transition to non-virgin based on the different values of mattering while holding other factors constant in Figure 5.3. In Figure 5.3, for low-SES girls, mattering is strongly protective against an earlier age at first sexual intercourse whereas the effect of

mattering is not significantly related to the timing of first sex for high-SES girls.

[Figure 5.3 about here]

The moderating effect of mothers' education, as an indicator of social class, on the relationship between mattering and the transition to first sex is confirmed by separate regressions for high-SES and low-SES girls in Table 5.9. There is a significant negative effect for mattering on the risk of an early transition to sexual intercourse for low-SES girls and a non-significant relationship for high-SES girls.

Referring back to Table 5.8, Model 3 tests for three-way interaction effects among race, class, and self on the timing of first sexual intercourse to determine whether race and class are moderators in the relationship between the self-concept and age at first sex. There are no significant three-way interactions in Model 3.

Table 5.9 also shows that there are some differences in the influence of the self-concept components of self-esteem and want to go to college on the timing of first sex by race and class. High self-esteem is protective against an early age at first sexual intercourse for White girls whereas self-esteem is not related to the timing of first sex for Black and Hispanic girls. Also, high educational aspirations are associated with a later transition to first sex for Black and Hispanic girls but are unrelated to the timing of first sex for White girls.[44]

[44]As noted previously, I only focused on the interactions for the self-concept components that were significant in the full model. However, I did test two- and three-way interactions for the other self-concept components and found that two interactions approached significance at the $p<.10$ level, between being Black and want to go to college and between having a college graduate mother, being Hispanic, and self-esteem. I did not find a two-way interaction between race and esteem as indicated in Table 5.9.

Do Girls' Feelings of Ambivalence Influence their Age at First Sexual Intercourse and does this Vary by Race/Ethnicity and Class?

Now, I restrict the sample to girls who are at least 15 years of age (N=1,840) to examine whether girls' feelings of ambivalence towards pregnancy influence the timing of first sexual intercourse while accounting for race/ethnicity and class and holding constant other factors. These factors include the age of the girl, whether she has reached menarche early, whether she has been in a romantic relationship in the last 18 months, her mother's age at her birth, and her family structure. A time-varying covariate 'year of age' is also included for each person year.

Table 5.10 provides discrete-time logistic regressions of the hazard rate of the age at first sexual intercourse by girls' ambivalence, self-concepts, race/ethnicity, class, and control variables among person-years. Model 1 shows the effect of race/ethnicity and class while controlling for other factors. Model 2 adds the self-concept measures and Model 3 adds ambivalence and is the full model. Results are similar to the regressions with the larger sample of girls in terms of race/ethnicity, class, self-concept and control measures. With the addition of ambivalence in Model 3, ambivalence is significantly positively related to an early transition to first sexual intercourse. In other words, girls who are more ambivalent towards becoming pregnant in adolescence are more likely to have sexual intercourse for the first time at an earlier age than girls who are less ambivalent about becoming pregnant.

[Table 5.10 about here]

Table 5.11 displays logistic models of the hazard rate of the age at first sexual intercourse by ambivalence, self-concept measures, controls, and the addition of race and

class interactions. Model 1 tests whether race is a moderator in the relationship between ambivalence and the timing of first sex. Model 2 tests whether class is a moderator in the relationship between ambivalence and the timing of first sex. Model 3 tests whether race and class moderate the relationship between ambivalence and first sex.

[Table 5.11 about here]

In Model 1 in Table 5.11, a significant interaction is evident between being Black and ambivalence ($p<.05$). Also, the interaction between being Hispanic and ambivalence approaches significance ($p<.10$). This interaction suggests that the effect of feelings of ambivalence towards pregnancy on the transition to first sexual intercourse differs among Black, Hispanic, and White girls. To better interpret this interaction, I plot regression lines predicting probabilities based on the different values of ambivalence while holding other factors constant in Figure 5.4. In Figure 5.4, for Black girls, feelings of ambivalence towards pregnancy are strongly positively related to a higher probability of transitioning to first sex at an earlier age. Hispanic girls who have ambivalent or positive feelings towards pregnancy are also at a higher risk for an early transition to first sexual intercourse but the effect of ambivalence is weaker than it is for Black girls. For White girls, timing of first sexual intercourse is only slightly affected at different values of feelings of ambivalence towards pregnancy.

[Figure 5.4 about here]

Table 5.12 displays three regressions of the full model separately by race. The moderating effect of race on the relationship between girls' feelings of ambivalence and the timing of first sexual intercourse is confirmed by comparing the separate models for White, Black, and Hispanic girls. There is a strong positive effect of ambivalence on the

risk for an early transition to first sexual intercourse for Black and Hispanic girls and a non-significant relationship for White girls.

[Table 5.12 about here]

Referring back to Table 5.11, Model 3 tests for three-way interaction effects among race, class, and ambivalence on the timing of first sexual intercourse. I find a significant interaction effect between being Black*ambivalence*college graduate mother. This finding suggests that the effect of ambivalence on the timing of first sex differs among girls by both race and class locations.

I graph regression lines predicting probabilities based on the different values of ambivalence while holding other factors constant in Figure 5.5. There are four plotted regression lines for high-SES White girls, high-SES Black girls, low-SES White girls, and low-SES Black girls. For low-SES Black girls, feelings of ambivalence are strongly related to an elevated risk of an early transition to first sexual intercourse. For low-SES White girls, high-SES White girls, and high-SES Black girls, ambivalence is unrelated or slightly positively related to the timing of first sexual intercourse.

[Figure 5.5 about here]

Table 5.13 provides four regressions of the hazard rate of age at first sexual intercourse by ambivalence, the self-concept and controls for the following groups: high-SES White girls, high-SES Black girls, low-SES White girls, and low-SES Black girls. The moderating effect of race and class on the relationship between girls' feelings of ambivalence and their age at first sexual intercourse is confirmed by comparing the separate models. Paralleling Figure 5.5, ambivalence is significantly positively related to an earlier transition from virgin to non-virgin among low-SES Black girls whereas

ambivalence is not significantly related to ambivalence for low-SES White girls, high-SES Black girls, or high-SES White girls.

[Table 5.13 about here]

Additional Analyses

Among girls who transitioned from being virgins to non-virgins between Waves I and III, additional analyses were performed to examine the influence of the self-concept and ambivalence towards pregnancy on girls' contraceptive use at first sexual intercourse and the occurrence of a pregnancy prior to age 18.

For the first supplemental analysis, respondents were asked at Wave III whether they had ever used any method of birth control the first time they had vaginal intercourse with each romantic or sexual partner with which they had intercourse since the summer of 1995 (the end of the Wave I interview). From the relationship history of each respondent, I identified the respondents' contraceptive use at first sex within their first reported relationship as the measure of interest.[45] The sample includes 1,649 girls who had sexual intercourse and were never pregnant between Waves I and III and who were not missing on the dependent or independent variables or had inconsistent or missing sexual histories.

I run a series of logistic regressions predicting contraceptive use at first sexual intercourse with their first reported partner by girls' self-concepts, race/ethnicity, class, and controls. Age at first sexual intercourse is added as a control in the models. I find

[45]Unfortunately, respondents are not asked for the date of first sexual intercourse with this partner. Although the age at first sexual intercourse is provided, this question is not relationship-specific and respondents are not asked whether their first sexual intercourse occurred with their first reported partner in the relationship history section. Moreover, respondents are not asked about their contraceptive use at first sexual intercourse that may occur with non-relationship partners. It is necessary to only include girls in the sample who had never been pregnant between Waves I and III because the pregnancy may have occurred prior to the date of first sexual intercourse with their first reported partner.

that Hispanic girls are significantly less likely to use contraception at first sexual intercourse than White girls ($p<.05$). The self-concept is not significantly related to contraceptive use in the full model. I further restrict the sample to girls who are 15 years of age or older at Wave I to test whether ambivalence towards pregnancy influences the likelihood of contraceptive use (N = 879). Among these girls, 145 (16.5 percent) had not used contraceptive use at their first sexual intercourse. I find that girls' ambivalence towards pregnancy at Wave I is significantly negatively related to using contraception at first sexual intercourse while accounting for the self-concept, race/ethnicity, class, and controls ($p<.05$). In other words, girls who have ambivalent or more positive feelings towards becoming pregnant at Wave I are less likely to have used contraception at first sexual intercourse. I also test for two-way interactions between race*ambivalence and class*ambivalence on contraceptive use and do not find a race or class moderation effect.[46]

For the second supplemental analysis, respondents were asked at Wave III whether a pregnancy occurred in any romantic or sexual relationships they had since the summer of 1995 (the end of the Wave I interview). If a pregnancy occurred, respondents were asked to provide the month and year in which the pregnancy ended. From the relationship history of each respondent, I identified the respondent's first pregnancy as the measure of interest.[47] The sample includes 2,502 girls who had sexual intercourse

[46]I also run alternative analyses for all girls who had sexual intercourse between Waves I and III regardless of pregnancy status (2,440) and for girls who became pregnant between Waves I and III (779). I do not find any significant results for the self-concept or ambivalence on contraceptive use in these models. Among girls who became pregnant and were 15 years of age or older at the Wave I interview (415), ambivalence towards pregnancy and self-efficacy are positively related to contraceptive use in the full model.

[47]A drawback of the pregnancy data in Add Health is that respondents are not asked about any pregnancies that may occur outside of a defined romantic or sexual relationship since there is not a general 'have you ever' pregnancy question asked at Wave III. Some pregnancies that occurred outside of a relationship are

between Waves I and III and who were not missing on the dependent or independent variables or had inconsistent or missing sexual and pregnancy histories. Among these girls, 161 (6.4 percent) had a pregnancy prior to age 18.

I run a series of logistic regressions predicting the occurrence of a pregnancy under age 18 by girls' self-concepts, race/ethnicity, class, and controls measured at Wave I. Age at first sexual intercourse is added as a control in the models. In the full model, the self-concept component of mattering is significantly negatively related to pregnancy under age 18 ($p<.01$). In other words, girls' perceived mattering has a protective effect against having an adolescent pregnancy up to five years later. Hispanic girls are more likely than White girls to have an adolescent pregnancy ($p<.01$). Also, girls' age at first sexual intercourse is significantly negatively related to the occurrence of pregnancy under 18 ($p<.001$). I test for two-way interactions between race*mattering and class*mattering on pregnancy under age 18 and do not find a race or class moderation effect.[48]

Using discrete-time hazard models, I also test the occurrence of a pregnancy prior to age 18 by the self-concept, race/ethnicity and class, and controls. Paralleling the methods for the main analysis of age at first sexual intercourse, I create a person-year file with a variable that flags whether a first pregnancy occurred within each year and utilize logistic regression. Age at first sexual intercourse and the time-varying covariate of year of age (i.e., person-year) is included in the models. Paralleling the results above, perceived mattering at Wave I is significantly negatively related the occurrence of an

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captured in the adjustments that I made if they are reported being pregnant at Wave I and Wave II in the non-relationship 'have you ever been pregnant' questions. These girls were coded as pregnant at Wave III and their Wave II date of pregnancy is utilized.

[48]I further restrict the sample to girls who are 15 years of age or older at Wave I to test whether ambivalence towards pregnancy influences the likelihood pregnancy under age 18 (N = 1324). However, only 40 girls (3.2 percent) in the sample report having had a pregnancy under age 18 and ambivalence is not significantly related to this outcome in the models.

adolescent pregnancy prior to age 18 ($p<.01$) (N = 2,423/person years = 8,243). Girls who feel that they matter more to others at Wave I are less likely to have gotten pregnant prior to age 18 than girls who feel that they matter less. Hispanic girls have a higher hazard rate of becoming pregnant prior to age 18 than White girls ($p<.01$).[49,50]

The supplemental analyses reveal that the self-concept component of perceived mattering is protective against the occurrence of an adolescent pregnancy prior to age 18. This finding is robust given that it is significant in both the logistic models and the discrete-time hazard models using event history analysis. Also, girls' ambivalent or positive feelings towards becoming pregnant are negatively related to contraceptive use. Hispanic girls are less likely to utilize contraception and more likely to become pregnant prior to age 18 and prior to age 20. Last, there was not a significant class difference in the occurrence of a pregnancy prior to age 18; however high-SES girls are significantly less likely to become pregnant prior to age 20 than low-SES girls

Summary of Results

A summary of significant results for the analyses in Chapter 5 is provided in Table 4.10. The self-concept component of perceived mattering reduces the risk of an early transition to first sexual intercourse. In other words, girls who feel that they matter to others are less likely to have sex for the first time at an earlier age than girls who feel that they matter less to others. Counterintuitively, the possible selves measure of likely will live to age 35 is positively related to an earlier age at first sexual intercourse. The

[49] I also examine whether girls' self-concepts influence their likelihood of having a pregnancy prior to age 20 (N=2,047/person years = 9,942). The self-concept does not significantly impact the hazard rate of becoming pregnant prior to age 20. Hispanic girls are significantly more likely to become pregnant under age 20 than White girls ($p<.05$). Also, high-SES girls have a significantly lower hazard rate of becoming pregnant prior to age 20 than low-SES girls ($p<.001$).

[50] I further restrict the sample to girls who are 15 years of age or older at the Wave I interview to determine whether ambivalence towards pregnancy influences the rate of becoming pregnant prior to age 18 and prior to age 20. I do not find any significant effects for ambivalence on the timing of pregnancy.

other components of the self are not statistically related age at first sex including self-efficacy, self-esteem and educational possible selves. These findings align with expectations that different components of the self may matter more than others, given that mattering is influential whereas other components are not. However, contrary to expectations, the self-concept as a whole is not very protective against an early age at first sexual intercourse in this analysis.

Consistent with intersectional theory, the influence of girls' perceived mattering and the possible selves measure of likely will live to age 35 on the transition to first sexual intercourse varies by race/ethnicity and class. In particular, the effect of likely will live to age 35 on age at first sex is different for White and Black girls and the influence of mattering on age at first sexual intercourse is different for high-SES and low-SES girls. For White girls, there is a positive effect of likely will live to age 35 on the probability of transitioning to first sex early and a non-significant effect for Black girls. It is possible that White girls who feel that they will not live to age 35 are more socially isolated and/or have health problems that may hinder the opportunity to have sexual intercourse with a partner. For low-SES girls, mattering is strongly protective against an earlier age at first sexual intercourse whereas the effect of mattering is not significantly related to the timing of first sex for high-SES girls. This interaction effect is contrary to expectation that the self will be more protective for middle-class girls than for other girls.

When restricting the sample to girls who are 15 years of age or over, as predicted, girls who have ambivalent or more positive feelings towards becoming pregnant in adolescence are at an increased risk of an early age at first sexual intercourse compared to girls who are less ambivalent or more negative towards pregnancy. Two- and three-way

interactions reveal that the effect of girls' feelings of ambivalence towards pregnancy on the transition to first sexual intercourse varies by race/ethnicity and class. The effect of ambivalence on age at first intercourse is different for Black, Hispanic, and White girls. There is a strong positive effect of ambivalence on the risk for an early transition to first sexual intercourse for Black and Hispanic girls and a non-significant relationship for White girls. A three-way interaction effect is also evident among low-SES White, low-SES Black, high-SES White, and high-SES Black girls. For low-SES Black girls, feelings of ambivalence are strongly related to an elevated risk of an early transition to first sexual intercourse whereas ambivalence is unrelated to the timing of first sexual intercourse for other groups of girls.

Chapter 6: Conclusion

In this dissertation, I focused on the ways in which adolescent girls' self-concepts impact their feelings about becoming pregnant in adolescence and their initial decisions to engage in sexual intercourse. Secondly, I examined whether the effect that the self-concept has on feelings of ambivalence and the timing of first sexual intercourse varies by girls' race/ethnic and class locations.

I utilize the first three waves, spanning from 1995 through 2002, of the National Longitudinal Study of Adolescent Health and statistical methods including OLS and logistic regression and discrete-time event history analysis to address four primary research questions: 1.) How do girls' self-concepts influence their feelings of ambivalence towards pregnancy? 2.) How does the relationship between girls' self-concepts and ambivalence vary by race/ethnicity and class? 3.) How do girls' self-concepts and ambivalence towards pregnancy influence their timing of first sexual intercourse? 4.) How does the influence of girls' self-concepts and ambivalence on their timing of first sexual intercourse vary by race/ethnicity and class?

I find that stronger self-concepts, in particular self-efficacy, mattering, and educational possible selves, are protective against girls' feelings of ambivalence one year later (refer to Table 4.10 for summary of significant results). This finding aligns with Rosenberg's (1986) assertion and a main tenant of symbolic interactionism that the self-concept is an important motivator of one's feelings and behaviors. Moreover, the self-concept seems especially pertinent for adolescents, paralleling other work that has linked the self to key outcomes, such as achievement and suicide, in adolescents' lives (Elliott et al., 2005). Here we see that girls' selves are likely a critical part in the process leading to

early pregnancy—a piece of the puzzle which is typically minimized by demographers. I would also argue that the component of the self-concept that is usually emphasized, and often mistakenly interchanged with the self-concept as a whole, is self-esteem, which is neither a powerful predictor of nor a protective buffer against many negative outcomes in adolescence.

Results from this dissertation indicate that, although self-esteem is not significantly related to ambivalence, girls' sense of mattering and efficacy and their perceived likelihood of and desire to go to college are negatively related to ambivalent or more positive feelings towards becoming pregnant in adolescence. For example, girls who feel that they are more in control of the events and situations that occur in their lives and who see college as a desired and achievable possibility in their futures feel less ambivalent or more negative feelings towards adolescent pregnancy than girls who feel less efficacious or do not see higher education as an available and preferred route to adulthood. These findings support Marian Wright Edelman's (2008) assertion during a discussion on teenage pregnancy that, "The best contraceptives are hope and a sense of a positive future."

Although the self-concept is influential, the self is agentic yet constrained by structure (Rosenberg, 1986). Structural barriers tied to the systems of power of race, class, and gender may dampen the effect that a strong self-concept may have on a girl's life. Intersectional theory can be applied to the study of girls' sexuality to understand how differences in adolescents' sexual behavior are partially driven by differential treatment at the institutional and cultural level which, in turn, exposes girls to different sexual and gender scripts among peers, families, and partners (Collins 2004; Cavanagh

2004, 2007). The employment of an intersectional approach improves this analysis by focusing on the intersection of race/ethnicity and class rather than privileging one identity or system over the other. Moreover, current models of adolescent sexual behavior that tend to apply to middle-class White girls do not predict Black and Hispanic girls' behaviors well. Employing McCall's (2005) intercategorical approach, my goal for this dissertation was to explore the ways in which girls' selves, race and class locations, and perceptions and initial sexual decisions intersect to set up particular pathways leading to early pregnancy.

The primary motivation for this dissertation arose from a paradox that I found while integrating the literatures on the self and on adolescent pregnancy that exists in the relationships between girls' self-concepts, pregnancy, and race/ethnicity. Stronger self-concepts are thought to reduce the likelihood of becoming pregnant in adolescence. Minority adolescents, particularly Black girls, have equal or stronger self-concepts than White girls yet have higher pregnancy and birth rates in adolescence. Thus, the self-concept (or different components of the self) may operate differently for Blacks and Hispanics than for White girls. One way to explore this paradox is to focus on the feelings and decisions that come prior to the occurrence of pregnancy itself.

In this dissertation, I am able to not only make comparisons between White and Blacks girls, but also consider how these groups of girls differ from Hispanic girls. I did not find any significant differences in the impact of the self-concept on ambivalence and the timing of first sexual intercourse between Hispanic and White girls or Hispanic and Black girls. However, a focus on Hispanic girls is important given that they are more likely to have an adolescent birth than Black and White girls. Future research may

involve examining differences within the Hispanic group of girls by national origin and acculturation measures.

I do find that some components of the self-concept differentially affect girls' ambivalence towards pregnancy depending on their race and class locations. Race moderates the relationship between educational expectations and ambivalence in that expectations are protective against ambivalent or positive feelings for White girls but are unrelated to ambivalence for Black girls. Class moderates the relationship between educational aspirations and ambivalence with aspirations being protective against ambivalent or positive feelings for high-SES girls but being unrelated to ambivalence for low-SES girls. Interestingly, three-way interactions reveal that college expectations are protective for low-SES White and high-SES Black girls whereas college aspirations are protective for high-SES White and low-SES Black girls. The moderating effects of race and class on the influence of educational possible selves on ambivalence suggest that educational aspirations and expectations may serve as substitutes rather than complements to each other in their protective role against ambivalence.

These findings may be explained by discrepancies in girls' educational aspirations and expectations. For example, Black girls' stronger self-concepts (especially in terms of self-efficacy and possible selves) may not match their realities given that they have more structural barriers to alternative pathways and choices in the future (Driscoll et al 2005). Driscoll and her colleagues also found the educational expectations did not protect low-SES Blacks from a teen birth. This discrepancy between girls' self-evaluations and life circumstances may inhibit the protective effect of a strong self-concept. One avenue for future research includes measuring the discrepancy between educational expectations and

educational aspirations and how it may help explain race/ethnic and class differences in the effect of the self-concept on ambivalence.

In addition, discrepancies between parents' educational goals for their daughters and the girls' educational possible selves may dampen their protective effect against ambivalence. Another possibility is that the presumably most privileged girls, high-SES White girls, have high expectations from themselves and their parents that they will attend college so variation in their educational aspirations is what matters for ambivalence. Likewise, the least privileged girls with multiple minority statuses, low-SES Black girls, may have low educational expectations from themselves as from their parents so again variation in their aspirations matters for ambivalence. However, for the middle two group, low-SES White girls and high-SES Black girls, variation in their educational expectations is influential for ambivalence towards pregnancy. For these girls, the assertion by Hockaday et al. (2000:435) that "…aspirations may play a protective role with adolescents, but confidence in one's ability to achieve those goals is ultimately important" may apply.

Alternatively, girls may have different views about the incompatibility of college and motherhood depending on their race/ethnicity and class. Perhaps other possible selves in the future seem more incompatible with early motherhood than college attendance for certain girls, such as stable employment, house ownership, or a healthy marriage. For example, research has found race and class differences in young women's sense of compatibility between early childbearing and marriage (Cherlin et al. 2008; East 1998; Edin and Kefelas 2005). Future research could examine these possible

explanations for the moderation effects of race and class on the relationship between educational possible selves and ambivalence towards pregnancy.

Although girls' self-concepts are strongly related to their feelings about becoming pregnant in adolescence, most components of the self are not protective against an early age at first sexual intercourse. Contrary to expectations, girls' self-efficacy, self-esteem, and educational possible selves were not predictive of the timing of first sexual intercourse. Also unexpected is the finding that White girls who expected to live to age 35 were more likely to have sex for the first time at an earlier age than White girls who did not expect to live to age 35. It is possible that White girls who feel that they will not live to age 35 are more socially isolated and/or have health problems that may hinder the opportunity to have sexual intercourse with a partner.

I do find that girls' perceived mattering is protective, not only against feelings of ambivalence towards pregnancy, but also against an early age at first sexual intercourse. Supplemental analyses also indicate that perceived mattering is protective against the occurrence of a pregnancy prior to age 18 one to five years later. Girls who feel that they matter more to others are less likely to have sexual intercourse for the first time at an earlier age and are less likely to have an adolescent pregnancy than girls who feel that they matter less to others. Girls who feel that they do not matter may seek mattering from a partner or possibly a baby leading them to have a higher likelihood of experiencing more ambivalent feelings towards pregnancy, an earlier age at first sexual intercourse, or an adolescent pregnancy. The importance of mattering for girls' sexual and reproductive feelings and decisions support Rosenberg and McCullough's (1981) assertion about the pertinence of mattering for adolescents. I would argue that, referring

to Edelman's call for hope and sense of a positive future, girls also need to feel that they matter to those around them.

The influence of mattering on girls' timing of first sexual intercourse is contingent on class location. Mattering is strongly protective against an earlier age at first sexual intercourse for low-SES girls whereas mattering does not significantly influence the timing of first sex for high-SES girls. Contrary to expectations that the protective effect of the self would be stronger among middle-class girls, here we see that low-SES girls who feel that they matter less to others have an earlier age at first sex than low-SES girls who report higher perceived mattering. Perhaps high-SES girls have structural and interpersonal supports that discourage early first sexual intercourse and thus perceived mattering is not necessary to protect them from this outcome. In contrast, low-SES girls who feel that they matter to others may be able to ignore surrounding gender and sexual scripts that encourage early sexual behavior.

Results reveal that girls' ambivalent or positive feelings towards pregnancy increase the risk of an early age at first sexual intercourse. Interestingly, a three-way interaction between race, class, and ambivalence revealed that ambivalence towards pregnancy elevates the risk for an earlier transition to first sex for low-SES Black girls only. Presumably the most disadvantaged, low-SES Black girls are likely exposed to gender and sexual scripts among their families, peers, and partners with particular expectations for sexual and romantic behavior. This exposure coupled with feelings of ambivalence towards becoming pregnant in adolescence may exacerbate low-SES Black girls' risk of an early transition to first sex.

Supplemental analyses also indicate that girls' ambivalence towards pregnancy is negatively related to contraceptive use. A focus on girls' feelings that come prior to sexual decisions and behaviors can help pinpoint where girls diverge in their pathways leading to adolescent pregnancy. Acknowledging the ambiguity surrounding pregnancy and that feelings exist in between "I definitely want to get pregnant" and "I definitely don't want to get pregnant" is critical to understanding how pregnancy fits into girls' lives.

One of the limitations of this dissertation is that I do not have a perfect measure of ambivalence which captures both negative and positive aspects of girls' feelings about pregnancy. Although often interchanged with indifference, the definition of ambivalence is having simultaneous and contradictory feelings toward a subject, both negative and positive. Although researchers agree that moving beyond the concepts of intendedness and wantedness is necessary, the measurement of the ambivalence is still in development in the adolescent pregnancy literature. Qualitative studies have explored notions of ambivalence and researchers, including Barber, Axinn and Couper (2010), are currently developing better measures of the concept. Another disadvantage of the scale in Add Health is that the items are only asked of girls 15 years and older at the time of the first interview. Although the measure is not ideal, Add Health is the closest among the nationally representative datasets to capturing ambivalence towards adolescent pregnancy.

Another limitation is the measure of self-efficacy in Add Health. The items that comprise this scale capture rational decision-making or problem-solving more so than self-efficacy scales commonly used in the social psychological literature. However, the

scale seems to tap into adolescents' sense of personal control over events or situations that occur in their lives and is linked to feelings of ambivalence. If a typical self-efficacy measure were available, this component of the self would have likely had a stronger impact on girls' outcomes.

A further limitation of the analysis is that biases were introduced through the selection of the samples. For example, given that non-virgins were excluded from the sample in the second analysis, I did not capture early transitions to sexual intercourse among some girls. Girls who were pregnant at or prior to the first interview were also excluded so presumably the girls most at risk for negative outcomes were not considered. Also, restrictions led to smaller than ideal sample sizes for several race and class samples, such as for high-SES Hispanics and high-SES Blacks. Given the multiple analytic samples, it is difficult to draw general conclusions about an overall group of adolescent girls. Also, the age variation among girls, ranging from 11 to 18 years of age at the first wave, may cloud the strength of the findings.

In addition to the limitations above, there are potential issues involving spuriousness and the omission of variables. Several factors that influence adolescents' sexual and reproductive behavior are not included in the dissertation. I wanted to focus on the impact of the self-concept on the pathways leading to early pregnancy with an emphasis on race and class differences. In addition, I included important controls such as family structure and the age of the adolescent. However, factors were excluded that were unavailable in the Add Health dataset or were beyond the scope of this project. For example, it was difficult to control for intergenerational childbearing with measures such

as mothers' age at first birth and older siblings' childbearing since they were not collected by Add Health.

Contextual variables involving the peer and family context and well as the variables at the neighborhood and school level were excluded since they were beyond the scope the dissertation. The exclusion of these variables may lead to spurious relationships. For example, parents' involvement may influence girls' sense of mattering to others as well as their likelihood of transition to first sexual intercourse at an early age. Thus, parents' involvement may partially explain the relationship between mattering and first sex.

In this dissertation, I focus on the relationships among race, selves, and pregnancy, my interest in which was sparked by the paradox that I found in the literature. However, it could be that the paradox is the result of other factors that explain Black girls' stronger self-concepts and higher levels of pregnancy. A final limitation of the data is that I am unable to actually disentangle the paradox but rather examine how the relationship between the self and the pathways leading to pregnancy vary by race and class.

This dissertation builds upon existing literature in several ways. By merging two relatively separate literatures, on the self within social psychology and on adolescent pregnancy largely within demography, it is possible to gain new insights theoretically and in our understanding of the pathways leading to adolescent pregnancy among girls by race/ethnicity and class. Girls' self-concepts are important to consider when exploring the reasons why some girls become pregnant in adolescence and others do not. However, the self is not protective for all girls and certain components of the self are more

important for girls' sexual and reproductive outcomes than other components. We see contingencies in the influence of the self depending on girls' race and class locations. Girls' selves are culturally and structurally dependent. One avenue for future research, perhaps with a mixed methods approach including qualitative interviewing, is to examine the gender and cultural scripts in girls' peer groups, families, and with their partners that may explain why the self-concept may matter more for some girls than others. This dissertation also contributes to the existing literature by bringing power into theories of the self and self theories into the adolescent pregnancy literature.

One primary contribution of this dissertation is the examination of the influence of girls' selves on their ambivalence one year later and on their transition to first sexual intercourse up to five years later that is possible with the longitudinal Add Health dataset. Although I am unable to disentangle the paradox, the second main contribution is to empirically explore the relationships among selves, race, and pregnancy. Girls' self-concepts influence their feelings of ambivalence towards pregnancy one year later. High perceived mattering seems especially important, particularly for low-SES girls, given that it is protective against ambivalence towards pregnancy, an early transition to first sexual intercourse, and the occurrence of an adolescent pregnancy. Moreover, some differences by race and class were evident in the relationships among the girls' selves, ambivalence, and sexual behaviors that can better elucidate the unique pathways leading to early pregnancy and fertility.

Table 4.1. Descriptive Statistics of Ambivalence, Race/Ethnicity, Class, Self-Concept, and Controls among Adolescent Girls for First Analytic Sample and Full Sample of Girls

	Analytic Sample #1 (N=4,892)		Full Sample of Girls (N=5,735)	
Dependent Variable				
Ambivalence (1=low, 5=high)	1.89	(.02)	2.00	(.02)
Independent Variables				
Race/Ethnicity:				
Non-Hispanic White	67.9%		65.9%	
Non-Hispanic Black	13.0%		15.0%	
Hispanic	11.4%		11.6%	
Multiple Races/Other	7.7%		7.5%	
Mothers' Education:				
Non-College Graduate	75.8%		77.5%	
College Graduate or Higher	24.2%		22.5%	
Log Family Income	3.61	(.03)	3.58	(.03)
Missing Income Flag	19.3%		20.4%	
Self-Concept (1=low, 5=high):				
Self-Efficacy	3.79		3.78	(.01)
Mattering	4.22		4.20	(.01)
Self-Esteem	3.98		3.97	(.02)
Possible Selves:				
Want to go to College	4.56		4.50	(.03)
Likely will go to College	4.32		4.24	(.03)
Likely will live to age 35	4.45		4.42	(.02)
Controls				
Age of Adolescent	14.85	(.11)	14.95	(.11)
Early Menstruation (under age 12)	26.1%		26.6%	
On-time or Late Menstruation (12 or older)	73.9%		73.4%	
Adolescent in Romantic Relationship in Last 18 Months	59.3%		61.5%	
No Romantic Relationship in Last 18 Months	40.7%		38.5%	
Mothers' Age at Respondent's Birth	25.92	(.14)	25.84	(.12)
Missing Mothers' Age Flag	19.7%		21.7%	
Family Structure:				
Two Biological Parents	59.0%		56.4%	
Single Mother	25.0%		26.1%	
Biological Mother and Stepfather	7.5%		7.4%	
Biological Father (Single or w/ Stepmother)	4.2%		4.2%	
No Biological Parents	4.3%		5.9%	

Means and percentages are weighted. Standard errors in parentheses.

Table 4.2. Descriptive Statistics of Family Income and Controls among Adolescent Girls by Race/Ethnicity and Class for First Analytic Sample (N=4,892)

	Mother is College Graduate (High-SES)			Mother is Non-College Graduate (Low-SES)		
	NH White	NH Black	Hispanic	NH White	NH Black	Hispanic
Sample Size	747	275	77	1934	649	652
Unweighted Percentage	15.3%	5.6%	1.6%	39.5%	13.3%	13.3%
Weighted Percentage	18.4%	2.3%	1.2%	49.5%	10.8%	10.2%
Log Family Income	4.08 (.04)	3.72 (.05) a, f	3.81 (.10) b, g	3.59 (.03) c, h	3.16 (.07) d	3.26 (.06) e
Missing Income Flag	13.6%	34.1%	15.1%	17.2%	26.3%	21.8%
Controls						
Age of Adolescent	14.79 (.14)	14.86 (.23)	14.82 (.21)	14.81 (.13)	14.97 (.19)	14.99 (.24)
Early Menstruation (under age 12)	21.0%	39.3% a	31.9%	25.5% c	30.6% d	30.8% e
On-time or Late Menstruation (12 or older)	79.0%	60.7%	68.1%	74.5%	69.4%	69.2%
Adolescent in Romantic Relationship in Last 18 Months	61.7%	57.4%	49.1%	62.5%	55.8%	51.3% e
No Romantic Relationship in Last 18 Months	38.3%	42.6%	50.9%	37.5%	44.2%	48.7%
Mothers' Age at Respondent's Birth	27.43 (.29)	26.38 (.39) a, f	26.02 (.63) b	25.52 (.15) c	25.24 (.30) d	25.38 (.30) e
Missing Mothers' Age Flag	16.0%	31.2%	16.7%	17.5%	27.5%	19.0%
Family Structure:						
Two Biological Parents	69.4%	47.6% a, f	54.0% b, g	61.2% c, h	33.7% d	58.3% e, i
Single Mother	17.5%	35.5% a, f	30.9% b, g	22.4% c, h	48.8% d	25.0% i
Biological Mother and Stepfather	7.4%	8.7%	5.1%	8.1% h	5.3%	9.4% i
Biological Father (Single or w/ Stepmother)	3.1%	0.8% a, f	--	4.9%	3.0%	2.4%
No Biological Parents	2.7%	7.5%	3.1% g	3.4% h	9.2% d	4.9% i

Means and percentages are weighted. Standard errors in parentheses.

- Cell size <5.

Letters refer to significant differences at the p<.05 level:

a = High-SES White vs. High-SES Black

b = High-SES White vs. High-SES Hispanic

c = High-SES White vs. Low-SES White

d = High-SES White vs. Low-SES Black

e = High-SES White vs. Low-SES Hispanic

f = Low-SES Black vs. High-SES Black

g = Low-SES Black vs. High-SES Hispanic

h = Low-SES Black vs. Low-SES White

i = Low-SES Black vs. Low-SES Hispanic

Table 4.3. Ambivalence and Self-Concept among Adolescent Girls by Race/Ethnicity and Class for First Analytic Sample (N = 4,892)

	High-SES	Low-SES	NH White	NH Black	Hispanic
N	1309	3583	2681	924	729
(1=low, 5=high)					
Ambivalence	1.65	1.96 a	1.83	2.12 b	2.03 c
	(.03)	(.02)	(.02)	(.06)	(.06)
Self-Efficacy	3.79	3.79	3.77	3.88 b	3.79
	(.02)	(.01)	(.02)	(.02)	(.04)
Mattering	4.28	4.20 a	4.23	4.20	4.18
	(.02)	(.01)	(.02)	(.03)	(.04)
Self-Esteem	4.02	3.96 a	3.96	4.14 b	3.93 d
	(.02)	(.02)	(.02)	(.03)	(.04)
Want to go to College	4.80	4.48 a	4.57	4.57	4.42 c, d
	(.02)	(.03)	(.03)	(.05)	(.04)
Likely will go to College	4.75	4.18 a	4.36	4.32	4.01 c, d
	(.03)	(.03)	(.03)	(.06)	(.08)
Likely will live to age 35	4.60	4.41 a	4.55	4.15 b	4.28 c
	(.03)	(.02)	(.02)	(.04)	(.08)

Means are weighted. Standard errors in parentheses.
Letters refer to significant differences at the $p<.05$ level:
a = High-SES vs. Low-SES
b = White vs. Black
c = White vs. Hispanic
d = Black vs. Hispanic

Table 4.4. Ambivalence and Self-Concept among Adolescent Girls by Race/Ethnicity *and* Class for First Analytic Sample (N = 4,892)

	High-SES			Low-SES		
	NH White	NH Black	Hispanic	NH White	NH Black	Hispanic
N	747	275	77	1934	649	652
(1=low, 5=high)						
Ambivalence	1.63	1.83 a	1.79	1.91 d	2.19 f, g, k, m	2.06 h, l, n
	(.03)	(.10)	(.10)	(.03)	(.06)	(.06)
Self-Efficacy	3.78	3.86	3.75	3.77	3.89 f, m	3.79
	(.03)	(.06)	(.11)	(.02)	(.02)	(.04)
Mattering	4.31	4.23	4.21	4.21 d	4.19 f	4.18 h
	(.02)	(.04)	(.06)	(.02)	(.03)	(.04)
Self-Esteem	4.03	4.14	3.93	3.94 d, e	4.14 f, k, m	3.94 i, o
	(.03)	(.07)	(.09)	(.02)	(.03)	(.04)
Want to go to College	4.83	4.84	4.58 b, c	4.47 d, e	4.51 f, g	4.40 h, i
	(.02)	(.06)	(.11)	(.03)	(.05)	(.05)
Likely will go to College	4.80	4.73	4.55 b	4.20 d, e, j	4.23 f, g, k	3.95 h, i, l, n, o
	(.03)	(.06)	(.12)	(.03)	(.07)	(.08)
Likely will live to age 35	4.66	4.36 a	4.66 c	4.51 d	4.11 f, g, k, m	4.23 h, l, n
	(.03)	(.08)	(.09)	(.02)	(.05)	(.09)

Means are weighted. Standard errors in parentheses.

Letters refer to significant differences at the p<.05 level:

a = High-SES White vs. High-SES Black
b = High-SES White vs. High-SES Hispanic
c = High-SES Black vs. High-SES Hispanic
d = High-SES White vs. Low-SES White
e = High-SES Black vs. Low-SES White
f = High-SES White vs. Low-SES Black
g = High-SES Black vs. Low-SES Black
h = High-SES White vs. Low-SES Hispanic
i = High-SES Black vs. Low-SES Hispanic
j = High-SES Hispanic vs. Low-SES White
k = High-SES Hispanic vs. Low-SES Black
l = High-SES Hispanic vs. Low-SES Hispanic
m = Low-SES White vs. Low-SES Black
n = Low-SES White vs. Low-SES Hispanic
o = Low-SES Black vs. Low-SES Hispanic

Table 4.5. Correlation Matrix of Ambivalence and Self-Concept Measures among Adolescent Girls in First Analytic Sample (N = 4,892)

	Ambivalence	Self-Efficacy	Self-Esteem	Mattering	Want to Go to College	Likely Will Go to College	Likely Will Live to Age 35
Ambivalence (at Wave II)	1						
<u>Self-Concept (at Wave I):</u>							
Self-Efficacy	-0.106 ***	1					
Self-Esteem	-0.076 ***	0.350 ***	1				
Mattering	-0.126 ***	0.296 ***	0.587 ***	1			
Want to Go to College	-0.202 ***	0.125 ***	0.134 ***	0.159 ***	1		
Likely Will Go to College	-0.232 ***	0.148 ***	0.196 ***	0.237 ***	0.697 ***	1	
Likely Will Live to Age 35	-0.114 ***	0.095 ***	0.204 ***	0.277 ***	0.156 ***	0.184 ***	1

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

Table 4.6. OLS Regressions of Ambivalence by Race/Ethnicity, Class, Self-Concept, and Controls among Adolescent Girls for First Analytic Sample (N =4,892)

	(1)		(2)	
Independent Variables				
Race/Ethnicity (NH White Omitted):				
Non-Hispanic Black	0.20	(.06) ***	0.21	(.06) ***
Hispanic	0.12	(.07)	0.09	(.06)
Multiple Races/Other	-0.10	(.05)	-0.10	(.05)
Mother is College Graduate or Higher	-0.21	(.03) ***	-0.15	(.03) ***
Log Family Income	-0.07	(.02) **	-0.05	(.02) *
Missing Income Flag	0.06	(.05)	0.05	(.04)
Self-Concept (1=low, 5=high):				
Self-Efficacy			-0.12	(.03) ***
Mattering			-0.08	(.03) *
Self-Esteem			0.03	(.03)
Possible Selves:				
Want to go to College			-0.07	(.02) **
Likely will go to College			-0.09	(.02) ***
Likely will live to age 35			-0.02	(.02)
Controls				
Age of Adolescent	0.02	(.01)	0.02	(.01)
Early Menstruation (Under age 12)	0.04	(.04)	0.04	(.04)
Adolescent in Romantic Relationship in Last 18 Months	0.08	(.03) *	0.06	(.03)
Mothers' Age at Respondent's Birth	-0.01	(.00) ***	-0.01	(.00) ***
Missing Mothers' Age Flag	-0.03	(.05)	-0.03	(.05)
Family Structure (Two Biological Parents Omitted):				
Single Mother	0.05	(.04)	0.05	(.04)
Biological Mother and Stepfather	0.00	(.06)	-0.01	(.06)
Biological Father (Single or w/ Stepmother)	0.15	(.07) *	0.14	(.07)
No Biological Parents	0.17	(.08) *	0.11	(.07)
Intercept	2.08	(.19) ***	3.50	(.27) ***
R^2	0.06		0.11	

Standard errors in parentheses. *p <.05, **p<.01, ***p<.001

Table 4.7. OLS Regressions of Ambivalence by Self-Concept with Race/Ethnicity and Class Interactions and Controls among Adolescent Girls for First Analytic Sample (N = 4,892)

	(1)		(2)		(3)	
Independent Variables						
Self-Concept (1=low, 5=high):						
Self-Efficacy	-0.10	(.04) **	-0.12	(.03) ***	-0.12	(.03) ***
Self-Efficacy*Black	-0.07	(.09)				
Self-Efficacy*Hispanic	-0.09	(.10)				
Self-Efficacy*Other	-0.02	(.10)				
Self-Efficacy*Mother CollGrad			0.01	(.05)		
Mattering	-0.11	(.04) **	-0.05	(.04)	-0.08	(.03) *
Mattering*Black	0.04	(.11)				
Mattering*Hispanic	0.09	(.11)				
Mattering*Other	0.19	(.10) †				
Mattering*Mother CollGrad			-0.12	(.07)		
Self-Esteem	0.03	(.03)	0.03	(.03)	0.03	(.03)
Possible Selves:						
Want to go to College	-0.05	(.03)	-0.05	(.03) †	-0.02	(.03)
Want College*Black	-0.07	(.09)			-0.11	(.08)
Want College*Hispanic	-0.01	(.07)			-0.03	(.07)
Want College*Other	-0.07	(.09)			-0.05	(.09)
Want College*Mother CollGrad			-0.14	(.08) †	-0.20	(.10) †
Want College*Black*Mother CollGrad					0.33	(.16) *
Want College*Hispanic*Mother CollGrad					0.00	(.15)
Want College*Other*Mother CollGrad					0.06	(.16)
Likely will go to College	-0.11	(.03) ***	-0.10	(.02) ***	-0.12	(.03) ***
Likely College*Black	0.10	(.05) †			0.15	(.05) **
Likely College*Hispanic	-0.01	(.06)			0.01	(.07)
Likely College*Other	0.04	(.08)			0.05	(.09)
Likely College*Mother CollGrad			0.06	(.07)	0.11	(.09)
Likely College*Black*Mother CollGrad					-0.37	(.16) *
Likely College*Hispanic*Mother CollGrad					-0.01	(.15)
Likely College*Other*Mother CollGrad					-0.04	(.17)
Likely will live to age 35	-0.03	(.02)	-0.02	(.02)	-0.02	(.02)
Race/Ethnicity (NH White Omitted):						
Non-Hispanic Black	0.21	(.56)	0.21	(.06) ***	0.11	(.31)
Hispanic	0.14	(.55)	0.09	(.06)	0.18	(.27)
Multiple Races/Other	-0.66	(.49)	-0.10	(.05) *	-0.13	(.41)
Mother is College Graduate or Higher	-0.14	(.03) ***	0.71	(.40) †	0.30	(.30)
Log Family Income	-0.05	(.02) *	-0.05	(.02) *	-0.05	(.02) *
Missing Income Flag	0.05	(.04)	0.06	(.04)	0.06	(.04)
Controls						
Age of Adolescent	0.02	(.01) †	0.02	(.01)	0.02	(.01) †
Early Menstruation (Under age 12)	0.04	(.04)	0.04	(.04)	0.04	(.04)
Adolescent in Romantic Relationship in Last 18 Months	0.06	(.03) †	0.06	(.03) †	0.06	(.03) †
Mothers' Age at Respondent's Birth	-0.01	(.00) ***	-0.01	(.00) ***	-0.01	(.00) ***
Missing Mothers' Age Flag	-0.03	(.05)	-0.03	(.05)	-0.04	(.05)
Family Structure (Two Biological Parents Omitted):						
Single Mother	0.05	(.04)	0.05	(.04)	0.05	(.04)
Biological Mother and Stepfather	-0.02	(.06)	-0.01	(.06)	-0.02	(.06)
Biological Father (Single or w/ Stepmother)	0.13	(.07) †	0.13	(.07) †	0.13	(.07) †
No Biological Parents	0.11	(.07)	0.11	(.07)	0.11	(.07)
Intercept	3.54	(.29) ***	3.34	(.25) ***	3.43	(.26) ***
R^2	0.11		0.11		0.11	

Standard errors in parentheses. † p<.10, *p <.05, **p<.01, ***p<.001

Table 4.8. Separate OLS Regressions of Ambivalence by Self-Concept and Controls among Adolescent Girls by Race/Ethnicity and Class for First Analytic Sample (N = 4,892)

	High-SES (N = 1309)		Low-SES (N = 3583)		NH White (N=2681)		NH Black (N=924)		Hispanic (N=729)	
Independent Variables										
Self-Concept (1=low, 5=high):										
Self-Efficacy	-0.09	(.05) †	-0.13	(.03) ***	-0.10	(.04) **	-0.18	(.09) *	-0.22	(.09) *
Mattering	-0.15	(.07) *	-0.05	(.04)	-0.11	(.04) *	-0.12	(.11)	-0.09	(.09)
Self-Esteem	-0.02	(.05)	0.05	(.04)	0.03	(.04)	0.06	(.09)	0.14	(.07) *
Possible Selves:										
Want to go to College	-0.19	(.08) *	-0.04	(.03) †	-0.05	(.03)	-0.10	(.08)	-0.07	(.06)
Likely will go to College	-0.03	(.07)	-0.10	(.02) ***	-0.10	(.03) **	0.00	(.05)	-0.11	(.05) *
Likely will live to age 35	-0.03	(.03)	-0.02	(.02)	-0.04	(.03)	0.01	(.04)	0.01	(.05)
Race/Ethnicity (NH White Omitted):										
Non-Hispanic Black	0.13	(.09)	0.24	(.06) ***	--	--	--	--	--	--
Hispanic	0.03	(.11)	0.09	(.07)	--	--	--	--	--	--
Multiple Races/Other	-0.06	(.09)	-0.12	(.06) †	--	--	--	--	--	--
Mother is College Graduate or Higher	--	--	--	--	-0.12	(.04) **	-0.28	(.08) **	-0.19	(.11) †
Log Family Income	-0.04	(.04)	-0.05	(.02) *	-0.09	(.03) **	-0.04	(.04)	0.00	(.06)
Missing Income Flag	0.01	(.07)	0.06	(.05)	0.02	(.06)	0.20	(.11) †	-0.06	(.11)
Controls										
Age of Adolescent	-0.02	(.02)	0.03	(.01) *	0.01	(.01)	0.01	(.04)	0.02	(.03)
Early Menstruation (Under age 12)	0.04	(.06)	0.05	(.05)	0.07	(.05)	-0.13	(.09)	0.09	(.09)
Adolescent in Romantic Relationship in Last 18 Months	0.03	(.04)	0.07	(.04) †	0.06	(.04) †	0.03	(.09)	0.02	(.10)
Mothers' Age at Respondent's Birth	-0.01	(.01) †	-0.01	(.00) ***	-0.01	(.00) **	-0.01	(.01)	-0.01	(.01)
Missing Mothers' Age Flag	-0.01	(.10)	-0.04	(.05)	-0.01	(.07)	-0.16	(.11)	0.17	(.11)
Family Structure (Two Biological Parents Omitted):										
Single Mother	0.15	(.06) *	0.02	(.05)	0.01	(.05)	0.17	(.09) †	0.01	(.12)
Biological Mother and Stepfather	0.05	(.11)	-0.03	(.07)	-0.03	(.07)	0.07	(.10)	0.01	(.16)
Biological Father (Single or w/ Stepmother)	0.34	(.16) *	0.07	(.08)	0.13	(.07) †	-0.03	(.27)	0.09	(.31)
No Biological Parents	0.16	(.12)	0.08	(.08)	0.02	(.09)	0.30	(.13) *	0.34	(.18) †
Intercept	4.66	(.53) ***	3.16	(.29) ***	3.85	(.33) ***	3.61	(.75) ***	3.22	(.73) ***
R^2	0.12		0.08		0.11		0.08		0.11	

Standard errors in parentheses. †p<.10, *p <.05, **p<.01, ***p<.001

Table 4.9. Separate OLS Regressions of Ambivalence by Self-Concept and Controls among Adolescent Girls by Race/Ethnicity*and* Class for First Analytic Sample (N = 4,892)

	High-SES White (N=747)		High-SES Black (N=275)		High-SES Hispanic (N=77)		Low-SES White (N=1934)		Low-SES Black (N=649)		Low-SES Hispanic (N=652)	
Independent Variables												
Self-Concept (1=low, 5=high):												
Self-Efficacy	-0.09	(.05)	-0.21	(.11) †	-0.52	(.21) *	-0.10	(.04) *	-0.14	(.09)	-0.20	(.10) *
Mattering	-0.12	(.09)	-0.29	(.12) *	0.03	(.25)	-0.10	(.05) †	-0.06	(.13)	-0.10	(.09)
Self-Esteem	-0.03	(.06)	0.14	(.13)	0.07	(.19)	0.05	(.04)	0.05	(.11)	0.15	(.07) *
Possible Selves:												
Want to go to College	-0.21	(.11) *	-0.13	(.14)	-0.34	(.14) *	-0.02	(.03)	-0.11	(.08)	-0.04	(.06)
Likely will go to College	0.01	(.09)	-0.33	(.13) *	-0.05	(.17)	-0.12	(.03) ***	0.03	(.05)	-0.12	(.06) *
Likely will live to age 35	-0.09	(.04) *	0.12	(.06) *	0.21	(.14)	-0.03	(.04)	-0.01	(.05)	0.01	(.05)
Log Family Income	-0.06	(.05)	0.01	(.10)	0.01	(.12)	-0.09	(.03) **	-0.02	(.05)	0.00	(.06)
Missing Income Flag	-0.03	(.09)	0.11	(.12)	-0.25	(.16)	0.03	(.06)	0.17	(.12)	-0.03	(.12)
Controls												
Age of Adolescent	-0.03	(.02)	-0.06	(.06)	0.02	(.08)	0.03	(.02)	0.02	(.04)	0.02	(.03)
Early Menstruation (Under age 12)	0.03	(.07)	-0.15	(.13)	0.19	(.30)	0.09	(.06)	-0.15	(.09) †	0.08	(.09)
Adolescent in Romantic Relationship in Last 18 Months	0.06	(.05)	-0.05	(.12)	-0.33	(.24)	0.07	(.05)	0.05	(.11)	0.07	(.11)
Mothers' Age at Respondent's Birth	-0.01	(.01)	-0.03	(.02) †	0.02	(.02)	-0.01	(.00) **	0.00	(.01)	-0.01	(.01)
Missing Mothers' Age Flag	-0.01	(.11)	0.03	(.22)	0.24	(.32)	-0.01	(.08)	-0.21	(.10) *	0.16	(.11)
Family Structure (Two Biological Parents Omitted):												
Single Mother	0.07	(.07)	0.22	(.16)	0.24	(.33)	-0.01	(.06)	0.15	(.09)	-0.03	(.12)
Biological Mother and Stepfather	-0.01	(.13)	0.36	(.19) †	0.54	(.23) *	-0.03	(.08)	-0.03	(.11)	-0.06	(.16)
Biological Father (Single or w/ Stepmother)	0.31	(.16) †	-0.11	(.22)	-0.39	(.53)	0.08	(.08)	-0.02	(.28)	0.20	(.38)
No Biological Parents	0.15	(.17)	-0.08	(.23)	0.09	(.64)	-0.04	(.11)	0.35	(.15) *	0.32	(.19) †
Intercept	4.90	(.65) ***	6.51	(1.81) ***	3.19	(2.07)	3.46	(.37) ***	3.07	(.80) ***	3.16	(.77) ***
R^2	0.12		0.25		0.40		0.08		0.05		0.10	

Standard errors in parentheses. †p<.10, *p <.05, **p<.01, ***p<.001

Table 4.10. Overall Summary of Significant Results for All Analyses, Add Health, 1995 - 2002

Sample	Dependent Variable	Significant Main Effects		Significant Interaction Effects
Chapter 4:				
Girls 11-18 years of age at Wave I, never pregnant at Wave I or II	ambivalence one year later (at Wave II)	efficacy	-	
		mattering	-	
		educational aspirations	-	for high-SES White girls and low-SES Black girls only
		educational expectations	-	for low-SES White girls and high-SES Black girls only
Chapter 5:				
Virgins 11-18 years of age at Wave I	risk of earlier transition to first sex between Waves II and III	likely to live to age 35	+	for White girls only
		mattering	-	for low-SES girls only
Virgins 15-18 years of age at Wave I	risk of earlier transition to first sex between Waves II and III	ambivalence	+	for low-SES Black girls only
Additional Analyses in Chapter 5:				
Virgins 15-18 years of age at Wave I, transitioned to non-virgins but never pregnant between Waves I and III	contraceptive use at first sexual intercourse	ambivalence	-	
Virgins 11-18 years of age at Wave I, transitioned to non-virgins between Waves I and III	pregnancy under age 18	mattering	-	

Note: Wave I (1995) age range 11-18; Wave II (1996); Wave III (2001-2002) age range 18-26

Table 5.1. Descriptive Statistics of Age at First Sex, Race/Ethnicity, Class, Self-Concept, and Controls among Adolescent Girls for Second Analytic Sample and Full Sample of Girls

	Analytic Sample #2 (N=3,485)		Full Sample of Girls (N=5,735)	
Dependent Variable				
Median Age at First Sex	17.00		16.00	
Mean Age at First Sex	17.19	(.09)	16.33	(0.6)
Never Had Sex Flag	17.9%		12.6%	
Independent Variables				
Race/Ethnicity:				
Non-Hispanic White	69.5%		66.0%	
Non-Hispanic Black	10.6%		15.0%	
Hispanic	11.9%		11.6%	
Multiple Races/Other	8.0%		7.5%	
Mothers' Education:				
Non-College Graduate	73.7%		77.5%	
College Graduate or Higher	26.3%		22.5%	
Log Family Income	3.64	(.04)	3.58	(.03)
Missing Income Flag	17.8%		20.4%	
Self-Concept (1=low, 5=high):				
Self-Efficacy	3.82	(.01)	3.78	(.01)
Mattering	4.28	(.01)	4.20	(.01)
Self-Esteem	4.02	(.02)	3.97	(.02)
Possible Selves:				
Want to go to College	4.65	(.02)	4.50	(.03)
Likely will go to College	4.43	(.03)	4.24	(.03)
Likely will live to age 35	4.50	(.02)	4.42	(.02)
Controls				
Age of Adolescent	14.45	(.11)	14.95	(.11)
Early Menstruation (under age 12)	24.3%		26.6%	
On-time or Late Menstruation (12 or older)	75.7%		73.4%	
Adolescent in Romantic Relationship in Last 18 Months	47.9%		61.5%	
No Romantic Relationship in Last 18 Months	52.1%		38.5%	
Mothers' Age at Respondent's Birth	26.20	(.16)	25.84	(.12)
Missing Mothers' Age Flag	18.1%		21.7%	
Family Structure:				
Two Biological Parents	64.2%		56.4%	
Single Mother	22.5%		26.1%	
Biological Mother and Stepfather	6.5%		7.4%	
Biological Father (Single or w/ Stepmother)	3.7%		4.2%	
No Biological Parents	3.1%		5.9%	

Means and percentages are weighted. Standard errors in parentheses.

Table 5.2. Descriptive Statistics of Family Income and Controls among Adolescent Girls by Race/Ethnicity and Class for Second Analytic Sample (N=3,485)

	Mother is College Graduate (High-SES)						Mother is Non-College Graduate (Low-SES)					
	NH White		NH Black		Hispanic		NH White		NH Black		Hispanic	
Sample Size	597		187		54		1389		370		474	
Unweighted Percentage	17.1%		5.4%		1.6%		39.9%		10.6%		13.6%	
Weighted Percentage	19.6%		2.3%		1.5%		48.8%		8.4%		11.0%	
Log Family Income	4.11	(.04)	3.70	(.07) a, f	3.81	(.11) b, g	3.62	(.03) c, h	3.14	(.08) d	3.25	(.07) e
Missing Income Flag	12.4%		30.4%		17.9%		15.8%		26.9%		18.6%	
Controls												
Age of Adolescent	14.45	(.14)	14.43	(.21)	14.54	(.24)	14.39	(.14)	14.40	(.18)	14.64	(.26)
Early Menstruation (under age 12)	18.7%		41.8%	a	29.2%		23.6%	c	30.3%	d	28.5%	e
On-time or Late Menstruation (12 or older)	81.3%		58.2%		70.8%		76.4%		69.7%		71.5%	
Adolescent in Romantic Relationship in Last 18 Months	53.9%		42.7%		40.0%		50.2%	h	38.4%	d	41.4%	e
No Romantic Relationship in Last 18 Months	46.1%		57.3%		60.0%		49.8%		61.6%		58.6%	
Mothers' Age at Respondent's Birth	27.78	(.30)	26.73	(.39) a, f	26.30	(.66) b	25.70	(.17) c	25.71	(.35) d	25.47	(.33) e
Missing Mothers' Age Flag	13.8%		28.4%		14.9%		16.7%		25.1%		17.7%	
Family Structure:												
Two Biological Parents	74.3%		54.9%	a, f	66.8%	g	64.5%	c, h	36.9%	d	64.8%	e, i
Single Mother	14.9%		30.8%	a, f	24.8%	g	21.1%	c,h	50.7%	d	22.7%	e, i
Biological Mother and Stepfather	5.8%		6.6%		--		7.3%	h	4.6%		7.6%	
Biological Father (Single or w/ Stepmother)	3.0%		--		--		4.1%		2.2%		2.6%	
No Biological Parents	1.9%		7.0%		--	g	2.9%	h	5.5%	d	2.4%	i

Means and percentages are weighted. Standard errors in parentheses.

- Cell size <5.

Letters refer to significant differences at the p<.05 level:

a = High-SES White vs. High-SES Black

b = High-SES White vs. High-SES Hispanic

c = High-SES White vs. Low-SES White

d = High-SES White vs. Low-SES Black

e = High-SES White vs. Low-SES Hispanic

f = Low-SES Black vs. High-SES Black

g = Low-SES Black vs. High-SES Hispanic

h = Low-SES Black vs. Low-SES White

i = Low-SES Black vs. Low-SES Hispanic

Table 5.3. Age at First Sex and Self-Concept among Adolescent Girls by Race/Ethnicity and Class for Second Analytic Sample (N =3,485)

	High-SES	Low-SES	NH White	NH Black	Hispanic
N	1005	2480	1986	557	528
Median Age at First Sex	18.00	17.00	17.00	17.00	18.00
Mean Age at First Sex	17.61	17.05 a	17.12	16.96	17.63 d
	(.12)	(.09)	(.10)	(.14)	(.29)
Never Had Sex Flag	24.9%	15.4% a	18.8%	11.0% b	18.1% d
(1=low, 5=high)					
Self-Efficacy	3.82	3.82	3.80	3.90 b	3.82
	(.03)	(.02)	(.02)	(.04)	(.04)
Mattering	4.32	4.26 a	4.30	4.26	4.21 c
	(.02)	(.01)	(.01)	(.03)	(.04)
Self-Esteem	4.06	4.01	4.02	4.19 b	3.95 d
	(.03)	(.02)	(.02)	(.05)	(.05)
Want to go to College	4.87	4.57 a	4.67	4.63	4.52 c
	(.02)	(.02)	(.02)	(.05)	(.05)
Likely will go to College	4.82	4.29 a	4.49	4.40	4.12 c, d
	(.02)	(.03)	(.03)	(.06)	(.08)
Likely will live to age 35	4.62	4.45 a	4.60	4.15 b	4.34 c
	(.03)	(.02)	(.02)	(.06)	(.08)

Means are weighted. Standard errors in parentheses.

Letters refer to significant differences at the p<.05 level:

a = High-SES vs. Low-SES

b = White vs. Black

c = White vs. Hispanic

d = Black vs. Hispanic

Table 5.4. Age at First Sex and Self-Concept among Adolescent Girls by Race/Ethnicity *and* Class for Second Analytic Sample (N = 3,485)

	High-SES			Low-SES		
	NH White	NH Black	Hispanic	NH White	NH Black	Hispanic
N	597	187	54	1389	370	474
Median Age at First Sex	18.00	17.00	18.00	17.00	17.00	18.00
Mean Age at First Sex	17.63	17.06 a	18.19	16.93 d, j	16.94 f, k	17.57 n
	(.14)	(.15)	(.53)	(.09)	(.15)	(.30)
Never Had Sex Flag	25.1%	21.8%	21.0%	16.2% d, e	8.2% f, g, m	17.8% h, o
(1=low, 5=high)						
Self-Efficacy	3.81	3.89	3.80	3.80	3.90	3.82
	(.03)	(.06)	(.12)	(.02)	(.04)	(.04)
Mattering	4.35	4.27	4.20	4.28 d	4.26 f	4.21 h
	(.02)	(.05)	(.08)	(.02)	(.03)	(.04)
Self-Esteem	4.07	4.20	3.93 c	4.00 e	4.19 f, k, m	3.96 i, o
	(.03)	(.07)	(.10)	(.02)	(.05)	(.05)
Want to go to College	4.89	4.95 a	4.74 c	4.58 d, e	4.54 f, g	4.49 h, i, l
	(.02)	(.02)	(.09)	(.03)	(.06)	(.05)
Likely will go to College	4.87	4.85	4.69 b	4.33 d, e, j	4.28 f, g, k	4.05 h, i, l, n, o
	(.02)	(.04)	(.08)	(.03)	(.07)	(.09)
Likely will live to age 35	4.70	4.31 a	4.74 c	4.56 d, e, j	4.10 f, k, m	4.29 h, l, n
	(.03)	(.11)	(.07)	(.02)	(.07)	(.08)

Means are weighted. Standard errors in parentheses.
*p<.05, **<.01, ***<.001
Letters refer to significant differences at the p<.05 level:
a = High-SES White vs. High-SES Black
b = High-SES White vs. High-SES Hispanic
c = High-SES Black vs. High-SES Hispanic
d = High-SES White vs. Low-SES White
e = High-SES Black vs. Low-SES White
f = High-SES White vs. Low-SES Black
g = High-SES Black vs. Low-SES Black
h = High-SES White vs. Low-SES Hispanic
i = High-SES Black vs. Low-SES Hispanic
j = High-SES Hispanic vs. Low-SES White
k = High-SES Hispanic vs. Low-SES Black
l = High-SES Hispanic vs. Low-SES Hispanic
m = Low-SES White vs. Low-SES Black
n = Low-SES White vs. Low-SES Hispanic
o = Low-SES Black vs. Low-SES Hispanic

Table 5.5. Correlation Matrix of Age at First Sex and Self-Concept Measures among Girls in Second Analytic Sample (N = 3,485)

	Age at First Sex	Self-Efficacy	Self-Esteem	Mattering	Want to Go to College	Likely Will Go to College	Likely Will Live to Age 35
Age at First Sex	1						
Self-Concept (at Wave I):							
Self-Efficacy	0.14243 ***	1					
Self-Esteem	0.05502 *	0.30138 ***	1				
Mattering	0.06327 *	0.36088 ***	0.59754 ***	1			
Want to Go to College	0.06519 *	0.08668 ***	0.1747 ***	0.13843 ***	1		
Likely Will Go to College	0.0962 ***	0.10328 ***	0.23849 ***	0.18267 ***	0.6776 ***	1	
Likely Will Live to Age 35	-0.027	0.05971 **	0.25306 ***	0.18485 ***	0.1559 ***	0.19249 ***	1

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

Table 5.6. Life Table Survival Estimates of Age at First Sex among Adolescent Girls for Second Analytic Sample (N = 3,485 respondents/15,136 person years)

Age Interval								
Lower	Upper	Number Failed (i.e,Transitioned to First Sex)	Number Censored	Effective Sample Size	Conditional Probability of Failure (i.e., Transitioning to First Sex)	Conditional Probability Standard Error	Survival (i.e., Remained Virgins)	Failure (i.e., Became Non-Virgins)
0	12	0	4	15134	0.000	0.000	1.000	0.000
12	13	3	186	15039	0.000	0.000	1.000	0.000
13	14	25	875	14505.5	0.002	0.000	1.000	0.000
14	15	127	1484	13301	0.010	0.001	0.998	0.002
15	16	310	1926	11469	0.027	0.002	0.989	0.012
16	17	462	2079	9156.5	0.051	0.002	0.962	0.038
17	18	594	1849	6730.5	0.088	0.003	0.913	0.087
18	19	658	1301	4561.5	0.144	0.005	0.833	0.167
19	20	286	1007	2749.5	0.104	0.006	0.713	0.287
20	21	189	684	1618	0.117	0.008	0.639	0.362
21	22	127	424	875	0.145	0.012	0.564	0.436
22	23	36	272	400	0.090	0.014	0.482	0.518
23	24	22	148	154	0.143	0.028	0.439	0.561
24	25	5	46	35	0.143	0.059	0.376	0.624
25 .		1	6	4	0.250	0.217	0.322	0.678

Table 5.7. Logistic Regressions of the Hazard Rate of Age at First Sex by Race/Ethnicity, Class, Self-Concept, and Controls among Adolescent Girls for Second Analytic Sample (N = 3,485 respondents/15,136 person years)

	(1)				(2)			
Independent Variables	*b*			*OR*	*b*			*OR*
Race/Ethnicity (NH White Omitted):								
Non-Hispanic Black	0.26	(.08)	**	1.29	0.32	(.09)	***	1.38
Hispanic	-0.18	(.10)		0.83	-0.19	(.10)		0.83
Multiple Races/Other	-0.02	(.10)		0.98	-0.01	(.11)		0.99
Mother is College Graduate or Higher	-0.42	(.08)	***	0.66	-0.42	(.08)	***	0.66
Log Family Income	-0.02	(.04)		0.98	-0.02	(.04)		0.98
Missing Income Flag	0.00	(.09)		1.00	0.01	(.08)		1.01
Self-Concept (1=low, 5=high):								
Self-Efficacy					-0.01	(.06)		0.99
Mattering					-0.20	(.08)	*	0.82
Self-Esteem					-0.10	(.06)		0.91
Possible Selves:								
Want to go to College					-0.04	(.05)		0.96
Likely will go to College					0.00	(.04)		1.00
Likely will live to age 35					0.11	(.04)	*	1.11
Year of Age	0.25	(.02)	***	1.28	0.25	(.02)	***	1.29
Controls								
Age of Adolescent	-0.14	(.03)	***	0.87	-0.15	(.03)	***	0.86
Early Menstruation (Under age 12)	-0.05	(.08)		0.95	-0.07	(.08)		0.94
Adolescent in Romantic Relationship in Last 18 Months	0.80	(.06)	***	2.23	0.79	(.06)	***	2.19
Mothers' Age at Respondent's Birth	-0.02	(.01)	***	0.98	-0.02	(.01)	***	0.98
Missing Mothers' Age Flag	0.05	(.10)		1.05	0.04	(.11)		1.04
Family Structure (Two Biological Parents Omitted):								
Single Mother	0.34	(.07)	***	1.41	0.33	(.07)	***	1.39
Biological Mother and Stepfather	0.02	(.11)		1.02	0.01	(.11)		1.01
Biological Father (Single or w/ Stepmother)	0.55	(.18)	**	1.73	0.56	(.18)	**	1.74
No Biological Parents	0.23	(.15)		1.26	0.23	(.15)		1.26
Intercept	-3.30	(.37)	***		-2.31	(.50)	***	

Standard errors in parentheses. *p <.05, **p<.01, ***p<.001

Table 5.8. Logistic Regressions of the Hazard Rate of Age at First Sex with Race/Ethnicity and Class Interactions and Controls among Adolescent Girls for Second Analytic Sample (N = 3,485 respondents/15,136 person years)

	(1)				(2)				(3)			
Independent Variables	*b*			*OR*	*b*			*OR*	*b*			*OR*
Self-Concept (1=low, 5=high):												
Self-Efficacy	-0.01	(.05)		0.99	-0.02	(.06)		0.99	-0.02	(.05)		0.98
Mattering	-0.17	(.10)		0.85	-0.27	(.08)	**	0.76	-0.25	(.11)	*	0.78
Mattering*Black	-0.03	(.17)		0.97					0.00	(.17)		1.00
Mattering*Hispanic	-0.07	(.20)		0.93					-0.07	(.20)		0.93
Mattering*Other	-0.24	(.21)		0.79					-0.10	(.22)		0.91
Mattering*Mother CollGrad					0.31	(.15)	*	1.36	0.35	(.17)	*	1.42
Mattering *Black*Mother CollGrad									-0.11	(.20)		0.90
Mattering*Hispanic*Mother CollGrad									0.42	(.34)		1.53
Mattering*Other*Mother CollGrad									-0.47	(.27)	†	0.63
Self-Esteem	-0.10	(.06)	†	0.90	-0.10	(.06)	†	0.91	-0.11	(.06)	†	0.90
Possible Selves:												
Want to go to College	-0.04	(.05)		0.96	-0.04	(.05)		0.96	-0.04	(.05)		0.96
Likely will go to College	0.01	(.04)		1.01	0.01	(.05)		1.01	0.02	(.04)		1.02
Likely will live to age 35	0.17	(.07)	*	1.19	0.10	(.05)	*	1.10	0.17	(.07)	*	1.19
Likely Live*Black	-0.15	(.09)	†	0.86					-0.18	(.10)	†	0.84
Likely Live*Hispanic	-0.15	(.11)		0.86					-0.13	(.12)		0.88
Likely Live*Other	-0.01	(.13)		0.99					-0.17	(.13)		0.84
Likely Live*Mother Collgrad					0.05	(.10)		1.05	-0.04	(.14)		0.96
Likely Live*Black*Mother CollGrad									0.11	(.20)		1.11
Likely Live*Hispanic*Mother CollGrad									-0.35	(.31)		0.71
Likely Live*Other*Mother CollGrad									0.46	(.25)	†	1.59
Race/Ethnicity (NH White Omitted):												
Non-Hispanic Black	1.13	(.70)		3.10	0.33	(.09)	***	1.39	1.11	(.68)		3.03
Hispanic	0.77	(.71)		2.15	-0.19	(.10)	†	0.83	0.67	(.71)		1.95
Multiple Races/Other	1.05	(.81)		2.86	0.00	(.11)		1.00	1.14	(.79)		3.14
Mother is College Graduate or Higher	-0.43	(.08)	***	0.65	-1.98	(.74)	**	0.14	-1.78	(.76)	*	0.17
Log Family Income	-0.02	(.04)		0.98	-0.02	(.04)		0.98	-0.02	(.04)		0.98
Missing Income Flag	0.00	(.08)		1.00	0.01	(.08)		1.01	0.01	(.08)		1.01
Year of Age	0.25	(.02)	***	1.29	0.25	(.02)	***	1.29	0.25	(.02)	***	1.29
Controls												
Age of Adolescent at Wave I Interview	-0.15	(.03)	***	0.86	-0.15	(.03)	***	0.86	-0.15	(.03)	***	0.86
Early Menstruation (Under age 12)	-0.06	(.08)		0.94	-0.06	(.08)		0.94	-0.07	(.08)		0.94
Adolescent in Romantic Relationship in Last 18 Months	0.79	(.06)	***	2.20	0.78	(.06)	***	2.19	0.79	(.06)	***	2.20
Mothers' Age at Respondent's Birth	-0.02	(.01)	***	0.98	-0.02	(.01)	***	0.98	-0.02	(.01)	***	0.98
Missing Mothers' Age Flag	0.04	(.11)		1.04	0.04	(.11)		1.04	0.04	(.11)		1.04
Family Structure (Two Biological Parents Omitted):												
Single Mother	0.32	(.07)	***	1.38	0.33	(.07)	***	1.39	0.32	(.07)	***	1.38
Biological Mother and Stepfather	0.02	(.11)		1.02	0.01	(.11)		1.01	0.02	(.11)		1.02
Biological Father (Single or w/ Stepmother)	0.56	(.18)	**	1.76	0.55	(.18)	**	1.74	0.56	(.18)	**	1.75
No Biological Parents	0.25	(.15)		1.28	0.23	(.15)		1.26	0.25	(.15)	†	1.29
Intercept	-2.74	(.57)	***		-1.99	(.51)	***		-2.44	(.57)	***	

Standard errors in parentheses. † p<.10, *p <.05, **p<.01, ***p<.001

Table 5.9. Separate Logistic Regressions of the Hazard Rate of Age at First Sex by Self-Concept and Controls among Adolescent Girls by Race/Ethnicity and Class for Second Analytic Sample 3,485 respondents/15,136 person years

	High-SES				Low-SES				Non-Hispanic White				Non-Hispanic Black				Hispanic			
Independent Variables	*b*			*OR*	*b*			*OR*	*b*			*OR*	*b*			*OR*	*b*			*OR*
Self-Concept (1=low, 5=high):																				
Self-Efficacy	0.12	(.11)		1.13	-0.05	(.06)		0.95	0.01	(.06)		1.02	-0.12	(.16)		0.89	0.06	(.12)		1.06
Mattering	0.01	(.15)		1.01	-0.27	(.09)	**	0.76	-0.14	(.11)		0.87	-0.23	(.14)	†	0.79	-0.38	(.18)	*	0.68
Self-Esteem	-0.07	(.11)		0.93	-0.10	(.06)		0.91	-0.15	(.07)	*	0.86	0.00	(.12)		1.00	0.07	(.14)		1.08
Possible Selves:																				
Want to go to College	-0.05	(.15)		0.95	-0.03	(.05)		0.97	0.01	(.06)		1.01	-0.22	(.10)	*	0.80	-0.19	(.09)	*	0.83
Likely will go to College	-0.18	(.14)		0.84	0.02	(.05)		1.02	-0.01	(.06)		0.99	0.17	(.13)		1.19	0.11	(.11)		1.12
Likely will live to age 35	0.15	(.10)		1.16	0.09	(.05)	*	1.10	0.17	(.07)	*	1.19	-0.01	(.07)		0.99	-0.01	(.08)		0.99
Race/Ethnicity (NH White Omitted):																				
Non-Hispanic Black	0.32	(.19)	†	1.37	0.33	(.10)	***	1.39	--	--			--	--			--	--		
Hispanic	-0.19	(.28)		0.83	-0.19	(.10)	†	0.83	--	--			--	--			--	--		
Multiple Races/Other	-0.03	(.19)		0.97	-0.01	(.12)		0.99	--	--			--	--			--	--		
Mother is College Graduate or Higher	--	--			--	--			-0.40	(.08)	***	0.67	-0.64	(.23)	**	0.53	-0.46	(.28)	†	0.63
Log Family Income	0.03	(.08)		1.03	-0.02	(.05)		0.98	-0.07	(.06)		0.93	0.00	(.08)		1.00	0.17	(.13)		1.19
Missing Income Flag	0.14	(.17)		1.15	-0.03	(.10)		0.97	0.04	(.11)		1.04	-0.04	(.18)		0.96	-0.32	(.23)		0.73
Year of Age	0.25	(.02)	***	1.28	0.26	(.02)	***	1.29	0.25	(.02)	***	1.28	0.35	(.06)	***	1.43	0.28	(.04)	***	1.32
Controls																				
Age of Adolescent	-0.14	(.04)	**	0.87	-0.16	(.03)	***	0.86	-0.14	(.03)	***	0.87	-0.10	(.06)		0.90	-0.20	(.06)	**	0.82
Early Menstruation (Under age 12)	0.02	(.12)		1.02	-0.08	(.09)		0.93	-0.10	(.10)		0.91	-0.18	(.16)		0.84	0.08	(.18)		1.09
Adolescent in Romantic Relationship in Last 18 Months	0.87	(.12)	***	2.38	0.76	(.06)	***	2.13	0.87	(.07)	***	2.38	0.61	(.14)	***	1.84	0.38	(.16)	*	1.46
Mothers' Age at Respondent's Birth	-0.02	(.02)		0.98	-0.02	(.01)	**	0.98	-0.02	(.01)	**	0.98	0.01	(.01)		1.01	0.00	(.01)		1.00
Missing Mothers' Age Flag	-0.08	(.20)		0.92	0.08	(.12)		1.08	-0.01	(.14)		0.99	0.09	(.18)		1.09	0.69	(.24)	**	1.99
Family Structure (Two Biological Parents Omitted):																				
Single Mother	0.35	(.15)	*	1.42	0.33	(.09)	***	1.39	0.29	(.10)	**	1.33	0.18	(.16)		1.20	0.56	(.22)	*	1.76
Biological Mother and Stepfather	-0.21	(.29)		0.81	0.08	(.12)		1.08	-0.01	(.13)		0.99	0.04	(.34)		1.05	0.21	(.33)		1.23
Biological Father (Single or w/ Stepmother)	1.27	(.40)	**	3.56	0.39	(.19)	*	1.47	0.75	(.21)	***	2.13	0.80	(.58)		2.22	-0.71	(.54)		0.49
No Biological Parents	-0.13	(.25)		0.88	0.33	(.18)	†	1.39	0.21	(.20)		1.24	0.74	(.31)	*	2.10	-0.22	(.28)		0.80
Intercept	-3.78	(1.12)	***		-1.97	(.60)	***		-2.68	(.63)	***		-4.19	(1.18)	***		-2.73	(1.47)	†	
N	1005				2480				1986				557				528			
Person-years	4800				10336				8682				2278				2269			

Standard errors in parentheses. †p<.10, *p <.05, **p<.01, ***p<.001

Table 5.10. Logistic Regressions of the Hazard Rate of Age at First Sex by Ambivalence, Race/Ethnicity, Class, Self-Concept, and Controls among Adolescent Girls (N = 1,840 respondents/7,314 person years)

	(1)				(2)				(3)			
Independent Variables	*b*			*OR*	*b*			*OR*	*b*			*OR*
Race/Ethnicity (NH White Omitted):												
Non-Hispanic Black	0.43	(.13)	**	1.54	0.48	(.14)	***	1.61	0.44	(.13)	***	1.56
Hispanic	-0.21	(.12)		0.81	-0.20	(.12)		0.82	-0.23	(.12)		0.80
Multiple Races/Other	-0.21	(.14)		0.81	-0.20	(.14)		0.82	-0.21	(.15)		0.81
Mother is College Graduate or Higher	-0.37	(.10)	***	0.69	-0.37	(.11)	***	0.69	-0.36	(.10)	***	0.70
Log Family Income	-0.09	(.06)		0.91	-0.09	(.06)		0.91	-0.08	(.06)		0.92
Missing Income Flag	0.08	(.11)		1.08	0.07	(.11)		1.07	0.05	(.11)		1.05
Ambivalence									0.23	(.07)	**	1.26
Self-Concept (1=low, 5=high):												
Self-Efficacy					0.01	(.08)		1.01	0.06	(.08)		1.06
Mattering					-0.24	(.11)	*	0.79	-0.23	(.11)	*	0.79
Self-Esteem					-0.06	(.07)		0.95	-0.05	(.07)		0.96
Possible Selves:												
Want to go to College					-0.10	(.07)		0.90	-0.09	(.07)		0.91
Likely will go to College					0.04	(.06)		1.04	0.05	(.06)		1.05
Likely will live to age 35					0.11	(.06)		1.12	0.13	(.06)	*	1.14
Year of Age	0.14	(.02)	***	1.15	0.15	(.02)	***	1.16	0.15	(.02)	***	1.17
Controls												
Age of Adolescent	-0.17	(.05)	***	0.84	-0.17	(.05)	***	0.85	-0.18	(.05)	***	0.83
Early Menstruation (Under age 12)	-0.25	(.11)	*	0.78	-0.28	(.11)	*	0.76	-0.29	(.11)	**	0.75
Adolescent in Romantic Relationship in Last 18 Months	0.87	(.09)	***	2.39	0.86	(.09)	***	2.37	0.88	(.09)	***	2.42
Mothers' Age at Respondent's Birth	-0.01	(.01)		0.99	-0.01	(.01)		0.99	-0.01	(.01)		0.99
Missing Mothers' Age Flag	0.23	(.14)		1.26	0.23	(.14)		1.26	0.24	(.14)		1.27
Family Structure (Two Biological Parents Omitted):												
Single Mother	0.29	(.11)	**	1.34	0.27	(.11)	*	1.31	0.26	(.11)	*	1.29
Biological Mother and Stepfather	-0.12	(.14)		0.88	-0.12	(.14)		0.89	-0.12	(.14)		0.89
Biological Father (Single or w/ Stepmother)	0.24	(.19)		1.27	0.21	(.19)		1.23	0.20	(.19)		1.23
No Biological Parents	-0.06	(.17)		0.95	-0.10	(.17)		0.90	-0.12	(.17)		0.89
Intercept	-0.91	(.69)			-0.07	(.82)			-0.82	(.86)		

Standard errors in parentheses. *p <.05, **p<.01, ***p<.001

Table 5.11. Logistic Regressions of the Hazard Rate of Age at First Sex by Ambivalence and the Self-Concept with Race/Ethnicity and Class Interactions and Controls among Adolescent Girls (N = 1,840 respondents/ 7,314 person years)

	(1)				(2)				(3)			
Independent Variables	*b*			*OR*	*b*			*OR*	*b*			*OR*
Ambivalence	0.12	(.10)		1.13	0.23	(.07)	**	1.25	0.09	(.11)		1.10
Ambivalence*Black	0.36	(.18)	*	1.44					0.45	(.18)	*	1.57
Ambivalence*Hispanic	0.24	(.14)	†	1.27					0.22	(.14)		1.25
Ambivalence*Other	0.08	(.18)		1.08					0.27	(.22)		1.31
Ambivalence*Mother CollGrad					0.00	(.15)		1.00	0.17	(.21)		1.19
Ambivalence *Black*Mother CollGrad									-0.64	(.37)	†	0.53
Ambivalence*Hispanic*Mother CollGrad									1.10	(.51)	*	3.01
Ambivalence*Other*Mother CollGrad									-0.54	(.33)	†	0.58
Self-Concept (1=low, 5=high):												
Self-Efficacy	0.06	(.08)		1.06	0.06	(.08)		1.06	0.06	(.08)		1.06
Mattering	-0.21	(.15)		0.81	-0.28	(.11)	*	0.76	-0.23	(.11)	*	0.80
Mattering*Black	0.06	(.24)		1.07								
Mattering*Hispanic	0.05	(.25)		1.06								
Mattering*Other	-0.38	(.26)		0.69								
Mattering*Mother CollGrad					0.21	(.19)		1.23				
Self-Esteem	-0.06	(.07)		0.95	-0.04	(.07)		0.96	-0.06	(.07)		0.94
Possible Selves:												
Want to go to College	-0.10	(.07)		0.91	-0.09	(.07)		0.91	-0.10	(.06)		0.90
Likely will go to College	0.05	(.06)		1.05	0.05	(.06)		1.05	0.05	(.06)		1.05
Likely will live to age 35	0.23	(.09)	*	1.26	0.12	(.06)	†	1.13	0.24	(.09)	*	1.27
Likely Live*Black	-0.31	(.13)	*	0.73					-0.32	(.14)	*	0.73
Likely Live*Hispanic	-0.18	(.12)		0.83					-0.16	(.11)		0.85
Likely Live*Other	-0.12	(.17)		0.89					-0.25	(.15)	†	0.78
Likely Live*Mother Collgrad					0.02	(.14)		1.02	-0.04	(.16)		0.96

Table 5.11. (Cont.) Logistic Regressions of the Hazard Rate of Age at First Sex by Ambivalence and the Self-Concept with Race/Ethnicity and Class Interactions and Controls among Adolescent Girls (N = 1,840 respondents/ 7,314 person years)

Likely Live*Black*Mother CollGrad									0.20	(.15)		1.23
Likely Live*Hispanic*Mother CollGrad									-0.41	(.19)	*	0.66
Likely Live*Other*Mother CollGrad									0.16	(.14)		1.18
Race/Ethnicity (NH White Omitted):												
Non-Hispanic Black	0.86	(1.09)		2.35	0.44	(.13)	***	1.56	1.04	(.67)		2.84
Hispanic	-0.07	(1.00)		0.93	-0.23	(.12)	†	0.80	0.15	(.55)		1.16
Multiple Races/Other	1.74	(1.12)		5.72	-0.20	(.15)		0.82	0.50	(.80)		1.66
Mother is College Graduate or Higher	-0.38	(.10)	***	0.68	-1.35	(1.11)		0.26	-0.41	(.77)		0.66
Log Family Income	-0.08	(.06)		0.93	-0.08	(.06)		0.92	-0.08	(.06)		0.93
Missing Income Flag	0.04	(.11)		1.04	0.04	(.11)		1.04	0.05	(.11)		1.05
Year of Age	0.16	(.02)	***	1.17	0.15	(.02)	***	1.17	0.16	(.02)	***	1.18
<u>Controls</u>												
Age of Adolescent at Wave I Interview	-0.19	(.05)	***	0.83	-0.18	(.05)	***	0.83	-0.19	(.05)	***	0.83
Early Menstruation (Under age 12)	-0.29	(.12)	*	0.75	-0.29	(.11)	**	0.75	-0.27	(.11)	*	0.77
Adolescent in Romantic Relationship in Last 18 Months	0.88	(.09)	***	2.42	0.88	(.09)	***	2.42	0.89	(.09)	***	2.44
Mothers' Age at Respondent's Birth	-0.01	(.01)		0.99	-0.01	(.01)		0.99	-0.01	(.01)		0.99
Missing Mothers' Age Flag	0.24	(.14)	†	1.28	0.24	(.14)	†	1.27	0.24	(.14)	†	1.27
Family Structure (Two Biological Parents Omitted):												
Single Mother	0.30	(.11)	**	1.35	0.26	(.11)	*	1.29	0.28	(.11)	*	1.33
Biological Mother and Stepfather	-0.09	(.14)		0.92	-0.12	(.15)		0.89	-0.10	(.14)		0.90
Biological Father (Single or w/ Stepmother)	0.21	(.19)		1.23	0.20	(.19)		1.22	0.21	(.19)		1.23
No Biological Parents	-0.11	(.17)		0.89	-0.12	(.17)		0.89	-0.14	(.17)		0.87
Intercept	-1.16	(1.04)			-0.58	(.88)			-1.13	(1.00)		

Standard errors in parentheses. † p<.10, *p <.05, **p<.01, ***p<.001

Table 5.12. Separate Logistic Regressions of the Hazard Rate of Age at First Sex by Ambivalence, Self-Concept and Controls among Adolescent Girls by Race/Ethnicity (N = 1,840 respondents/ 7,314 person years)

	NH White				NH Black				Hispanic			
Independent Variables	*b*			*OR*	*b*			*OR*	*b*			*OR*
Ambivalence	0.11	(.10)		1.12	0.51	(.14)	***	1.66	0.48	(.12)	***	1.62
Self-Concept (1=low, 5=high):												
Self-Efficacy	0.01	(.09)		1.01	0.25	(.20)		1.28	0.32	(.13)	*	1.38
Mattering	-0.12	(.15)		0.89	-0.37	(.20)	†	0.69	-0.25	(.21)		0.78
Self-Esteem	-0.11	(.10)		0.90	0.09	(.15)		1.10	-0.10	(.17)		0.90
Possible Selves:												
Want to go to College	-0.03	(.09)		0.97	-0.29	(.19)		0.75	-0.26	(.20)		0.78
Likely will go to College	-0.04	(.08)		0.96	0.33	(.17)	†	1.39	0.29	(.14)	*	1.34
Likely will live to age 35	0.22	(.09)	*	1.25	-0.04	(.10)		0.96	-0.01	(.10)		0.99
Mother is College Graduate or Higher	-0.29	(.12)	*	0.75	-0.72	(.35)	*	0.49	-0.71	(.31)	*	0.49
Log Family Income	-0.09	(.08)		0.91	-0.08	(.12)		0.93	0.16	(.14)		1.17
Missing Income Flag	0.13	(.14)		1.14	0.33	(.21)		1.39	-0.38	(.33)		0.68
Year of Age	0.13	(.02)	***	1.14	0.26	(.09)	**	1.30	0.35	(.05)	***	1.41
Controls												
Age of Adolescent	-0.16	(.06)	*	0.85	-0.34	(.15)	*	0.71	-0.53	(.19)	**	0.59
Early Menstruation (Under age 12)	-0.30	(.15)	*	0.74	-0.48	(.22)	*	0.62	-0.26	(.28)		0.77
Adolescent in Romantic Relationship in Last 18 Months	1.03	(.11)	***	2.81	0.67	(.21)	**	1.95	0.27	(.25)		1.31
Mothers' Age at Respondent's Birth	-0.01	(.01)		0.99	-0.02	(.02)		0.98	0.06	(.02)	**	1.06
Missing Mothers' Age Flag	0.20	(.20)		1.22	0.17	(.18)		1.19	0.79	(.33)	*	2.21
Family Structure (Two Biological Parents Omitted):												
Single Mother	0.32	(.16)	*	1.38	0.10	(.18)		1.10	0.39	(.34)		1.48
Biological Mother and Stepfather	-0.18	(.17)		0.83	0.20	(.50)		1.22	-0.08	(.51)		0.92
Biological Father (Single or w/ Stepmother)	0.47	(.23)	*	1.60	0.63	(.58)		1.87	-1.77	(.41)	***	0.17
No Biological Parents	-0.15	(.22)		0.86	0.65	(.57)		1.93	-0.56	(.39)		0.57
Intercept	-1.01	(1.19)			-0.24	(2.21)			-1.89	(2.59)		
N	966				269				346			
Person-years	3811				922				1402			

Standard errors in parentheses. †p<.10, *p <.05, **p<.01, ***p<.001

Table 5.13. Separate Logistic Regressions of the Hazard Rate of Age at First Sex by Ambivalence, Self-Concept and Controls among Adolescent Girls by Race/Ethnicity *and* Class (N = 1,840 respondents/7314 person years)

	High-SES White			High-SES Black			Low-SES White			Low-SES Black		
Independent Variables	*b*		*OR*	*b*		*OR*	*b*		*OR*	*b*		*OR*
Ambivalence	0.31	(.21)	1.36	-0.28	(.32)	0.76	0.07	(.11)	1.08	0.71	(.17) ***	2.03
Self-Concept (1=low, 5=high):												
Self-Efficacy	0.48	(.20) *	1.62	-0.20	(.26)	0.82	-0.11	(.09)	0.90	0.29	(.27)	1.34
Mattering	0.21	(.31)	1.23	0.22	(.38)	1.25	-0.22	(.17)	0.80	-0.73	(.24) **	0.48
Self-Esteem	-0.36	(.19) †	0.70	0.29	(.27)	1.34	-0.05	(.10)	0.95	0.12	(.23)	1.12
Possible Selves:												
Want to go to College	0.25	(.42)	1.29	-0.98	(.31) **	0.38	-0.04	(.09)	0.96	-0.42	(.26)	0.66
Likely will go to College	-0.59	(.41)	0.55	-0.68	(.43)	0.51	-0.01	(.08)	0.99	0.50	(.21) *	1.65
Likely will live to age 35	0.16	(.20)	1.17	0.13	(.19)	1.14	0.24	(.09) **	1.27	-0.16	(.14)	0.85
Log Family Income	-0.02	(.13)	0.98	-0.16	(.44)	0.85	-0.06	(.09)	0.94	0.03	(.12)	1.03
Missing Income Flag	0.69	(.28) *	1.99	0.64	(.37) †	1.91	-0.08	(.16)	0.92	0.34	(.20) †	1.40
Year of Age	0.24	(.04) ***	1.27	0.05	(.08)	1.06	0.11	(.04) **	1.11	0.56	(.13) ***	1.75
Controls												
Age of Adolescent	-0.33	(.11) **	0.72	0.24	(.26)	1.27	-0.12	(.08)	0.88	-0.80	(.19) ***	0.45
Early Menstruation (Under age 12)	-0.20	(.26)	0.82	0.28	(.44)	1.32	-0.30	(.19)	0.74	-0.48	(.27) †	0.62
Adolescent in Romantic Relationship in Last 18 Months	1.10	(.21) ***	2.99	0.91	(.48) †	2.49	1.06	(.12) ***	2.88	0.70	(.32) *	2.02
Mothers' Age at Respondent's Birth	-0.02	(.02)	0.98	-0.08	(.06)	0.92	-0.01	(.01)	0.99	0.01	(.02)	1.01
Missing Mothers' Age Flag	-0.18	(.35)	0.84	-0.22	(.32)	0.81	0.34	(.22)	1.40	0.12	(.23)	1.13
Family Structure (Two Biological Parents Omitted):												
Single Mother	0.38	(.19) *	1.47	-0.22	(.49)	0.81	0.34	(.19) †	1.40	0.18	(.21)	1.20
Biological Mother and Stepfather	-1.08	(.38) **	0.34	1.49	(.73) *	4.43	-0.04	(.19)	0.96	-0.46	(.88)	0.63
Biological Father (Single or w/ Stepmother)	0.82	(.81)	2.27	-2.20	(1.62)	0.11	0.35	(.22)	1.42	1.27	(.70) †	3.55
No Biological Parents	-0.34	(.52)	0.71	-0.81	(.54)	0.44	-0.09	(.29)	0.92	0.69	(.68)	1.99
Intercept	-1.46	(2.70)		2.78	(7.69)		-0.76	(1.29)		2.03	(2.54)	
N	283			92			683			177		
Person-years	1260			349			2551			573		

Standard errors in parentheses. †p<.10, *p <.05, **p<.01, ***p<.001

Table A2.1. Previous Studies Utilizing the Feelings about Pregnancy Items in the Add Health dataset, 1995-2002

Authors	Year	Main Variable	Label	Measurement
Sieving et al	2007	Dual Method Use	Perceived Consequences of Pregnancy	#3-9 below
Ryan et al	2007	Consistent Contraceptive Use	Negative View of Pregnancy	#1 below
Jaccard et al	2003	Occurrence of Pregnancy; Relationship with Mother (predictor)	Ambivalence Toward Pregnancy	#1-2 below; ambivalence interpreted as 'neither agree nor disagree' for #1 & #2; 'agree/strongly agree' for #2; and 'disagree/strongly disagree' for #1
Kapinus & Gorman	2004	Relationship with Parents (predictor)	Perceived Consequences of Pregnancy	#3-7 below
Bruckner et al	2004	Consistent Contraceptive Use & Occurrence of Pregnancy	Ambivalence Toward Pregnancy	#1, #3-4, #7-8; four groups: 'strongly agree' with all 5 items or 'strongly agree' with 4 items & 'agree' with 1 item interpreted as antipregnancy; 'disagree' or 'strongly disagree' with at least 3 items interpreted as propregnancy; 'neither agree nor disagree' with at least 2 items interpreted as having the least defined attitudes toward becoming pregnant i.e., ambivalent (15 respondents who were both ambivalent and propregnancy were counted as propregnancy); all other respondents were considered to have mainstream attitudes.
Cuffee et al	2007	Onset of Sex	Perceptions of Shame and Guilt with Pregnancy	#1-4 below
Harding	2007	Neighborhood (predictor)	Pregnancy Frame	#2
Rostosky et al	2003	Onset of Sex	Negative Pregnancy Outcomes	1 of 4 sex attitudes scales from factor loading; perceptions that pregnancy would lead to negative outcomes #3-4 below

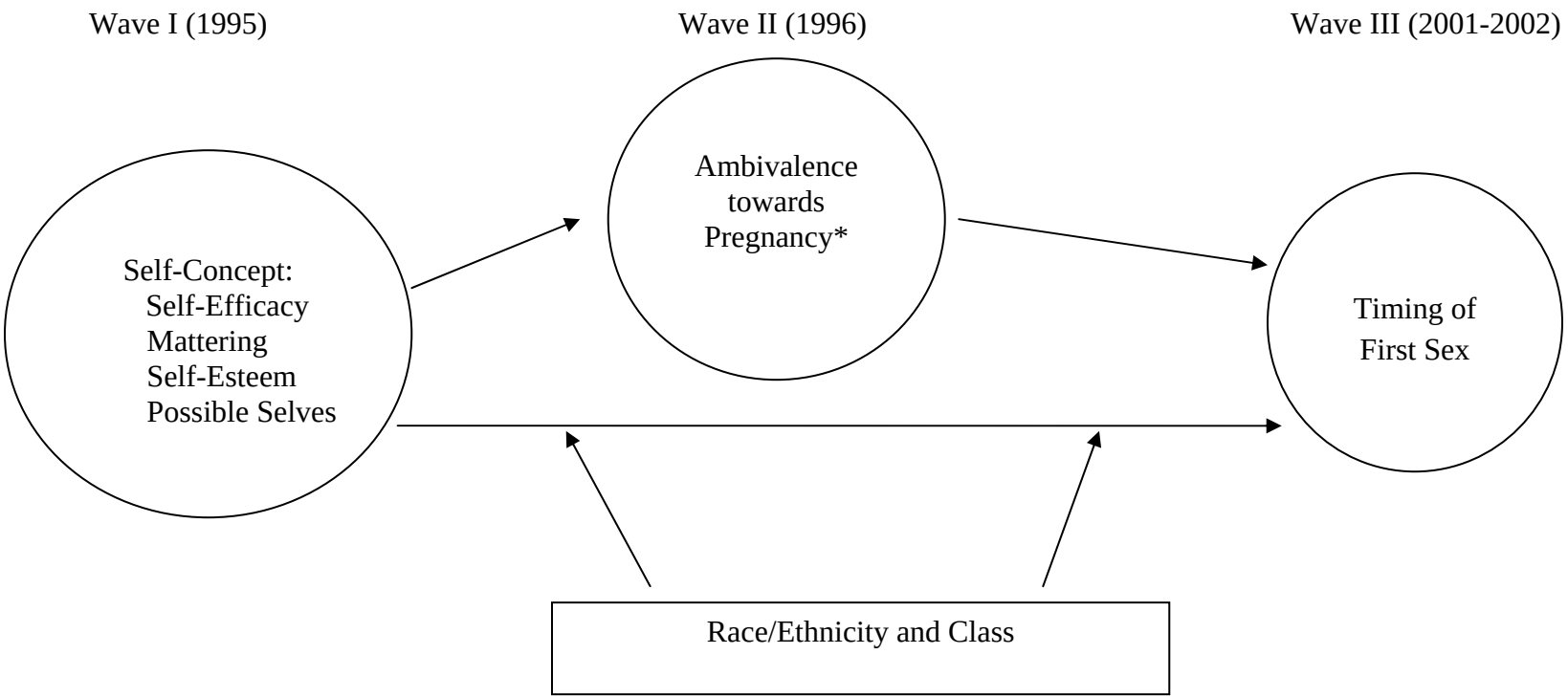
Available Items in Add Health: A five-point response scale from strongly disagree to strongly agree to the following statements (a variation of these statements are also asked of males): (1) “Getting pregnant at this time in your life is one of the worst things that could happen to you.”; (2) “It wouldn’t be all that bad if you got pregnant at this time in your life.”; (3) “If you got pregnant, it would be embarrassing for your family.”; (4) “If you got pregnant, it would be embarrassing for you.”; (5) “If you got pregnant, you would have to quit school.”; (6) “If you got pregnant, you might marry the wrong person.”; (7) “If you got pregnant, you would be forced to grow up too fast”; (8) “If you got pregnant, you would have to decide whether or not to have the baby, and that would be stressful and difficult.”; (9) “If you got pregnant, you would consider getting an abortion.” Also, for girls reporting having ever been pregnant or who are currently pregnant, a question also asks, (10) “Before you got pregnant, did you want to get pregnant by your partner at that time?”

Table A3.1. Details of Selection of Analytic Samples, Add Health, 1995-2002

	Larger Sample of Adolescent Girls		Analytic Sample 1		Analytic Sample 2	
	Sample Size	Cases Excluded	Sample Size	Cases Excluded	Sample Size	Cases Excluded
Wave I in-home interview respondents	20,745					
Respondents who completed Waves I, II, III and who have valid sampling weights	10,828	9,917				
Adolescent girls	5,735	5,093	5,735		5,735	
Never pregnant at Waves I or II			5,047	688		
Virgins at Wave I & never pregnant at Wave I					3,580	2,155
Not missing/inconsistent on dependent variable			4,954	93	3,518	62
Not missing on race/ethnicity			4,951	3	3,518	0
Not missing on maternal education			4,934	17	3,503	15
Not missing on mattering/efficacy/esteem			4,917	17	3,499	4
Not missing on possible selves measures			4,892	25	3,485	14
Final sample size	5,735		4,892		3,485	

Note: Wave I (1995) age range 11-18; Wave II (1996); Wave III (2001-2002) age range 18-26

Figure 1.1. Conceptual Framework for Analyses of Add Health dataset, 1995-2002



*Ambivalence is measured at Wave I in the second results chapter, Chapter 5, which examines the influence of ambivalence on the timing of first sex.

Figure 4.1. Ambivalence by Self-Concept Measures among Adolescent Girls for First Analytic Sample (N = 4,892)

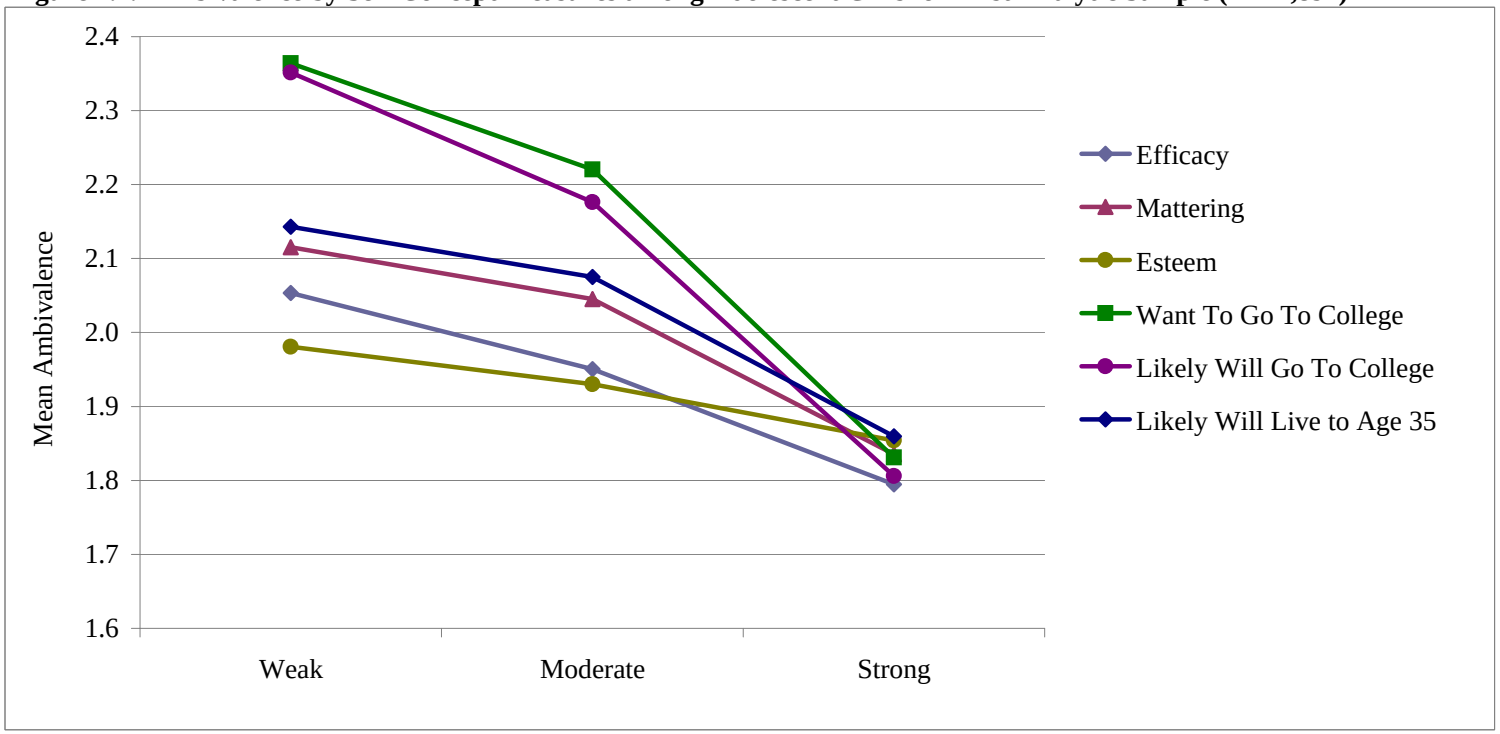


Figure 4.2. Ambivalence by Likely Will Go to College among Non-Hispanic White and Black Adolescent Girls for First Analytic Sample (N = 4,892)

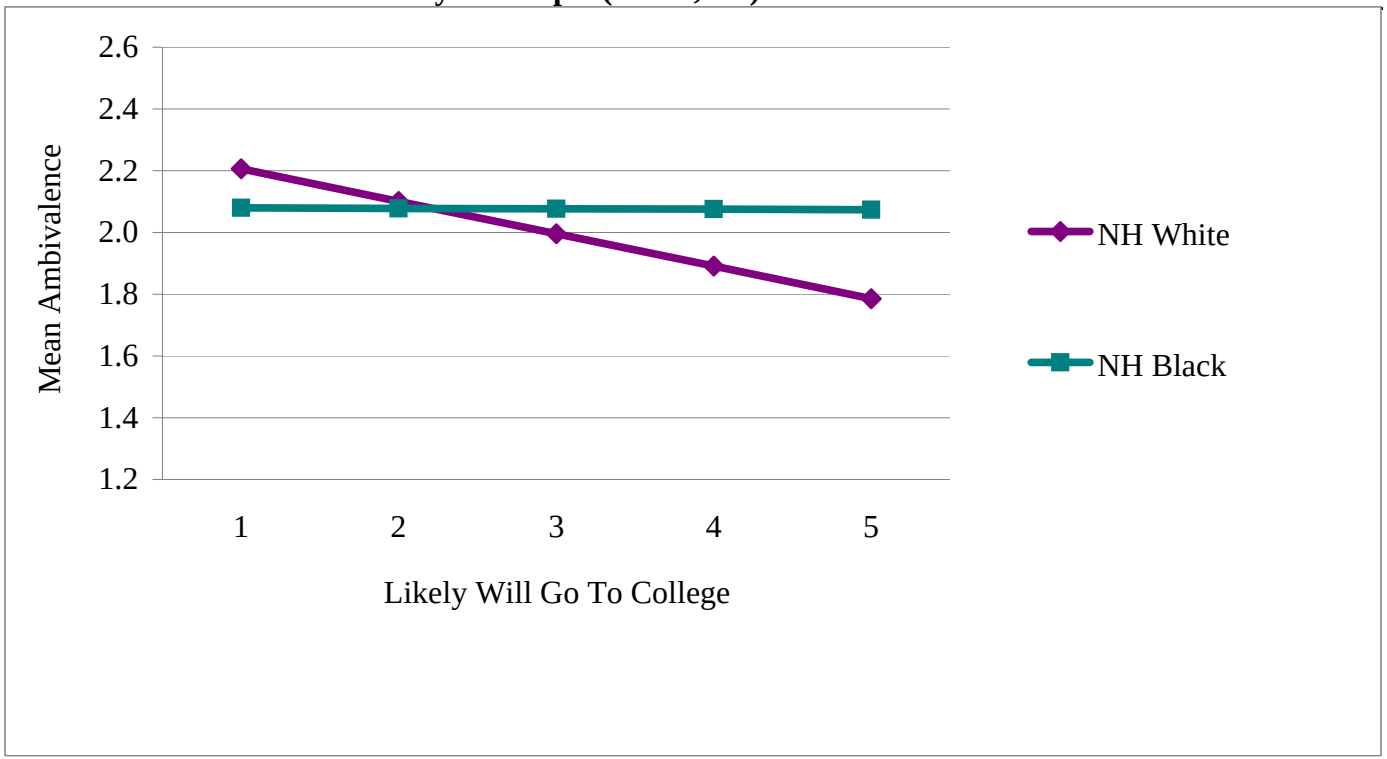


Figure 4.3. Ambivalence by Want to go to College among High-SES and Low-SES Adolescent Girls for First Analytic Sample (N = 4,892)

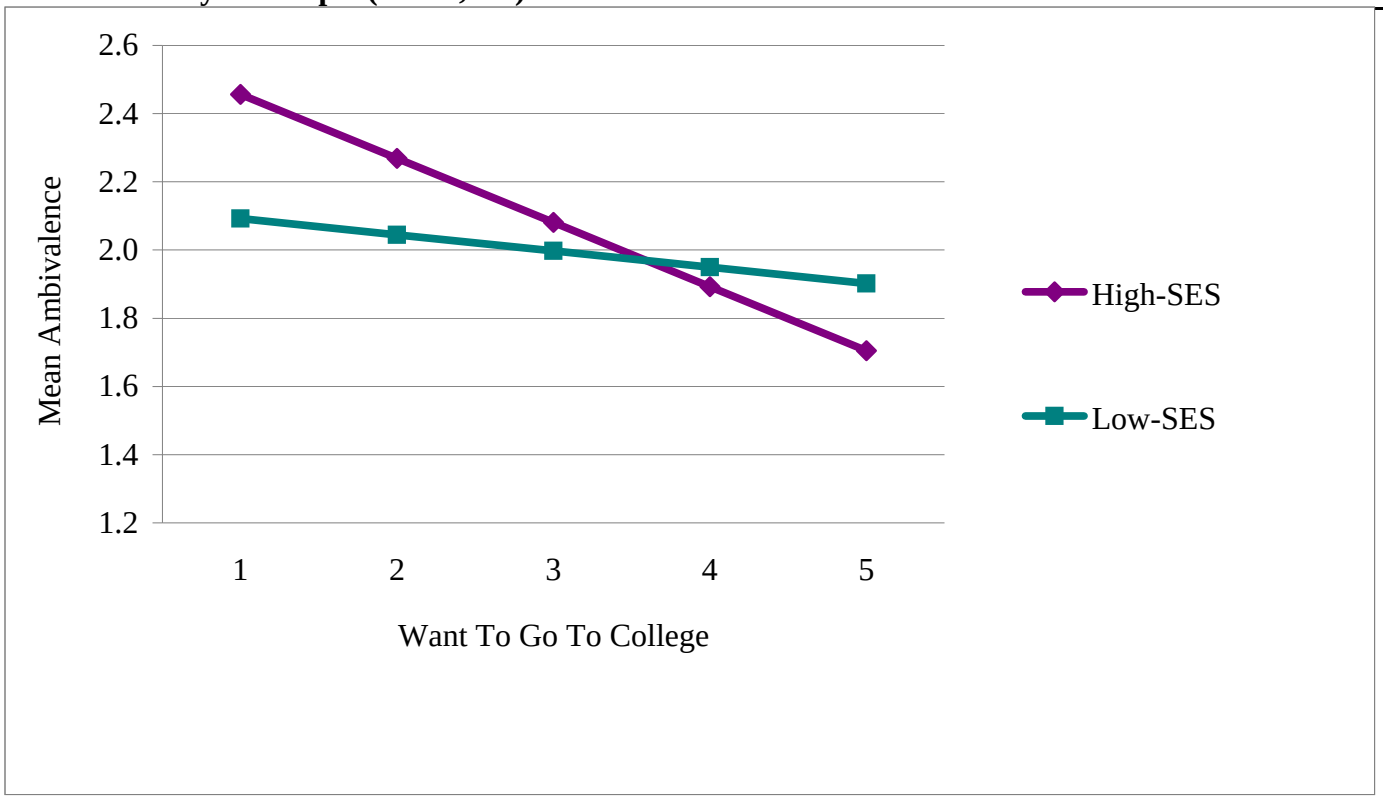


Figure 4.4. Ambivalence by Likely will go to College among Adolescent Girls by Race and Mothers' Education for First Analytic Sample (N = 4,892)

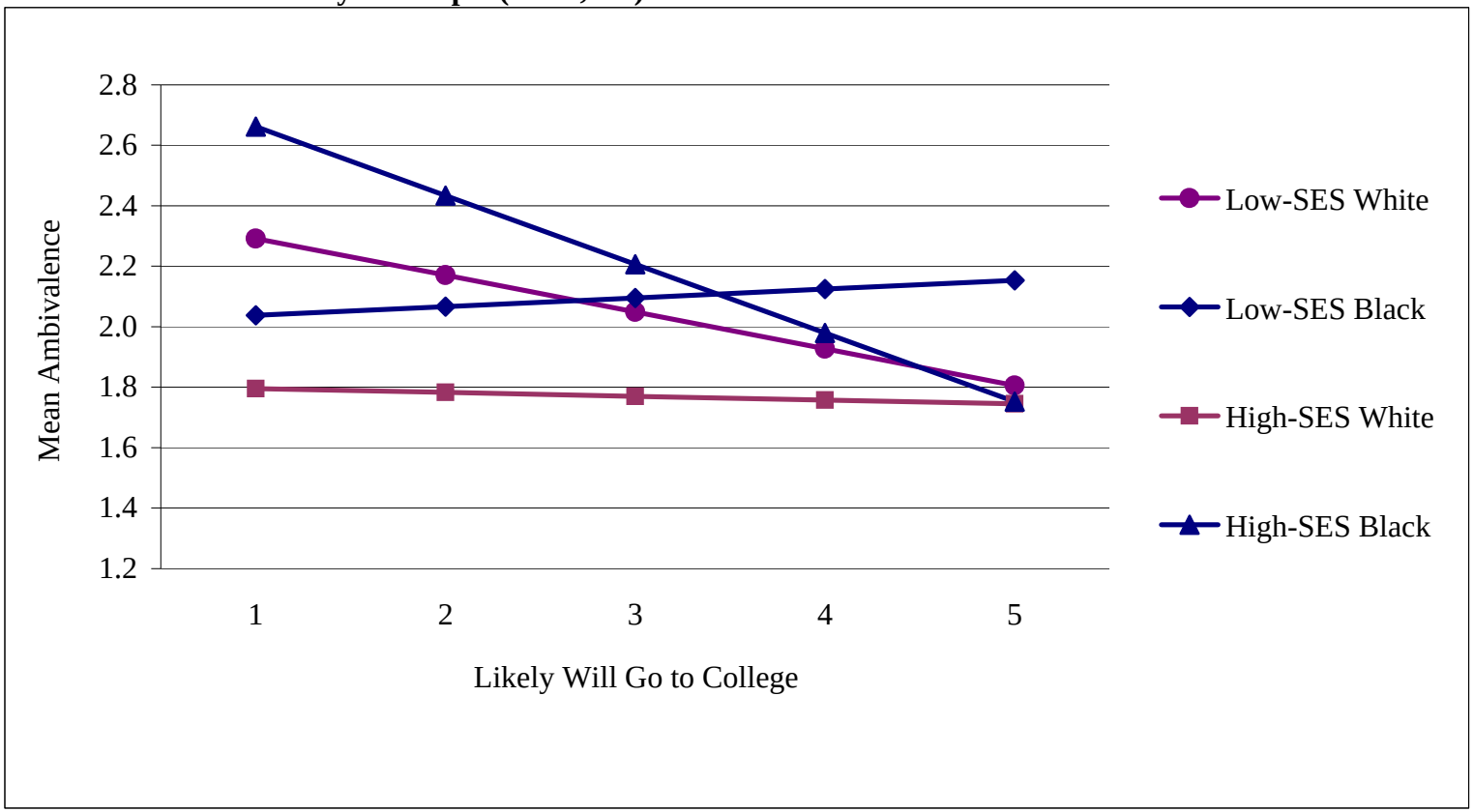


Figure 4.5. Ambivalence by Want to go to College among Adolescent Girls by Race and Mothers' Education for First Analytic Sample (N = 4,892)

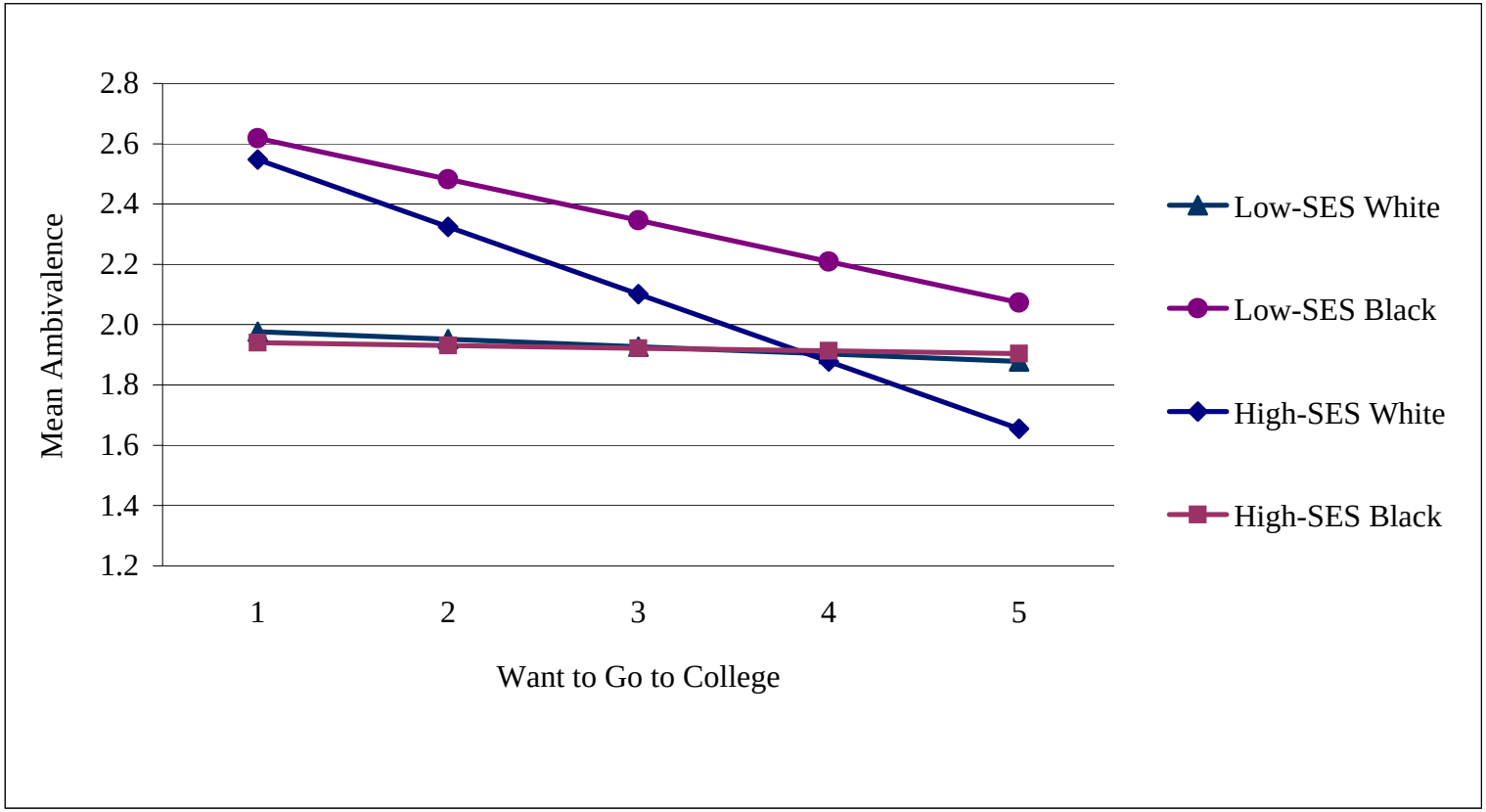


Figure 5.1. Age at First Sex by Self-Concept Measures among Adolescent Girls for Second Analytic Sample (N =3,485)

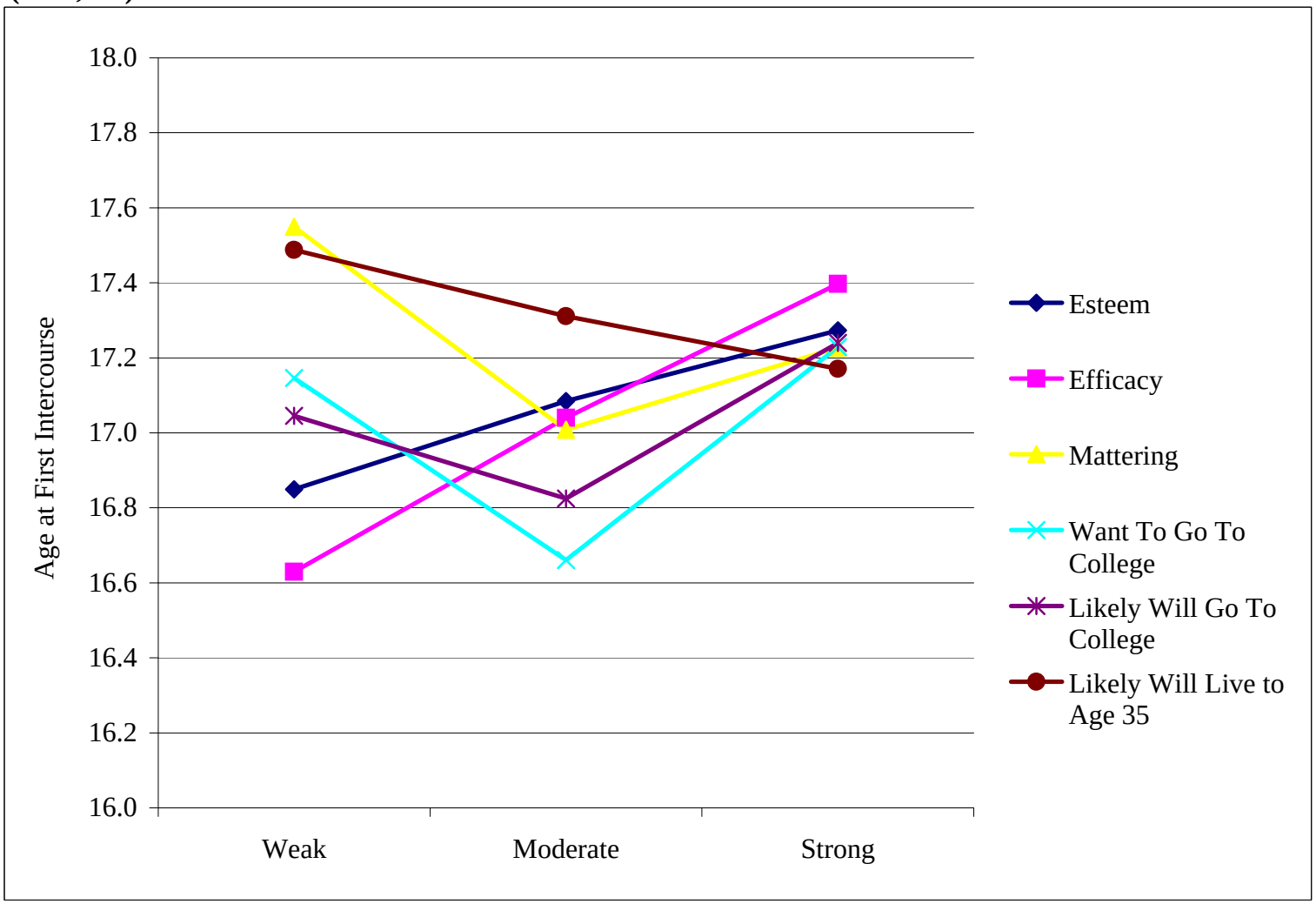


Figure 5.2. Predicted Probabilities of Transition to First Sex by Likely Will Live to Age 35 among Non-Hispanic White and Black Adolescent Girls for Second Analytic Sample (N = 3,485 respondents/15,136 person years)

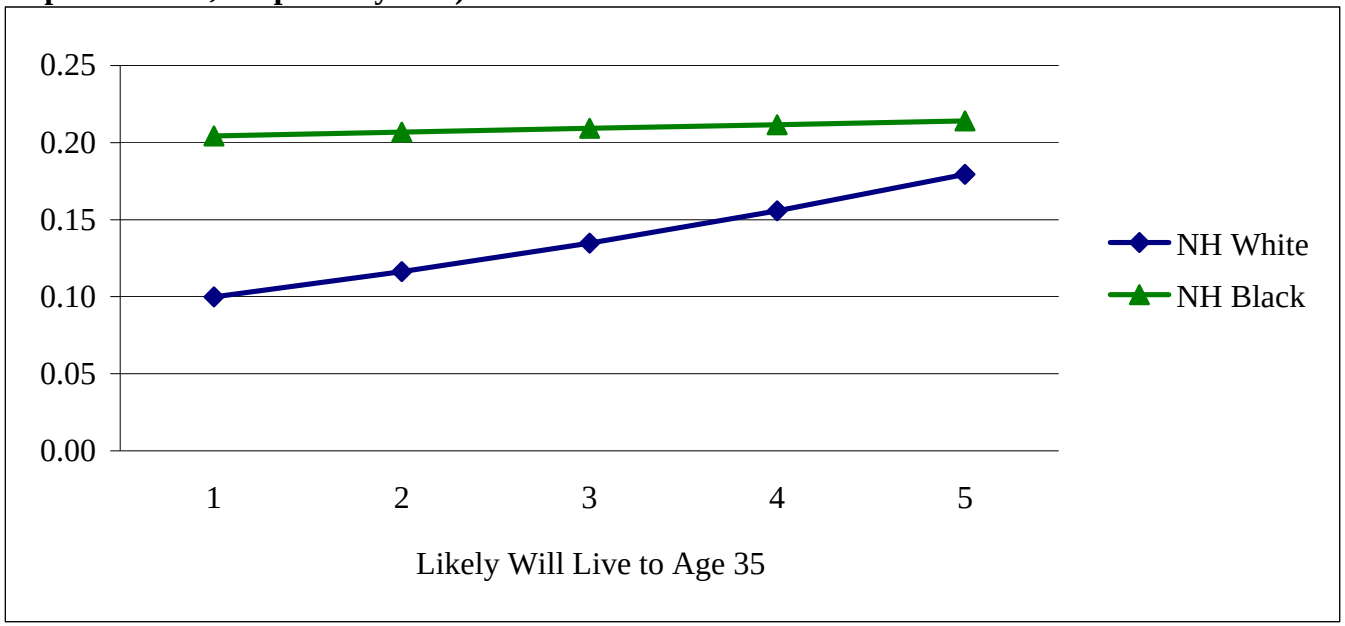


Figure 5.3. Predicted Probabilities of Transition to First Sex by Mattering among High-SES nad Low-SES Adolescent Girls for Second Analytic Sample (N = 3,485 respondents/15,136 person years)

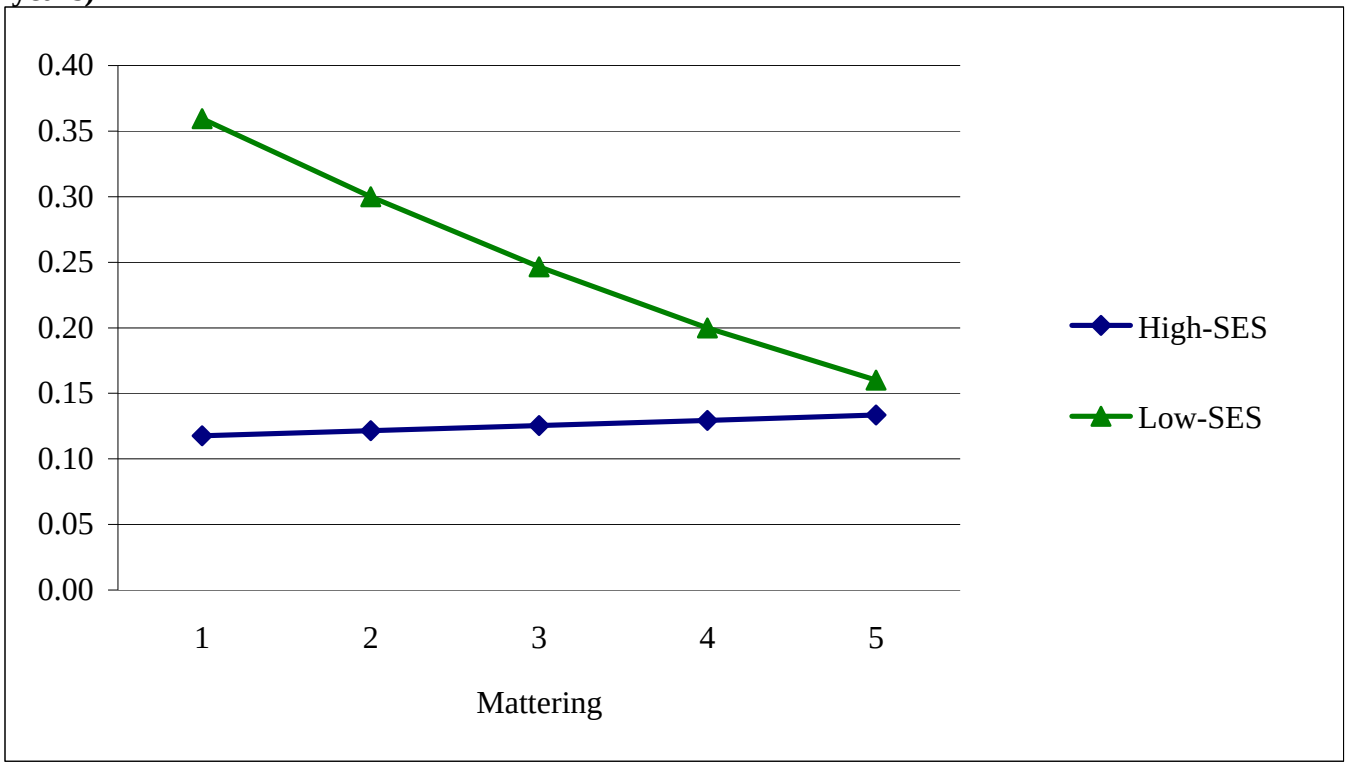


Figure 5.4. Predicted Probabilities of Transition to First Sex by Ambivalence among Adolescent Girls by Race/Ethnicity (N = 1,840 respondents/7314 person years)

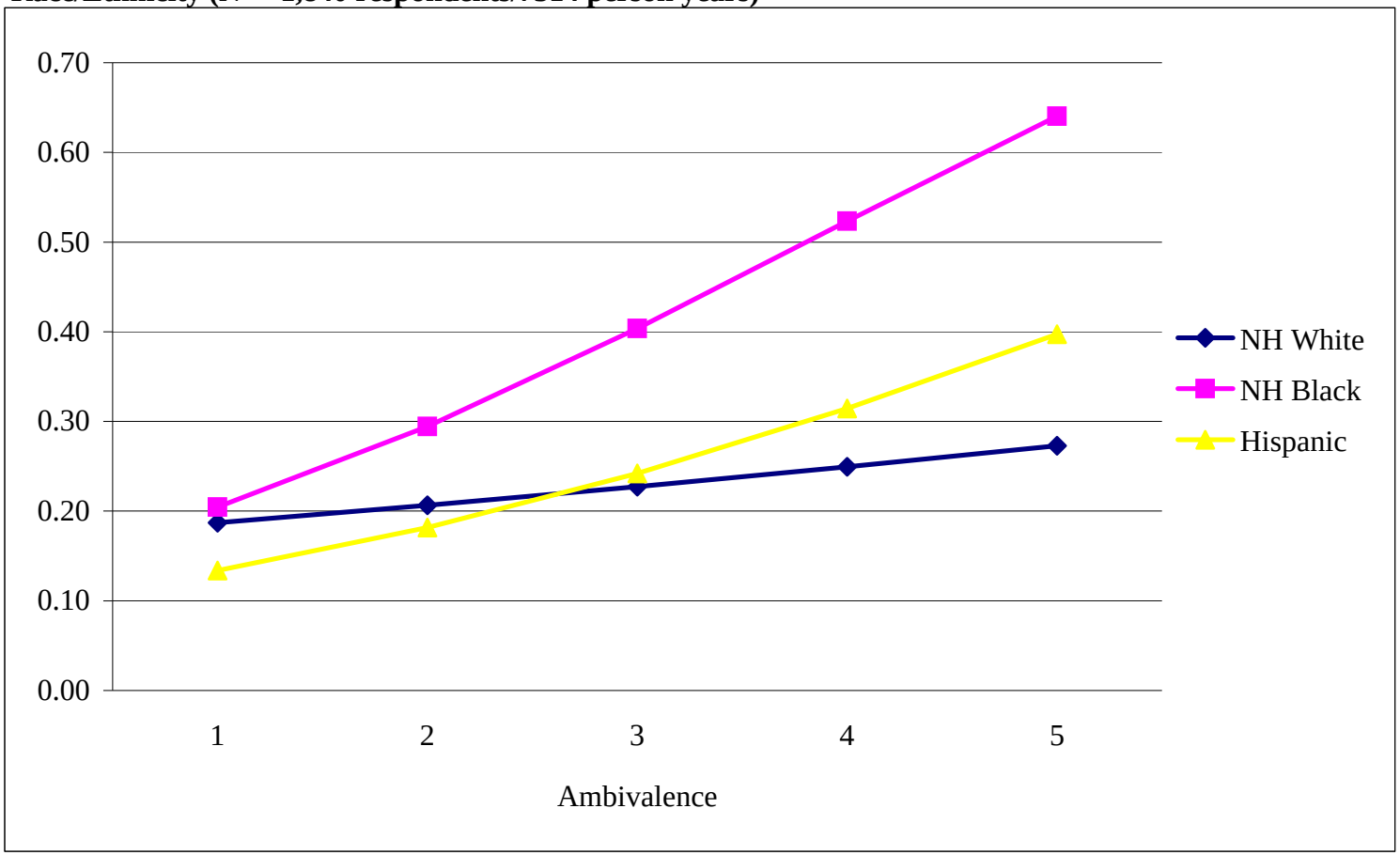
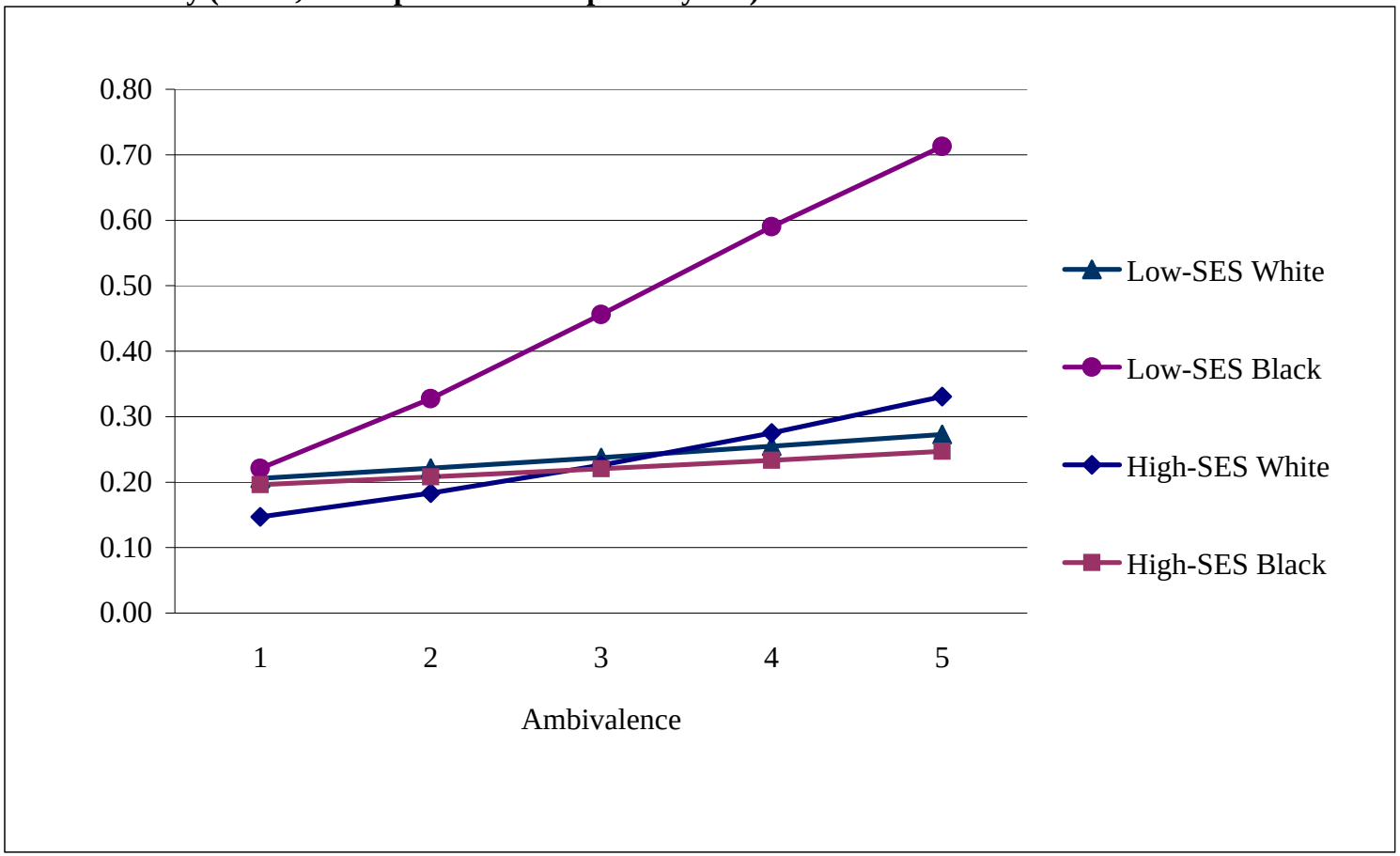


Figure 5.5. Predicted Probabilities of Transition to First Sex by Ambivalence among Adolescent Girls by Race/Ethnicity (N = 1,840 respondents/7314 person years)



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