Adolescent Girls' Ambivalence towards Pregnancy: The Role of the Self-Concept and Race/Ethnic and Class Locations

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Abstract

An important paradox in the adolescent pregnancy literature 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. Utilizing the National Study of Adolescent Health (Add Health, N = 4,901), this paper begins to disentangle this paradox with a focus on the influence of adolescent girls' self-concepts on their feelings of ambivalence towards pregnancy and how this relationship varies by race/ethnicity and class. Results indicate that most components of the self-concept are protective against feelings of ambivalence towards pregnancy. Race/ethnic and class differences in the effect of the self-concept on ambivalence are evident.

Introduction

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 recent reversal in the steady decline of the teen birth rate 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, it has called into question our existing knowledge of and strategies for addressing adolescent fertility.

An important paradox in the adolescent pregnancy literature 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 (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 (Hamilton et al. 2009). Thus, the self-concept (or different components of the self) 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.

This paper begins to disentangle this paradox with a focus on 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. The self-concept, including self-esteem, self-efficacy, mattering (i.e. perceived support from others), and 'possible selves' (i.e., expectations for the future), may be more influential for feelings towards pregnancy than for actual behaviors, such as first sex or pregnancy, given that these feelings serve as more proximate determinants that occur before girls' sexual and contraceptive decisions and actions. Rather than assuming that intention is the basis of pregnancy, I acknowledge the ambiguity and complexity of some

girls' feelings surrounding pregnancy and seek to identify why some adolescents are relatively indifferent towards becoming pregnant and others are not.

Utilizing Waves I and II of the National Study of Adolescent Health (Add Health) and based on intersectionality and symbolic interactionism, this paper addresses two research questions:

1. How do girls' self-concepts influence their feelings of ambivalence towards pregnancy?
2. How does the influence of girls' self-concepts on their feelings towards pregnancy vary by race/ethnicity and class?

Theoretical Framework and Literature Review

In addition to the paradox among race, selves, and pregnancy in the adolescent pregnancy literature, there are several additional motivations for this study including 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 leading to pregnancy and to identify which factors matter more for some girls than others depending on their race/ethnicity and class.

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 birth rate in the U.S. Although the pregnancy rate for adolescents in the U.S. declined one-third since its

most recent peak in the early 1990s, there has been a small recent rise in the pregnancy rate from 2005 to 2006 of about three percent. The adolescent birth rate has also increased five percent between 2005 and 2007 (Hamilton et al., 2009; Martin et al., 2009). It is uncertain whether this reversal is a temporary upturn or the start of a more persistent upward trend but it has renewed prevention efforts and sparked debate among policymakers, researchers, and the media. Also, sharp race/ethnic and class disparities in adolescent pregnancy and fertility rates persist in the U.S. Non-Hispanic Black and Hispanic adolescents have higher pregnancy and birth rates than non-Hispanic white adolescents (Saenz and Conde 2009).

Adolescent childbearing often results in negative health and economic outcomes for teenage parents and their children (Martin et al. 2009; Meade and Ickovics 2005; Menacker et al. 2004; Saenz and Conde 2009; Ventura et al. 2001). 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; Hobcraft and Kiernan 2001; Martin et al. 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; Hobcraft and Kiernan 2001).

Ambivalence towards Pregnancy

Some adolescents may be ambivalent towards becoming pregnant; neither actively seeking nor actively avoiding pregnancy. 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). In their qualitative study of low-income young women, Edin and Kefalas found that almost half of the mothers characterized their most recent birth in this way. 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. 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." 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.

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 et al. (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 et al. (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. These 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).

Studies have found that feelings of ambivalence towards pregnancy may be a powerful factor in understanding adolescents' sexual and reproductive behaviors. Several studies have found that adolescents' ambivalent or positive feelings towards pregnancy predicted the occurrence of early pregnancy (Afable-Munsuz et al., 2006; Jaccard et al 2003; Rosengard et al., 2004) and contraceptive use (Bruckner et al. 2004; Frost et al. 2007; Ryan et al. 2007; Sieving et al. 2007).

Variations in ambivalence towards pregnancy are evident by race/ethnicity and class. Disadvantaged and non-White girls are more likely to be ambivalent towards pregnancy compared to more advantaged and White girls. Edin and Kefalas (2005) found racial differences in ambivalence 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. 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. 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. (2003) 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 had less negative attitudes than those who were more advantaged (Jaccard et al. 2003). Kapinus and Gorman (2004) found that Black and Hispanic girls were more positive about the consequences of pregnancy than White girls.

Intersectionality

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) definition of intersectionality as, "…the relationships among multiple dimensions and modalities of social relations and subject formation."

An intersectional approach can be applied to the study of adolescent sexuality. Collins (2004:11) discusses how "…Sexuality can also be seen as a site of intersectionality, a specific constellation of social practices that demonstrate how oppressions converge." Moreover, Collins (2004:6) states that the majority of social groups, "…encounter distinctive sexual politics based on their placement in systems of gender, race, and sexuality." Race/ethnic and class differences in youth'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 different sexual and gender scripts among peer groups, families, and partners by race/ethnicity and class (Cavanagh 2004, 2007). 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 macro-level) may dampen the possible protective influence of a strong self-concept against early pregnancy.

Symbolic Interactionism and the Self

Symbolic interactionism, a major social psychological theory, stresses the reciprocal relationship between the individual and society. 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). Symbolic interactionism argues that the self-concept is both a social product and force; constrained by structure yet agentic. The self motivates feelings and behaviors and may be especially pertinent for adolescents who tend to be more oriented towards the future, which Wells and Stryker (1988) refer to the "forward tilt" of adolescence. Researchers who study the self often focus on adolescents and have found that the self is linked to key outcomes such as achievement and suicide (Elliot et al., 2005). The self is likely to be a critical part of the pregnancy process for adolescents that tends to be typically minimized by demographers.

The self-concept is comprised of various components including self-esteem, self-efficacy, mattering, and possible selves. Self-esteem refers to one's ability to think well of and positively about oneself and represents one's sense of self-worth (Gecas and Burke 1995; Owens 2003). 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). 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). 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 study, possible selves include educational expectations and aspirations and a measure of whether adolescents believe that they will live until age 35 which taps into whether any possible selves are perceived for the future. Possible selves act as incentives for future behavior and provide a context in which the self and behavior is interpreted and evaluated (Markus and Nurius 1986).

A small body of research has examined race/ethnic differences in the relationship between 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). 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, research has not yet considered the influence of girls' self-concepts on their perceptions leading to pregnancy and how this may vary by both race/ethnicity and class.

Hypotheses

This paper 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. Specifically, two research questions are addressed: 1.) How do girls' self-concepts influence their feelings of ambivalence towards pregnancy? 2.) How does the influence of girls' self-concepts on their feelings towards pregnancy vary by race/ethnicity and class? This study seeks to understand the complexity of girls' feelings towards early pregnancy rather than assuming a dichotomous construct of 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.

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 (e.g., high self-efficacy and mattering) will be less ambivalent, conceptualized as having conflicting or uncertain 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. Also, based on intersectional theory, I predict that the relationship between girls' self-concepts and feelings of ambivalence will be stronger for middle-class, white girls than for other groups of girls.

Data and Methods

Dataset and Sample

I utilize the restricted-use data of Waves I and II 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 and two 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. A third and fourth wave of data was collected in 2001-2002 and in 2008-2009 but, for this analysis, I use only Waves I and II.

In addition to a core sample selected from 132 high and middle schools, several oversamples were drawn including (but not limited to) Black adolescents from well-educated families, Chinese adolescents, Cuban adolescents, and Puerto Rican adolescents (Harris et al., 2009). 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. The Wave II sample was primarily drawn from the pool of participants in Wave I however the majority of 12^{th} grade respondents were removed since they exceeded the grade eligibility requirement. The Wave II in-home interview took place between April 1996 and

August 1996 and was similar to the Wave I administration (there was no parent interview in Wave II). The response rate for Wave I is 78.9 percent and the rate is 88.2 percent for Wave II.

For this study, I focus on adolescents who completed in-home interviews at Waves I, II and III who have valid sampling weights, resulting in a sample size of 10,828 adolescents (Chantala 2006).[1] This study focuses only on adolescent girls and thus 5,092 male adolescents are dropped resulting in a sample of 5,735 adolescent girls. After restricting the sample to girls who had never been pregnant and who were not missing on the dependent or main independent variables, my final sample size for this analysis is 4,901 girls.

Dependent Variable

Ambivalence. Feelings of ambivalence towards pregnancy at Wave II is measured with five statements: "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."; "If you got pregnant you would be forced to grow up too fast."[2] The response choices for each statement range from 1 = strongly agree to 5 = strongly disagree. A scale was created that is composed of the average score for each respondent across the five items. The second question was reverse-coded so that, aligning with the other questions, a low score equals low ambivalence or negative feelings towards pregnancy and a higher score indicates higher ambivalence or more positive feelings towards pregnancy. Principal

[1] As this analysis is part of a larger project which focuses on girls who are interviewed at Waves I, II, and III, I use this universe as my starting point for this paper.

[2] 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 specific consequences of pregnancy rather feelings towards pregnancy.

Components Analysis (PCA) was performed and one underlying factor was identified. The standardized Cronbach Alpha is 0.78.

Independent Variables

Self-Esteem is measured with a scale consisting of four statements taken from Wave I: "You have a lot of good qualities"; "You have a lot to be proud of"; "You feel like you are doing everything just about right"; "You like yourself just the way you are." Response choices range from 1 = strongly agree to 5 = strongly disagree. All items are reverse-coded so that a higher score indicates higher self-esteem. The Cronbach's Alpha is .80 for this scale.

Self-Efficacy is a scale of five items measured at Wave I with a standardized Cronbach's Alpha of .73 including: "When you get what you want, it's usually because you worked hard for it"; "When you have a problem to solve, one the first things you do is to get as many facts about the problem as possible"; "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"; "When making decisions, you generally use a systematic method judging and comparing alternatives"; "After carrying out a solution to a problem, you usually try to analyze what went right and what went wrong." All items are reverse-coded so the scale ranges from 1 = low self-efficacy to 5 = high self-efficacy.

Mattering. Perceived mattering is a scale composed of seven items (Cronbach's Alpha = .75) including: "How much do you feel that adults care about you?"; "How much do you feel that your teachers care about you?"; "How much do you feel your parents care about you?"; "How much do you feel that your friends care about you?"; "How much do you feel that your family pays attention to you?"; "You feel loved and wanted."; and "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 the composite scale ranges from 1= low mattering to 5 = high mattering.

Possible selves is measured with three separate measures. *Educational expectations* are captured with the question, "On a scale from 1 to 5, where 1 is low and 5 is high, how likely is it that you will go to college?" *Educational aspirations* are measured with the item, "On a scale of 1 to 5, where 1 is low and 5 is high, how much do you want to go to college?" The third measure captures the expectation of having any possible selves in the future, *live to age 35*, with the question, "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. A low score on each measure indicates negative possible selves whereas a higher score equals more positive possible selves.

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. Recoded dummy variables were created for Hispanic, Non-Hispanic White, Non-Hispanic Black, and 'other,' Non-Hispanic White is excluded as the reference category.

Social Class is captured by self-reported measures of mothers' education and household income. Both questions were asked of the parent, usually the resident mother, during the in-home parent interview. *Maternal education* is measured with the question, "How far did you go in school?" with response choices ranging from 1 = 8^{th} 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. Missing cases are replaced with adolescents' reports of mothers' education if available. Remaining missing cases were dropped from the analysis. Four dummy variables were created for less than a high school degree, high school graduate, some college, or college graduate or higher. *Household income* is measured 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. Income is split into quadrants with four dummy variables for $23,000 or under, $24,000 - 40,000, $41,000 – 60,000, $61,000 or over. A dummy variable was also created for missing income.

Control Variables

Age of the adolescent 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. *Menarche*, as an indicator of whether a girl has reached puberty, is measured with a dummy variable for 1 = ever menstruated and 0 = never menstruated. A dichotomous variable is used to capture whether the girl is in a current *romantic relationship* (0 = no, 1 = yes). Family structure is measured from the mother's report of her current marital status. A dummy variable is created for residing in a *single-parent household*. *Mother's age at the adolescent's birth* is calculated by subtracting the adolescent's age from the mother's current age (Mother's age at first birth, to capture intergenerational early childbearing, is not available in Add Health).

Analysis Plan

Using OLS regression, I assess 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. I run three stepwise models that include: 1) self-concept measures and controls; 2.) addition of race/ethnicity; 3.) addition of social class (i.e., mothers' education and family income). I also test for two-way interactions between race*self-concept and class*self-concept for possible moderation effects of race and class on the relationship between the self-concept and ambivalence towards pregnancy.[3] To aid in interpreting the interaction effects found in the interactive models, I will compute and plot predicted regression lines of the interactions holding other factors constant. Given the complex, school-based sampling design of Add Health, I use survey procedures in SAS to correct for the unequal probability of selection and ensure unbiased estimates. All analyses are also weighted to adjust for the oversampling of particular subgroups.

Results

Sample Description

Table 1 provides a description of the sample with means and percentages of the girls' ambivalence, race/ethnicity and class, self-concept measures, and controls. The ambivalence measure ranges from 1, indicating low ambivalence or more negative feelings towards pregnancy to 5, indicating high ambivalence or more positive feelings towards pregnancy. 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.

[3] Future research for this study includes testing three-way interactions between race*class*self-concept on ambivalence.

Approximately 70 percent of girls are non-Hispanic White and 13 percent are non-Hispanic Black, 11.4 percent are Hispanic and 7.8 percent are 'other' races. About 15.5 percent of girls have mothers who have less than a high school degree compared to about 33 percent of girls with mothers who are high school graduates, 27.2 percent with some college and 24.2 percent who are college graduates. The family income of girls is divided into quartiles ranging from about 21 percent of girls with a family income of $23,000 or under to about 19 percent of girls with family incomes of $61,000 or over.

Overall, girls' self-concepts average on the high end indicating that girls have relatively strong self-concepts with each measure ranging from 1 (low/weak) to 5 (high/strong). Girls' mean self-esteem is 3.98 and their mean self-efficacy is 3.79. Mattering and the possible selves measures are higher (means from 4.22-4.56) 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 live to age 35.

The average age of the sample is approximately 15 years of age. Most girls have reached puberty (89 percent having menstruated) and one-half (50.3 percent) of girls are in romantic relationships. About 3 percent of girls' mothers gave birth to the respondents under age 18 and about 18 percent of girls' mothers are currently single.

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

Table 2 provides the means of ambivalence and the self-concept measures among girls by race/ethnicity and class subgroups (mother is a college graduate vs. mother is a non-college graduate). Non-Hispanic black girls with mothers who are non-college graduates are more ambivalent or positive towards pregnancy than other groups of girls (2.19 vs. 1.63-2.06). In

contrast, non-Hispanic white girls with college-educated mothers are the least ambivalent or most negative towards pregnancy compared to other girls (1.63 vs. 1.79-2.19).

Non-Hispanic black girls have higher self-esteem and self-efficacy on average than non-Hispanic white and Hispanic girls. Self-esteem and self-efficacy appear to be comparable between high-SES and low-SES girls. Non-Hispanic white girls who have college-educated mothers have the highest perceived mattering compared to other groups of girls. Larger class differences are evident for the possible selves measures than the above self-concept measures with high-SES girls having higher or more positive possible selves than low-SES girls. Within mothers' education categories, non-Hispanic black girls have equal or higher educational possible selves (want to go to college and likely will go to college) than non-Hispanic white girls with Hispanic girls having the lowest possible selves. In contrast, Non-Hispanic black girls, particularly those with mothers who are non-college graduates, are the least likely to feel that they will live to age 35.

Do Girls' Self-Concepts Influence Ambivalence towards Pregnancy?

Figure 1 depicts the bivariate relationship between the self-concept measured at Wave I and feelings of ambivalence towards pregnancy measured at Wave II. It is evident that girls' self-concepts are negatively related 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 seems to have the weakest influence on ambivalence as indicated by the less steep slope in the figure.

Table 3 provides OLS regressions of ambivalence towards pregnancy by race/ethnicity and class, the self-concept, and control variables. Model 1 includes the effect of the self-concept on ambivalence while controlling for the age of the adolescent, whether the respondent's mother was under age 18 at the time of birth, whether the adolescent has never menstruated, the mothers' current marital status, and whether the adolescent is in a current romantic relationship. Model 2 adds race/ethnicity and Model 3 adds social class (i.e. mothers' education and family income) and is the full model.

Across the first three models, self-esteem is not significantly related to feelings of ambivalence towards pregnancy. 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. 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 compared to girls with lower self-efficacy and mattering and who feel that they do not want to or are less likely to go to college. The possible selves measure of likely will live to age 35 is protective against feelings of ambivalence towards pregnancy in the Model 1 but loses significance once race/ethnicity is added to the model.

In Model 2, non-Hispanic Black and Hispanic girls are more likely to be ambivalent or more positive towards pregnancy than non-Hispanic white girls. However, the significance for Hispanic girls disappears once mothers' education and family income is added in Model 3. In Model 3, high-SES girls (i.e., mothers with more education and higher family income) are significantly less likely to have ambivalent or positive feelings towards pregnancy than low-SES girls (i.e., mothers have less than a high school degree and a family income of $23,000 or under).

In terms of control variables, the age of the adolescent is significantly positively related to ambivalence in that girls who are older feel more ambivalent or positive towards becoming pregnant than younger girls. Also, girls with mothers who were under age 18 at their birth are more likely to feel ambivalent or positive about becoming pregnant. Lastly, girls with single mothers are more likely to feel ambivalent or positive about pregnancy in Models 1 and 2 but this loses significance once social class is included in Model 3.

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

Model 4 tests for interaction effects between race and self on feelings of ambivalence towards becoming pregnant to determine whether race is a moderator in the relationship between the self-concept and ambivalence. An interaction effect between non-Hispanic Black*likely will go to college approaches significance in Model 4. This finding suggests that the effect of educational expectations on ambivalence towards pregnancy differs for non-Hispanic 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 2. In Figure 2, for non-Hispanic white girls, educational expectations are protective against ambivalent or positive feelings towards pregnancy whereas, for non-Hispanic black girls, ambivalence is only slightly affected at different values of likely will go to college and even increases slightly as values of likely will go to college increase. This moderating effect of race on the relationship between the self and ambivalence is confirmed by separate OLS regressions for non-Hispanic black and white girls which resulted in a strong negative effect of likely will go to college on ambivalence for white girls and non-significant positive relationship for black girls (results not shown).

Model 5 tests for interaction effects between mothers' education (college graduate vs. non-college graduate) and the self-concept measures on feelings of ambivalence towards pregnancy to determine whether mothers' education (as an indicator for social class) moderates the relationship between the self-concept and ambivalence. An interaction effect between college-graduate mother*want to go to college approaches significance in Model 5. This finding suggests that the effect of educational aspirations on feelings of ambivalence toward becoming pregnant differs for high-SES girls (their mothers are college graduates) and low-SES girls (their mothers are not college graduates).

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 3. In Figure 3, for girls who have mothers who are college graduates, 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 girls who have mothers who are non-college graduates. The moderating effect of mothers' education, as an indicator of social class, on the relationship between the self and ambivalence is confirmed by separate OLS regressions for girls whose mothers are college graduates and girls whose mothers are non-college graduates which resulted in a strong negative effect for want to go to college on ambivalence for girls with college graduate mothers and a non-significant negative relationship for girls with non-college graduate mothers (results not shown).

Discussion and Conclusion

In sum, most components of self-concept were protective against girls' feelings of ambivalence towards pregnancy. Self-efficacy and educational possible selves had the strongest

impact on feelings towards pregnancy. Mattering was also significantly related to ambivalence whereas self-esteem and likely will live to age 35 were not significant in the full model. Also, it seems that the effect of educational possible selves, including aspirations and expectations for a college education, are conditional on race, ethnicity, and class. Educational expectations seem to matter less for non-Hispanic Blacks than for non-Hispanic whites' feelings towards pregnancy. Also, educational aspirations seem to be less protective for girls with non-college graduate mothers than for girls with college graduate mothers.

There are several possible reasons why race and class moderates the relationship between girls' educational possible selves and feelings of ambivalence towards pregnancy. For example, research indicates that 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. 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.

Whereas some studies have assumed that the self-concept, particularly educational expectations and aspirations, are protective for all adolescents against early childbearing, the self is protective but not for all girls. Some contingencies are evident in the pathways leading to adolescent pregnancy. This paper highlights this complexity and begins to disentangle the paradox between races, selves, and pregnancy in the adolescent pregnancy literature.

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Table 1. Descriptive Statistics of Ambivalence, Race/Ethnicity, Class, Self-Concept, and Controls among Adolescent Girls (N = 4,901)

Dependent Variable		
Ambivalence (1=low, 5=high)	1.89	(.02)
Independent Variables		
Race/Ethnicity:		
Non-Hispanic White	67.8%	
Non-Hispanic Black	13.0%	
Hispanic	11.4%	
Other	7.8%	
Mothers' Education:		
Less than High School Degree	15.54%	
High School Degree	33.03%	
Some College	27.23%	
College Graduate or Higher	24.21%	
Family Income:		
$23,000 or Under	20.57%	
$24,000 - 40,000	21.52%	
$41,000 - 60,000	19.99%	
$61,000 or Over	18.70%	
Missing	19.21%	
Self-Concept (1=low, 5=high):		
Self-Esteem	3.98	(.02)
Self-Efficacy	3.79	(.01)
Mattering	4.22	(.01)
Possible Selves:		
Want to go to College	4.56	(.02)
Likely will go to College	4.32	(.03)
Likely will live to age 35	4.45	(.02)
Controls		
Age of Adolescent	14.85	(.11)
Mothers' Age at Respondent's Birth:		
Under 18	3.37%	
18 or Over	96.63%	
Ever Menstruated:		
Yes	88.91%	
No	11.09%	
Mothers' Marital Status:		
Single	18.08%	
Married	81.92%	
Adolescent in Romantic Relationship:		
Yes	50.26%	
No	49.74%	

Means and percentages are weighted. Standard errors in parentheses.

Table 2. Ambivalence and Self-Concept by Race/Ethnicity and Class among Adolescent Girls (N = 4,901)

	Mother is College Graduate			Mother is Non-College Graduate		
	NH White	NH Black	Hispanic	NH White	NH Black	Hispanic
N	748	275	77	1936	649	654
(1=low, 5=high)						
Ambivalence	1.63	1.83	1.79	1.91	2.19	2.06
	(.03)	(.10)	(.10)	(.03)	(.06)	(.06)
Self-Esteem	4.03	4.14	3.93	3.94	4.14	3.94
	(.03)	(.07)	(.09)	(.02)	(.03)	(.04)
Self-Efficacy	3.78	3.86	3.75	3.77	3.89	3.79
	(.03)	(.06)	(.12)	(.02)	(.02)	(.04)
Mattering	4.31	4.23	4.21	4.21	4.19	4.18
	(.02)	(.04)	(.06)	(.02)	(.03)	(.04)
Want to go to College	4.83	4.84	4.58	4.47	4.51	4.40
	(.02)	(.06)	(.11)	(.03)	(.05)	(.05)
Likely will go to College	4.80	4.73	4.55	4.20	4.23	3.94
	(.03)	(.06)	(.11)	(.03)	(.07)	(.08)
Likely will live to age 35	4.66	4.36	4.66	4.51	4.11	4.23
	(.03)	(.08)	(.09)	(.02)	(.05)	(.09)

Means are weighted. Standard errors in parentheses.

Table 3. OLS Regressions of Ambivalence by Race/Ethnicity, Class, Self-Concept, and Controls among Adolescent Girls (N = 4,901)

	(1)		(2)		(3)		(4)		(5)	
Independent Variables										
Self-Concept (1=low, 5=high):										
Self-Esteem	0.04	(.03)	0.02	(.03)	0.03	(.03)	0.02	(.03)	0.04	(.03)
Self-Esteem*Black							0.04	(.10)		
Self-Esteem*Hispanic							0.10	(.07)		
Self-Esteem*Other							-0.12	(.09)		
Self-Esteem*Mother CollGrad									-0.07	(.06)
Self-Efficacy	-0.11	(.03) ***	-0.11	(.03) ***	-0.13	(.03) ***	-0.10	(.04) **	-0.13	(.04) ***
Self-Efficacy*Black							-0.07	(.10)		
Self-Efficacy*Hispanic							-0.13	(.10)		
Self-Efficacy*Other							0.02	(.10)		
Self-Efficacy*Mother CollGrad									0.02	(.06)
Mattering	-0.09	(.04) *	-0.08	(.03) *	-0.08	(.03) *	-0.10	(.04) *	-0.06	(.04)
Mattering*Black							0.01	(.12)		
Mattering*Hispanic							0.01	(.10)		
Mattering*Other							0.27	(.12) *		
Mattering*Mother CollGrad									-0.07	(.08)
Possible Selves:										
Want to go to College	-0.06	(.02) **	-0.06	(.02) **	-0.07	(.02) **	-0.05	(.03)	-0.05	(.03) *
Want College*Black							-0.08	(.08)		
Want College*Hispanic							-0.04	(.06)		
Want College*Other							-0.07	(.09)		
Want College*Mother CollGrad									-0.15	(.08) †
Likely will go to College	-0.12	(.02) ***	-0.11	(.02) ***	-0.08	(.02) ***	-0.10	(.03) **	-0.10	(.02) ***
Likely College*Black							0.10	(.06) †		
Likely College*Hispanic							-0.01	(.06)		
Likely College*Other							0.05	(.08)		
Likely College*Mother CollGrad									0.06	(.07)
Likely will live to age 35	-0.05	(.02) *	-0.03	(.02)	-0.02	(.02)	-0.04	(.03)	-0.03	(.02)
Likely Live*Black							0.04	(.05)		
Likely Live*Hispanic							0.05	(.06)		
Likely Live*Other							0.01	(.05)		
Likely Live*Mother Collgrad									0.01	(.04)
Race/Ethnicity (NH White Omitted):										
Non-Hispanic Black			0.26	(.06) ***	0.21	(.06) ***	0.07	(.60)	0.22	(.06) ***
Hispanic			0.12	(.06) *	0.05	(.06)	0.04	(.54)	0.07	(.06)
Other			-0.10	(.05) *	-0.12	(.05) *	-0.79	(.52)	-0.11	(.05) *
Mothers' Education (Less than High School Omitted):										
High School Degree					-0.07	(.05)				
Some College					-0.14	(.05) **				
College Graduate or Higher					-0.24	(.05) ***	-0.15	(.03) ***	0.72	(.41) †
Family Income ($23,000 or Under Omitted):										
$24,000 - 40,000					-0.03	(.05)	-0.05	(.05)	-0.05	(.05)
$41,000 - 60,000					-0.11	(.05) *	-0.13	(.05) *	-0.13	(.05) *
$61,000 or Over					-0.16	(.05) **	-0.18	(.05) ***	-0.18	(.05) ***
Missing					-0.05	(.05)	-0.06	(.05)	-0.06	(.05)
Controls										
Age of Adolescent	0.03	(.01) *	0.03	(.01) *	0.03	(.01) *	0.03	(.01) *	0.03	(.01) *
Mothers' Age at Respondent's Birth Under 18	0.32	(.09) ***	0.29	(.09) **	0.25	(.09) **	0.26	(.09) **	0.25	(.09) **
Never Menstruated	0.05	(.06)	0.05	(.06)	0.05	(.06)	0.05	(.06)	0.05	(.06)
Mothers' Marital Status - Single	0.11	(.04) **	0.09	(.04) *	0.05	(.04)	0.04	(.04)	0.04	(.04)
Adolescent in Romantic Relationship	0.00	(.03)	0.02	(.03)	0.03	(.03)	0.03	(.03)	0.03	(.03)
Intercept	3.07	(.25) ***	3.02	(.26) ***	3.11	(.25) ***	3.14	(.28) ***	2.89	(.24) ***

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

Figure 1. Ambivalence by Self-Concept Measures among Adolescent Girls (N = 4,901)

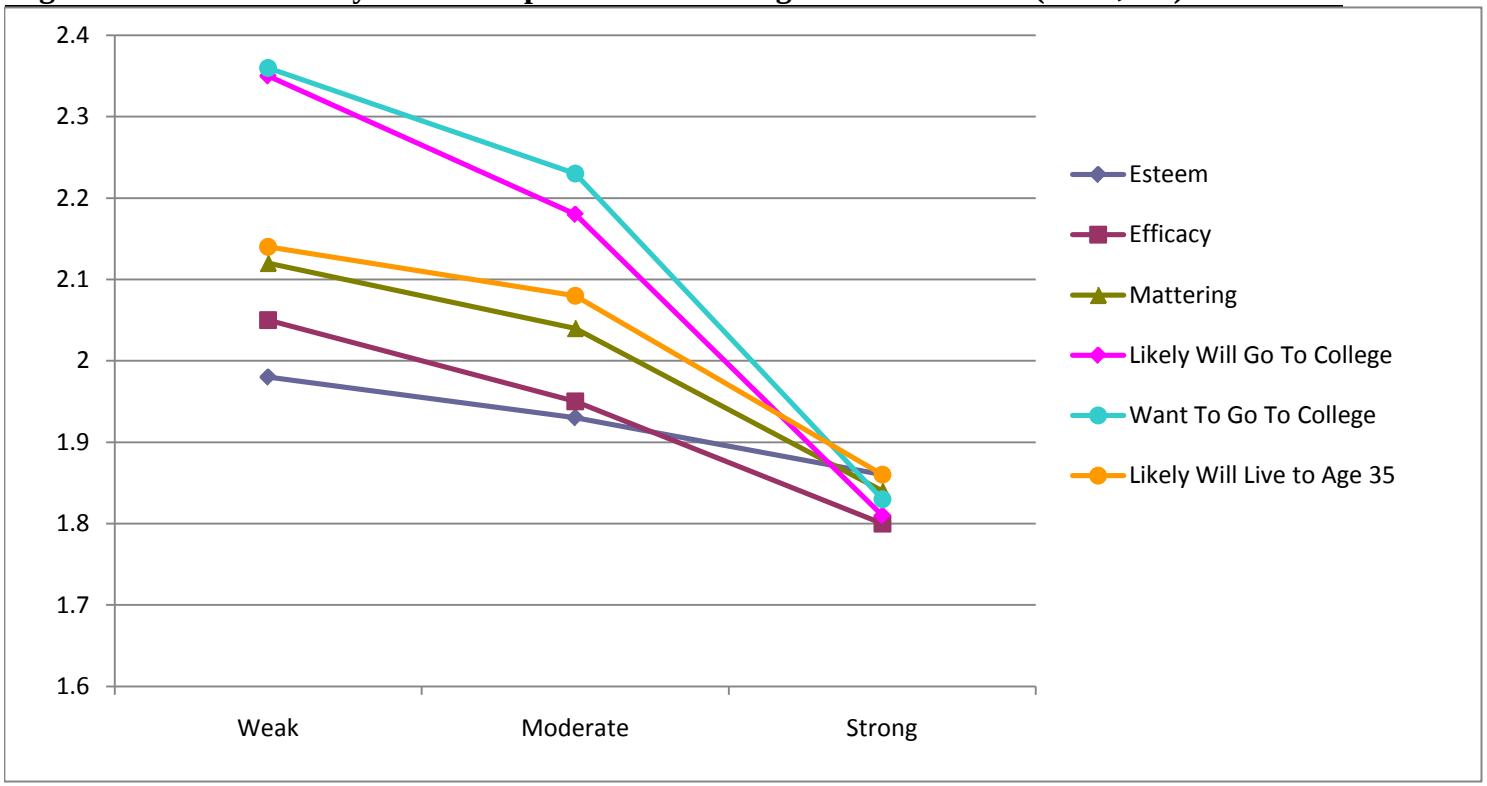

Figure 2. Ambivalence by Likely will go to College among Non-Hispanic White and Black Adolescent Girls (N = 4,901)

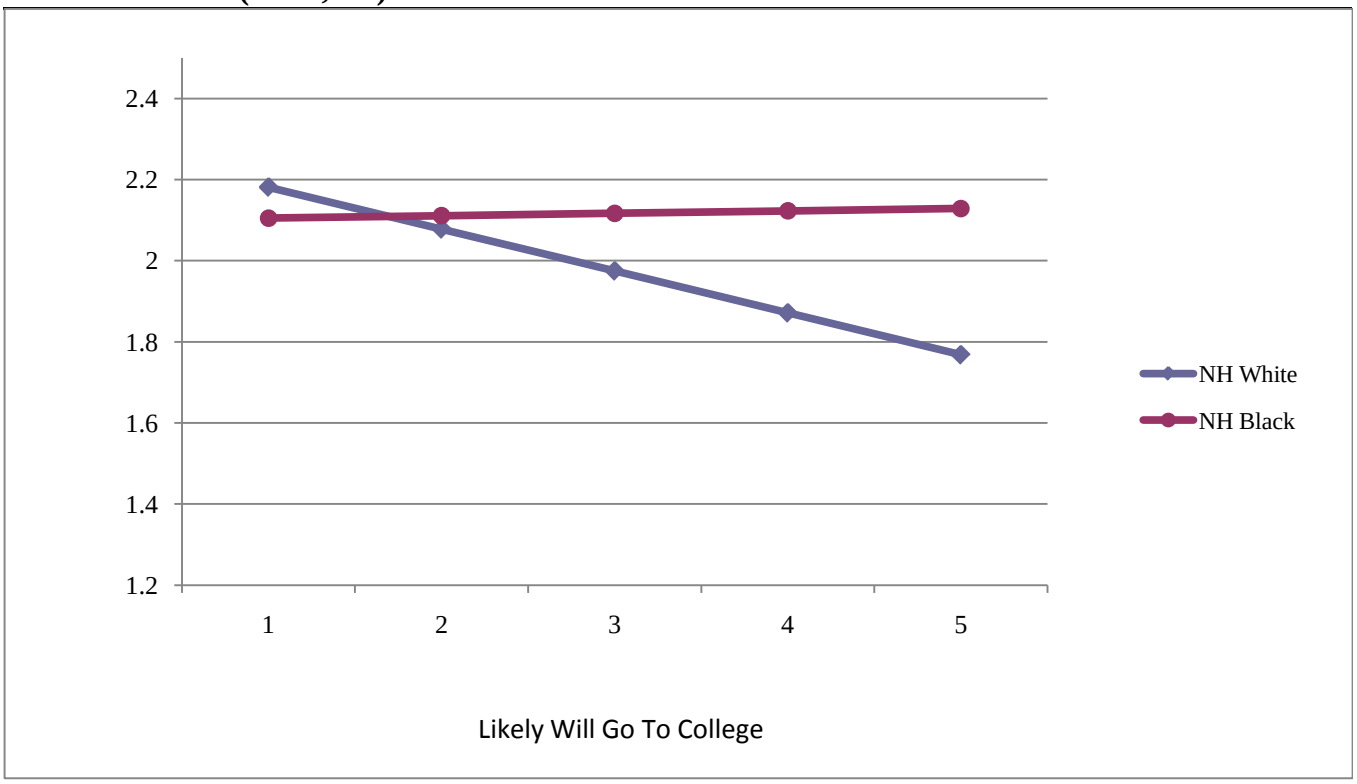

Figure 3. Ambivalence by Want to go to College and Mothers' Education among Adolescent Girls (N = 4,901)