Student Loans, College Attendance and Completion, and Family Formation

Arielle Kuperberg
University of North Carolina at Greensboro
atkuperb@uncg.edu
@ATKuperberg

Joan Maya Mazelis
Rutgers University-Camden
mazelis@camden.rutgers.edu
@JoanieMazelis

June 18, 2018

ABSTRACT

Student loans are increasingly common among young adults, but implications for family formation patterns and childbearing circumstances have not been fully explored. We analyze the National Longitudinal Survey of Youth 1997 Cohort dataset to examine the relationships of student loans and college attendance and completion to family formation patterns, specifically marriage, parenthood, age at marriage, and age and marital status at first birth. Data examined were collected between 1997 and 2015, and we examine respondents ranging in age from 17-35 during those years, allowing for the consideration of effects across the life course. We find women who had children at early ages were more likely to take out loans to attend college, but at older ages loans were associated with lower parenthood rates among women. Women with loans had marginally lower marriage rates at older ages, were significantly younger on average when they did have children, and were significantly less likely to be married at first birth, even after accounting for differences in age at first birth and selection effects. Loans were not associated with differences in these trends among men, but education was related to distinct family formation trajectories for both men and women.

KEYWORDS

Student Loans, Marriage, Parenthood, Nonmarital Parenthood, Higher Education

The authors thank Joseph Barker, Cassandra Patterson, Stephanie Pruitt, Allison M. Chandler, Mariyam Salley and Anastasia Shymanovich for their research assistance on this project. Earlier versions of this paper were presented at the 2016 Work and Family Researchers Network Conference, Washington D.C., and the 2017 American Sociological Association Conference, Montreal, Canada.

INTRODUCTION

The cost of college tuition has increased substantially in recent decades. As governmental support for public higher educational institutions has not kept pace with rising enrollments and increasing costs, tuition has risen, and students have taken on more debt to cover the cost of obtaining their degrees, with the average student graduating college in 2016 carrying over \$37,000 in student loan debt (Goldrick-Rab 2016; Hout 2009; Mitchell 2016). Rising tuition costs are out of reach for many (Napolitano et al. 2014), and most college students now rely on loans to fund their education, hoping to increase their future earnings enough to pay off their debt; in 2014, 69% of college graduates from public or private non-profit universities used loans to fund their education (Institute for College Access & Success 2015). Yet, completion of a college degree does not always yield mobility, with those who come from families lower in the socioeconomic hierarchy continuing to struggle (Witteveen and Attewell 2017). Loans can further hinder mobility, as those who come from lower socioeconomic backgrounds rely more on loans to attend and sometimes complete college (Witteveen & Attewell, 2017), with later debt payments restricting disposable income compared to those who have the family resources to attend college without taking out loans.

After graduation, student loan debt has been shown to keep graduates from pursuing post-baccalaureate education and homeownership; debt also hinders savings, wealth levels, and investments, and increases the chance of declaring bankruptcy (Gicheva and Thompson 2015; Grayson et al. 2012; Luong 2010; Millett 2003; Moore et al. 2006; National Association of Realtors Research Division 2017; Stucky 2014). Recent research has suggested loans may also influence family formation patterns. Although those with higher education generally marry at higher rates (England and Bearak 2012; Harknett and Kuperberg 2011), research finds that student loans can lead to significant delays in, and/or overall lower rates of, marriage and childbearing (Addo 2014; Gicheva 2016; Nau et al. 2015; Reeder and Kahn 2012), suggesting that the educational and resulting economic gains that loans enable may be offset by costs in family formation. However, existing research is limited in scope, focusing on limited populations or age ranges (Addo 2014; Gicheva 2016; Reeder and Kahn 2012), or using methods that may obscure differential relationships between family formation rates and student loans across the life course (Nau et al. 2015).

We expand upon prior literature by examining the relationships of student loans and college attendance and completion to marriage rates, age at marriage, and parenthood rates across young adulthood (ages 17-35) in a large nationally representative sample, the National Longitudinal Survey of Youth 1997 cohort, representing young adults born between 1980 and 1984 in the United States. We also add to this literature by examining the circumstances in which children are born, including parents' age and marital status at first birth, areas unexplored by prior research.

Student Loans, Education, and the Transition to Adulthood

After graduation, those with loans are delayed in achieving goals that are socially defined as markers of 'adulthood,' including marriage, childbearing, and financial independence (Furstenberg 2010; Furstenberg et al. 2004; Shanahan 2000). Young people used to achieve these goals earlier, and they continue to be widely shared goals among young adults (Cherlin 2004; Kefalas et al. 2011). Increases in financial instability in young adulthood over the past several decades has led to the widespread delay in achieving these goals, especially for those financially struggling and those with fewer opportunities to improve their economic position (Draut 2006; Furstenberg et al. 2004; Harknett and Kuperberg 2011).

Past research has indicated a delay in the transition to adulthood among young adults with loans, but this research is often limited in scope or age-range, or uses problematic methods. This research found young adults with student loan debt have lower rates of marriage and are less likely to have children by their late 20s or early 30s (Addo 2014; Bozick and Estacion 2014; Gicheva 2016; Nau et al. 2015; Reeder and Kahn 2012). One paper found that among MBA graduates, student loan debt led to a significant delay in marriage (Gicheva 2016). Another found that the relationship between student loan debt and marriage may be overstated, and only hold true for women (Bozick and Estacion 2014). One unpublished conference paper examined whether young adults had transitioned into parenthood by 2009, when respondents were age 24-30, finding those with loans were significantly less likely to be parents in that limited age range (Reeder and Kahn 2012). Another study examined time to birth after age 16, finding loans significantly delayed time to first birth (Nau et al. 2015). However, this study relied on methods that aggregated the effect of loans across all ages, potentially obscuring trends related to childbearing if relationships to loans vary by age.

Complicating the study of student loans' relationship to family formation is the fact that the higher rate at which young adults attend college in recent decades—enabled by student loans—is in part responsible for the delay in the transition to adulthood (Furstenberg et al. 2004). College graduates tend to marry later, although they are ultimately more likely to marry compared to those who do not graduate college (England and Bearak 2012; Harknett and Kuperberg 2011), one of the usual markers of the transition to adulthood (Furstenberg et al. 2004). College graduates also become parents at later ages, have fewer children, and are more likely to be childless than those with lower levels of education (Baudin et al. 2015; Kuperberg 2009). Although loans enable education, which improves financial standing generally, financial insecurity and instability circumscribe young adults' options. Therefore, to the extent that student loan debt represents a substantial share of young adults' financial obligations, student loans can affect marriage, entrance into parenthood, and childbearing circumstances. Loans may in some cases counter effects related to education (such as in the case of higher marriage rates among the more highly educated) or reinforce effects (such in the case of later childbearing and marriage among the more highly educated).

Financial Stability and Family Formation

Student loan debt can be associated with decreased financial stability compared to those with similar levels of education (Gicheva and Thompson 2015), leading to marriage delays and perhaps therefore higher rates of nonmarital childbearing for those with student loan debt. For many, financial stability is a prerequisite for marriage (Clarkberg 1999; Gibson-Davis et al. 2005; Smock et al. 2005); this may be particularly true for African Americans, who have delayed marriage rates more generally (Oppenheimer et al. 1997; South 1991). Most who marry in the United States now cohabit first, and studies of cohabitators have found many believe they must achieve financial security before marrying, awaiting more stable employment, higher earnings, and pay down debt before entering marriage (Oppenheimer 2003; Smock et al. 2005).

Research on the link between financial stability and marriage has found those with higher incomes and better local job prospects are more likely to marry (Harknett and Kuperberg 2011; Nakosteen and Zimmer 1997). Men, whether cohabiting or not, are more likely to marry if they have good economic positions or prospects; this is especially true for African American men (Harknett and Kuperberg 2011; Oppenheimer 2003). Research on African Americans found women are also more likely to marry when men face lower local unemployment and

underemployment rates (Harknett and McLanahan 2004). The longer men are delayed in career development, the longer marriages are delayed (Oppenheimer et al. 1997). These delays are not necessarily detrimental if childbearing is also delayed; those who marry at younger ages are more likely to divorce (Fuller et al. 2015; Kuperberg 2014; Lehrer 2008). But delays in family formation can also diminish social capital, because marriage and childbearing tend to increase bonding social capital—resources people can access through connections to strong social ties (Briggs 1998; Mazelis 2017; Putnam 2000)—by providing spouses access to each other’s social and financial networks (Mazelis and Mykyta 2011) and by allowing new parents to connect with others who are in similar situations (Small 2009).

While loans may lead some to delay parenthood while also delaying marriage, many people do not postpone having children while they wait to achieve hoped-for financial goals before marriage (Edin and Kefalas 2005), leading to a greater incidence of nonmarital childbearing among those with lower rates of financial stability, potentially including those with student loans. Others may delay childbearing as a result of their lower disposable income due to loan payments, that leaves less money for child raising expenses. These rates may also differ by whether or not young adults have completed college; highly educated women benefit the most economically from delaying parenthood (Sonfield et al. 2013).

The social and economic benefits of being born into a married family are well-documented (Brown 2004; Carlson and Corcoran 2001; Manning and Lamb 2003). Children born into married families experience a wide array of economic and social benefits (Brown 2004; Carlson and Corcoran 2001; Manning and Lamb 2003). Children born to married parents spend about 90% of their childhood above the poverty line, while those born to unmarried parents spend only about 60% of their childhood above the poverty line (Kearney and Levine 2017). This is partly due to selection into unmarried childbearing among those with lesser financial means; at birth, the household income of married parents is around twice as large as that of unmarried parents, despite many of those parents cohabiting (Kearney and Levine 2017). Nonmarital childbearing also has implications for parental well-being, such as educational achievement (Hofferth et al. 2001), social support networks (Mazelis 2017; Mazelis and Mykyta 2011), and earnings (Wilde et al. 2010). These benefits may partly result from selection into pre-childbearing marriage by those who are more financially stable to begin with. Yet the “promise of permanence” and “enforceable trust” (the added trust that is a result of outside institutions

such as the court system) that marriage enables can also allow married couples to engage in behaviors that may be individually detrimental but increase the financial stability and well-being of a family as a whole, such as moving for a partner's job opportunity (Cherlin 2000, 2004; Waite and Gallagher 2000).

Student loans may also be related to age at childbearing if childbearing is delayed due to loan payments. Alternatively, while related to lower ultimate education levels, early childbearing may also increase the likelihood that young adults take out student loans to fund their college education, if they do attend college, for multiple reasons. These reasons include: selection into early childbearing among those with lesser financial means; delays in education as a result of childbearing, which can reduce the willingness of parents (now grandparents) to aid in paying for college; and a general reduced willingness of parents to help pay tuition as a result of the perceived role status change of their adult children, now parents themselves. The costs of childcare while students attend college is an added expense that may also increase the necessity of taking out student loans.

Age at childbearing is also related to later child and parent outcomes. Children born to older mothers are more likely to eventually obtain a high school and college degree, and less likely to live in poverty (Kearney and Levine 2017). Those who have children at younger ages on average have fewer economic resources at childbirth because they have fewer years to obtain education and work experience before giving birth, and also face a larger penalty in ultimate earnings as a result of childbearing. Women who delay childbearing until the late 20s or 30s can mitigate the degree to which childbearing reduces earnings (Sonfield et al. 2013). Children of older mothers tend to do better in school and have lower risks of substance abuse, mental health problems, and juvenile crime, though outcomes are related to childhood environment more than directly to age (Fergusson and Woodward 1999).

Various other factors beyond financial stability affect marriage, entrance into parenthood, and childbearing circumstances; these factors may have competing effects. For example, individuals tend to marry at younger ages if they do not have formal education beyond high school, and if their parents have low formal educational achievement; parents education is also related to the likelihood of taking out loans (Axinn and Thornton 1992; Fuller et al. 2015; MacInnes 2011; Uecker and Stokes 2008). Yet these educational levels may correlate with poor economic prospects that in turn reduce ultimate marriage rates at older ages. Women marry and

have children at younger ages than do men (MacInnes 2011; Martinez et al. 2012). There are variations by race and ethnicity in age at marriage, with Latinos most likely to marry at younger ages, followed by whites, Asian Americans, and African Americans (Cheng and Landale 2011; Fuller et al. 2015; Glick et al. 2006; Teachman et al. 1987; Teachman et al. 2000; Uecker and Stokes 2008). We account for race, gender, and parents' education in our models to account for these selection effects, and we also run models separately by gender.

DATA AND METHOD

We analyze all available data from the National Longitudinal Survey of Youth (NLSY), 1997 cohort, including data collected every year from 1997 to 2011, 2013, and 2015. The respondents were born between 1980 and 1984, and were ages 12-17 during the first wave of data collection in 1997 and ages 30-35 during the last wave of data collection in 2015. We examine marriage and parenthood rates at ages 17-35, although results are inclusive of marriages and childbearing that occurred at earlier ages. Our sample includes 8,954 respondents who completed information about education and student loan status. Data are nationally representative of young adults born between 1980 and 1984 in the United States. Results for childbearing and marriage that are presented separately by age are inclusive of those respondents who reached that age before the last wave of survey data collection in 2015; therefore results for respondents aged 32-35 have a smaller N than results for respondents at younger ages (Age 32 N=7,188; Age 33 N=5,389; Age 34 N=3,552; Age 35 N=1,686).

Our key variable is a joint measure of completed education by 2015 and student loan status. We found that alternative methods of analyzing student loan data in which student loan debt is analyzed as a variable separate from education obscured some findings derived using this joint measure because the impact of loans varied by education level; using interaction terms produced similar results but complicated interpretations (results not shown, available from authors). We calculated student loan status from a series of variables asked each year at every wave of data collection, in which respondents were asked about the total amount of "government / other loans" received at each college they attended in the past year, along with a variable collected at age 25 that asked about total amount of loans. Respondents who answered any of these variables with values over 0 were coded as having student loans. Education variables were derived from a measure of completed education in 2015, along with our examination of variables from each wave asking whether respondents attended college during any month in the preceding

year. Students who attended some college but did not complete a bachelor's degree or who completed an associate's or technical degree were coded as having 'some college.' We next combined these two variables to create a series of five dichotomous variables; college graduates who took out student loans; college graduates who did not take out loans; those with some college who took out loans; those with some college who did not take out loans; and those who never attended college or took out student loans.

Our outcome variables include whether or not the respondent had any children by age (referred to as "parenthood"), marriage rates by age, age at first marriage, age at birth of first child, and whether age at first marriage exceeded age at first birth. We also run a second set of models predicting rates of parenthood, age at first birth, and marital status at first birth that are restricted to those who did not have children by the age of 22. This allowed us to further examine entrance into parenthood and childbearing circumstances among the more restricted sample of those who delayed entrance into parenthood beyond the traditional age at which young adults complete their college education. We use age 22 as the cutoff rather than age at college completion because early entrance can delay education completion. Marriage rates measured whether respondent was ever married, but did not account for later divorces, separations, or widowhood. Ages at first marriage and first child's birth were only calculated for respondents who married or had a child by 2015. Whether or not respondents were married or had a child at each age was calculated based on a variable updated each year that asked about age at first childbirth and age at first marriage. We used these variables and variables on marital status to calculate whether respondent's first marriage preceded the age at first birth or occurred during the same year as first birth, versus occurred after first birth or respondent was never married. This measure did not account for separations, divorces, or partner deaths that may have occurred between marriage and childbearing for respondents whose marriage preceded first child's birth, but only whether respondent was ever married during or prior to the year in which they first had a child.

Control variables in combined-gender models included gender, race, parents' education, and birth year. We also ran models separately by gender. Race was divided into White (reference), Black, Latino/a and Other Race, and gender into men (reference) and women. Parents' education was based on responses to questions about biological mother's and father's highest degrees, with responses divided into less than high school; high school degree or GED;

some college, technical or associate's degree; 4-year college degree (reference); and graduate degree. Variables for both mother's and father's education were included; we also included a dummy variable for "Missing mother's education" and "Missing father's education" in order to retain in our sample the 2,077 respondents missing information on one or both of these variables.

We found in preliminary analysis that our results related to parenthood and marriage by age violated the assumption of proportional hazards, therefore it was not appropriate to use Cox Proportional Hazard Models to predict our results (Blossfeld et al. 2007). Instead we used a series of logistic and OLS regressions predicting ever married and parenthood by age. We also used OLS regressions to predict age at first child's birth among those who have children, and age at marriage among those who are married, while logistic regressions were used to predict marriage, parenthood, and whether respondents were married before having their first child. We predicted outcome variables described above using our five-category variable that combines information on education and student loans, in which the omitted reference category is college graduates with loans, with the four other categories compared to that group. Then we used the postestimation command "pwcompare" in Stata to test for significant differences between those who completed some college with loans and those who completed some college without loans, or did not attend college. Results presented are regression-adjusted predicted means for each of the five categories, generated in Stata using the postestimation command "margins." These predicted results are adjusted to account for differences due to the control variables in the model: mother's and father's education, race, birth year, and gender in combined-gender models. In line with NLSY website instructions, we do not weight regression results because this would result in artificially inflated significance levels.

RESULTS

Table 1 presents descriptive statistics related to the loan status, education status, and our combined variable that divides respondents into five pathways, as well as control variables included in models. These results are not weighted and so not representative of these general rates in the United States, but rather, describe our sample. A total of 37.7% of our respondents had taken out loans, about evenly split between 19.3% of the total sample who had taken out loans and completed some college, and 18.4% who took out loans and completed a bachelor's degree. 36.6% of respondents had never taken out loans or attended college, leaving 17.8% who

completed some college without loans, and only 7.9% who had completed a college degree without loans.

Parenthood and Marriage by Age

In Tables 2 and 3 we present the predicted probabilities of parenthood by age and student loan / education category, with results for women presented in Table 2 and results for men in Table 3. Figure 1 presents results for a combined model in which both women's and men's results are combined, with a control variable for gender. The combined model (full results available from authors) found no differences between those with some college with and without loans in terms of timing of parenthood, but did find significant differences for college graduates with and without loans. At ages 19 and 21-24, graduates with loans were significantly *more* likely than those without loans to have a child, but at ages 32-34 they were significantly *less* likely to have any children compared to graduates without loans. Results calculated separately by gender reveal that this result is primarily driven by women; women who eventually graduate college with loans are significantly more likely to be parents than women who graduate college without loans at ages 19-23, and marginally more likely to be parents at age 24. However, at ages 33-34, women who graduated college with loans were significantly less likely to have any children than those who graduated without loans, and at age 35 they were marginally less likely to have them.

For those who ultimately obtained some college but not a degree, women with loans similarly had a significantly higher rate of parenthood compared to women who obtained some college without loans at ages 20-23, but this gap disappeared at older ages. Those with some college and loans were significantly less likely to have children than women with no college attendance until women are in their 30s, at which point the gap among the less educated narrowed. At all ages, women without bachelor's degrees are more likely to be parents than women who ultimately obtain college degrees.

Among men, loans do not make a difference in the probability of parenthood for those who have comparable levels of education. Indeed, for men age 33 and above, even education does not affect parenthood rates, although education is associated with ultimate parenthood rate among women at all ages. At ages 31 and below, education patterns among men follow similar patterns to those among women; those who ultimately obtain bachelor's degrees were less likely

to become parents compared to those who have some college, who in turn are less likely to become parents compared to those who never attend college.

Results indicate that for women who both do and do not graduate college, loans are associated with a higher probability of parenthood at young ages, indicative of selection into student loans among those with children. To examine how loans are related to post-graduate parenthood rates, in Tables 4 and 5 and Figure 3 we present the probability of having children by age, but limit results to those who are childless at age 22. Results indicate that for women the gap in parenthood rates among college graduates by loan status becomes larger when restricting the sample to those who did not have a child before the traditional age of college graduation. For instance, at age 32, graduates with loans who did not have a child at 22 have a parenthood rate that is 8 percentage points below that of graduates without loans, a significant difference, but in the entire sample this gap is 5.2 percentage points, and is not significant. At age 34 this gap is significant for both the entire sample and the restricted sample of those who did not have children early, but is 14.4 percentage points among those who do not have a child by age 22, while in the sample as a whole it is 11.2 percentage points. By age 32, among women who did not have kids by age 22, those who graduated college without loans were most likely to have children compared to every other education / loan group, while differences between college graduates without loans and those with some college or no college converge.

Among men, few differences emerge among those with and without loans who did not have children by age 22, except that at age 24 among college graduates, men with loans were significantly more likely to be parents than those without loans. Although in their mid-20s, men who delayed parenthood until at least age 23 were more likely to become parents if they had less education, by their early 30s all gaps by education disappeared, and at ages 33 and 34, men with a college education were more likely to be parents than men who did not attend college.

Figure 4 presents results related to marriage rates by age for both men and women. Findings indicate that college graduates without loans have marginally higher marriage rates than college graduates with loans at older ages (29 and 33-34, $p < .10$). Similar to results regarding parenthood, results calculated separately by gender (not shown, available from authors) find that this effect is only present among women but not men, and even among women this difference never obtains full significance, only reaching a $p < .10$ level at ages 30 and 32-34. Among those who never graduate college, significant differences in marriage rates emerge by student loan

status, but only at ages 19, 21, and 33; these differences are in the opposite direction of loan differences among graduates: that is, those with some college and loans were *more* likely than those with some college and no loans to have ever been married at these ages.

Age at Marriage and Childbearing Circumstances

Results related to age at first birth and at first marriage are presented in Table 4, inclusive of those who had children or ever married by 2015, respectively. We also examine age at first child among those whose first child was born when they were 23 or older. Next, we examine whether first marriage preceded or occurred at the same age at which young adults married, or if young adults married after having a first child or never married in a measure we call ‘married before first child.’ We calculate this measure in several ways: first for the entire sample of respondents who ever reported having children, with basic controls (parents’ education, race, birth year, and gender in combined-gender models), and then with an additional control for age at first child, to examine whether the timing of childbearing explains any gaps in nonmarital childbearing rates between those with and without loans. Next we run these same two models (one with basic demographic controls, and a second with a control for age at first birth), but restrict the sample to only those whose first child was born when they were 23 or older, to account for selection into early childbearing among women who eventually graduate college with loans that we found, in results presented in Table 2.

Earlier results demonstrated women with loans who eventually graduated college were more likely than college graduates without loans to be parents at young ages and less likely to be parents at older ages, while men’s loans were not related to parenthood rates; results related to age at first child among those with children demonstrate similar patterns. For men, age at first child was not related to loan status either for the entire sample of parents, or for the sample of parents who first had their child at age 23 or older. Education was related to age at first child for men: those with a college degree had their first child at an older age than men with some college, who in turn were older than those with no college when they had their first child. Among women, in the sample as a whole, age at first child is younger among college graduates with loans compared to college graduates without loans by 1 year on average, although there were no significant differences among those with some college education by loan status in the total sample of parents. In the sample of those who delayed parenthood until after age 22, loan status was not related to average age at parenthood among women with a college degree, but was

related to age at parenthood among those who did not graduate college; women with loans and some college had children at an older age than those with no loans and some college, if they delayed childbearing past age 22.

Age at first marriage was not related to loan status for either men or women among those who married by the last wave of data collection. When limiting the sample to only respondents who had children and were married by 2015, age at marriage did not significantly differ by loan status either. In both cases, those who graduated college married at an older age than those who attended some college but did not graduate or those who never attended. Among women, those who had some college also married at an older age than those who did not attend college, but among men, those with some college and no college were not significantly different.

When examining whether first marriage occurred before or in the same year as having their first child, we found student loans were associated with a higher nonmarital parenthood rate among college graduates, but not among those who did not complete college. Similar to other findings related to childbearing and age at childbearing, women drove these results, and differences were not significant for men. Among women who graduated college with loans, 59.5% were married before they had their first child, while among women who graduated college without loans this rate was 75.9%, a gap of 16.4 percentage points. Accounting for differences in age at first child explains some of the gap in marriage at first child by education, but does not significantly alter results related to student loans among college graduates. When restricting the sample to those who had their first child at age 23 or older, the pattern persists, although rates at which respondents were married at first child were higher overall; 85.1% of these women who also graduated college without loans were married before or during the year they had their first child, while this rate was 72.9% among these women who graduated college with loans. Differences were not significant by student loan status for college graduates or those who attended some college among men, and among women, loans were related to rates among college graduates but not those with some college.

DISCUSSION

In line with past research (Addo 2014; Gicheva 2016; Nau et al. 2015; Reeder and Kahn 2012), we found student loans were associated with some differential rates of childbearing, but only marginally associated with marriage rates. Adding to this literature, we find that loans are related to age at first birth, and although only marginally related to marriage rates and not related

to age at marriage, college graduates with loans were significantly less likely to be married by the time they had their first child – a key relationship status difference that has been found to negatively affect child outcomes (Brown 2004; Carlson and Corcoran 2001; Manning and Lamb 2003). We also add to prior literature by finding that those with loans were more likely to become parents at young ages and are also less likely than those with similar levels of education and no loans to become parents at older ages, leading to a younger average age at childbearing for those with loans among those who did have a child.

In line with prior research on loans and marriage (Bozick and Estacion 2014), any significant childbearing, marriage, and nonmarital childbearing effects that we found related to loans were found among women, but not men. Women who invest heavily in their own careers via loans and a college degree may be more reluctant than men to have children and potentially limit their career opportunities out of a desire to make sure their investment in their education was ‘worth it.’ Loans may also disproportionately affect women’s fertility rates because they may be seen as a personal obligation to be paid back by work done by the person who took them out. Some women (and men) may feel this precludes or should result in a delay in having children if women cannot withdraw from the workforce to care for those children at home. The younger overall age at which women generally have children compared to men (Martinez et al. 2012) may also mean that student loan payments are more likely to result in delayed fertility for women who did not already have children at younger ages, since payments are more likely to coincide with the years in which women are able and likely to bear children.

Results indicate that student loans are related to childbearing via both a selection effect for all women who attend college, and a potential causal effect among women who graduate college. Eventual college graduates and college attending women with loans are more likely to become parents at younger ages but growth in parenthood is higher among graduates without loans over time, leading to higher rates of parenthood among college graduates without loans at older ages. When restricting the sample to women who did not have children by age 22, the gap by loan status among college graduates grows even larger, indicating that selection into student loans by those who begin childbearing at young ages to some extent obscures the effect of student loans on parenthood, especially for those who follow the traditional and more socially accepted model of delaying parenthood until after completion of educational attainment.

The crossover in the relationship of loans to parenthood rates by age is also reflected in an overall lower average age at first child among women college graduates with loans, which past research has also found to be related to negative child outcomes (Fergusson and Woodward 1999; Kearney and Levine 2017; Sonfield et al. 2013). Among college graduates who delayed childbearing past age 22, women were less likely to be parents at older ages, but did not have a significantly different age at childbearing if they did have children. This is perhaps indicative of an overall *depressed* parenthood rate at older ages among those who delay children beyond age 22 and graduate college with loans, rather than a *delayed* parenthood rate among this group; future waves of NLSY data collection will confirm whether those with loans eventually ‘catch up’ in parenthood rates, or still have lower rates of parenthood once they have completed their childbearing years. For non-graduates who attended some college there were no significant differences in the total sample in terms of age at childbearing, but those with loans had lower rates of childbearing if they did not have a child by age 22 compared to those who completed some college without loans. Again, this result was only present for women and not men. While some may await financial stability to become parents, and there is a general trend to postpone childbearing, the fact that among those not yet parents, women with loans were less likely to enter parenthood at older ages reflects what might be more than a delayed transition, but perhaps even a foregone one. Women with loans and childless at older ages were less likely to enter parenthood than their counterparts without loans.

This research had some limitations. Results for ages 32 and above had a more restricted sample size, which can depress significant results, leading to a greater potential for type 2 (false negative) errors. We focus on the presence of loans rather than the total amount of loans; future research can examine whether college graduates are further differentiated by loan amounts. Results also point to the inappropriateness of traditional survival analysis methods such as Cox regressions to examine the effect of student loans on childbearing and marriage; for some results (such as childbearing among women) the relationship to student loans is positive at younger ages and negative at older ages; methods which aggregate effects across ages can potentially miss this crossover effect, which reflects both selection into student loans by those who have children at young ages, and the effect of student loans on later outcomes. Our method of using a five-group loan / education combined variable also reveals trends obscured by methods that do not examine the interaction of education with loan status. As we show in many cases (childbearing, age at

first child's birth, married before first child), loans are related to differences among college graduates but not those who do not complete college. In other cases, such as with marriage rates, the relationship to loans is negative for one educational group (college graduates) and positive for the other group at similar ages (those with some college). These differences highlight the importance of separating college attendees into graduates and nongraduates when examining the relationship of loans to behavior.

We find student loans do not only affect those who take them out; they have multigenerational effects, including whether women become parents and the circumstances under which they do, that is, their age and marital status when they enter parenthood. As student loan burdens continue to grow, results indicate there will be an increase in both childlessness and nonmarital childbearing among women college graduates, potentially negating some of the positive impacts of parents' higher education on the next generation, and reducing the degree to which higher education enables social mobility more generally. College degrees represent a meaningful investment in potential occupational and economic success, but if young adults forgo parenthood due to student loan debt, their gains cannot accrue to their children. Young adults may not want to forgo parenthood or may want to be married when they enter it, but feel their loans limit their ability to act according to their wishes. Student loans may also be affecting overall childlessness rates and marriage rates in society; recent reports have indicated United States childbearing is now at its lowest historical level, dropping below "replacement level" for the first time, and marriage is now delayed longer than ever before (Hamilton et al. 2017; Parker and Stapler 2017). As additional waves of NLSY and other datasets are released, future research can and should track the ultimate childbearing, marriage, and nonmarital childbearing rates of this cohort of young adults to fully examine the impact of student loans on shaping the next generation.

REFERENCES

- Addo, F. (2014). Debt, Cohabitation, and Marriage in Young Adulthood. *Demography*, 51(5), 1677-1701.
- Axinn, W. G., & Thornton, A. (1992). The influence of parental resources on the transition to marriage. *Social Science Research*, 21, 261-285.
- Baudin, T., De La Croix, D., & Gobbi, P. E. (2015). Fertility and childlessness in the United States. *The American Economic Review*, 105(6), 1852-1882.

- Blossfeld, H.-P., Golsch, K., & Rohwer, G. (2007). *Event history analysis with Stata*. Mahwah, NJ: Erlbaum.
- Bozick, R., & Estacion, A. (2014). Do student loans delay marriage? Debt repayment and family formation in young adulthood. *Demographic Research*, 30, 1865-1891.
- Briggs, X. (1998). Brown Kids in White Suburbs: Housing Mobility and the Many Faces of Social Capital. *Housing Policy Debate* 9: 177–221.
- Brown, S. L. (2004). Family Structure and Child Well-Being: The Significance of Parental Cohabitation. *Journal of Marriage and Family* 66(2):351-67.
- Carlson M. J., & Corcoran, M. E. (2001). Family Structure and Children's Behavioral and Cognitive Outcomes. *Journal of Marriage and Family* 63(3):779-92.
- Cheng, Y. H. A., & Landale, N. S. (2011). Adolescent precursors of early union formation among Asian American and white young adults. *Journal of Family Issues*, 32(2), 209-236.
- Cherlin, A. J. (2000). Toward a new home socioeconomics of union formation. In L. J. Waite, C. Bachrach, M. Hindin, E. Thomson, & A. Thornton (Eds.), *The ties that bind* (pp. 126 – 144). New York: Aldine de Gruyter.
- Cherlin, A. J. (2004). The deinstitutionalization of American marriage. *Journal of Marriage and Family*, 66, 848 – 861.
- Clarkberg, M. (1999). The price of partnering: The role of economic well-being in young adults' first union experiences. *Social Forces*, 77(3), 945-968.
- Damaske, S. (2011). *For the family?: how class and gender shape women's work*. Oxford University Press.
- Draut, T. (2006). *Strapped: Why America's 20- and 30-Somethings Can't Get Ahead*. New York: Doubleday.
- Edin, K., & Kefalas, M. (2005). *Promises I Can Keep: Why Poor Women Put Motherhood before Marriage*. Berkeley: University of California Press.
- England, P. & Bearak, J. (2012). Women's Education and their Likelihood of Marriage: A Historic Reversal. *A Fact Sheet Prepared for the Council on Contemporary Families*. https://contemporaryfamilies.org/wp-content/uploads/2013/10/2013_Factsheet_England_Marriage-and-education.pdf.

- Fergusson, D. M., & Woodward, L. J. (1999). Maternal age and educational and psychosocial outcomes in early adulthood. *The Journal of Child Psychology and Psychiatry and Allied Disciplines*, 40(3), 479-489.
- Fuller, J. N., Frost, A. M., & Burr, B. K. (2015). Exploring the impact of religiosity and socioeconomic factors on perceived ideal timing of marriage in young adults. *Journal of Student Research*, 4(1), 120-129.
- Furstenberg, F. (2010). On a New Schedule: Transitions to Adulthood and Family Change. *The Future of Children*, 20(1), 67-87.
- Furstenberg, F. F., Kennedy, S., McLoyd, V.C., Rumbaut, R. G. & Settersten, Jr, R. A. (2004). Growing up is Harder to Do. *Contexts* 3 (3): 33-41.
- Gibson-Davis, C., Edin, K., & McLanahan, S. (2005). High Hopes, but Even Higher Expectations: The Retreat From Marriage Among Low-Income Couples. *Journal of Marriage and Family* 67 (5):1301-12.
- Gicheva, D. (2016). Student loans or marriage? A look at the highly educated. *Economics of Education Review* 53: 207-216.
- Gicheva, D. & Thompson, J. (2015). "The Effects of Student Loans on Long-Term Household Financial Stability." Pp. 287-316 in *Student Loans and the Dynamics of Debt*, edited by Brad Hershbein and Kevin M. Hollenbeck. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research.
- Glick, J. E., Ruf, S. D., White, M. J., & Goldscheider, F. (2006). Educational engagement and early family formation: Differences by ethnicity and generation. *Social Forces*, 84, 1391–1415.
- Goldrick-Rab, S. (2016). *Paying the Price: College Costs, Financial Aid, and the Betrayal of the American Dream*. Chicago: University Of Chicago Press.
- Grayson, M. S., Newton, D. A., & Thompson, L. F. (2012). Payback time: the associations of debt and income with medical student career choice. *Medical education*, 46(10), 983-991.
- Hamilton, B.E., Martin, J.A., Osterman, M.J.K., Driscoll, A.K., Rossen, L. M. (2017). Births: Provisional data for 2016. Vital statistics rapid release; no 2. Hyattsville, MD: National Center for Health Statistics. June. Available from: <https://www.cdc.gov/nchs/data/vsrr/report002.pdf>
- Harknett, K. and Kuperberg, A. (2011). Education, Labor Markets and the Retreat from

- Marriage. *Social Forces* 90 (1): 41-63.
- Harknett, K. and McLanahan, S. (2004). Racial and ethnic differences in marriage after the birth of a child. *American Sociological Review*, 69(6), 790-811.
- Hofferth, S. L., Reid, L., & Mott, F. L. (2001). The effects of early childbearing on schooling over time. *Family planning perspectives*, 33(6), 259-267.
- Hout, M. (2009). Rationing college opportunity. *The American Prospect*, 20(9).
- Institute for College Access & Success. (2015). Student debt and the class of 2014. Retrieved from https://ticas.org/sites/default/files/pub_files/classof2014.pdf December 2017.
- Kearney, M. S., Levine, P. B. (2017). *The economics of non-marital childbearing and the "marriage premium for children"* (No. w23230). National Bureau of Economic Research.
- Kefalas, M. J., Furstenberg, F. F., Carr, P. J., & Napolitano, L. (2011). "Marriage is more than being together": The meaning of marriage for young adults. *Journal of Family Issues*, 32(7), 845-875.
- Kuperberg, A. (2009). Motherhood and graduate education: 1970–2000. *Population research and policy review*, 28(4), 473.
- Kuperberg, A. (2014). Age at coresidence, premarital cohabitation, and marriage dissolution: 1985–2009. *Journal of Marriage and Family*, 76(2), 352-369.
- Lehrer, E. L. (2008). Age at marriage and marital instability: Revisiting the Becker–Landes–Michael hypothesis. *Journal of Population Economics*, 21, 463–484.
- Luong, M. (2010). The financial Impact of student loans. *Statistics Canada, Perspectives* January: 5-18.
- MacInnes, M. D. (2011). Altar-bound? The effect of disability on the hazard of entry into a first marriage. *International Journal of Sociology*, 41(1), 87–103.
- Manning, W. D., & Lamb, K. A. (2003). Adolescent Well-Being in Cohabiting, Married, and Single-Parent Families. *Journal of Marriage and Family* 65(4):876-93.
- Martinez, G., Daniels, K. and Chandra, A. 2012. Fertility of men and women aged 15-44 years in the United States: National Survey of Family Growth 2006-2010. National Health Statistics Report 51, April 12th Available at <https://www.cdc.gov/nchs/data/nhsr/nhsr051.pdf>
- Mazelis, J.M. (2017). *Surviving Poverty: Creating Sustainable Ties among the Poor*. New York: NYU Press.

- Mazelis, J. M., and Mykyta, L. (2011). Relationship Status and Activated Kin Support: The Role of Need and Norms. *Journal of Marriage and Family*, 73, 430–445.
- Millett, C. M. (2003). How undergraduate loan debt affects application and enrollment in graduate or first professional school. *Journal of Higher Education*, 386-427.
- Mitchell, J. (2016). Student debt is about to set another record, but the picture isn't all bad." *The Wall Street Journal*, May 2nd, <https://blogs.wsj.com/economics/2016/05/02/student-debt-is-about-to-set-another-record-but-the-picture-isnt-all-bad/>
- Moore, J., Gale, J., Dew, K., & Simmers, D. (2006). Student debt amongst junior doctors in New Zealand; part 2: effects on intentions and workforce. *The New Zealand Medical Journal (Online)*, 119(1229).
- Nakosteen, R. A., & Zimmer, M. A. (1997). Men, money, and marriage: Are high earners more prone than low earners to marry? *Social Science Quarterly*, 76(1), 66-82.
- Napolitano, L. J., Pacholok, S., & Furstenberg, F. F. (2014). Educational aspirations, expectations, and realities for middle-income families. *Journal of Family Issues*, 35(9), 1200-1226.
- National Association of Realtors Research Division, and American Student Assistance. (2017). Student loan debt and housing report 2017: When debt holds you back. Retrieved September 20, 2017 (<https://www.nar.realtor/sites/default/files/reports/2017/2017-student-loan-debt-and-housing-09-18-2017.pdf>)
- Nau, M., Dwyer, R. E., & Hodson, R. (2015). Can't afford a baby? Debt and young Americans. *Research In Social Stratification And Mobility*, 42114-122.
- Oppenheimer, V. K. (2003). Cohabiting and marriage during young men's career-development process. *Demography*, 40(1), 127-149.
- Oppenheimer, V. K., Kalmijn, M., & Lim, N. (1997). Men's career development and marriage timing during a period of rising inequality. *Demography*, 34(3), 311-330.
- Parker, K. (2015). Women more than men adjust their careers for family life. *Fact Tank: Fact Tank: News in the Numbers*, Pew Research, October 1st <http://www.pewresearch.org/fact-tank/2015/10/01/women-more-than-men-adjust-their-careers-for-family-life/>
- Parker, K. & Stapler, R. (2017). As U.S. Marriage Rates Hovers at 50%, education gap in marital status widens. *Fact Tank: News in the Numbers*, Pew Research, September 14th

- <http://www.pewresearch.org/fact-tank/2017/09/14/as-u-s-marriage-rate-hovers-at-50-education-gap-in-marital-status-widens/>
- Putnam, R. D. (2000). *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon & Schuster.
- Reeder, L., & Kahn, J.R. (2012). The effects of student loan debt on the transition to parenthood. Presented at the *Annual Meeting of the American Sociological Association*. Denver, CO.
- Shanahan, M. J. (2000). Pathways to Adulthood in Changing Societies: Variability and Mechanisms in Life Course Perspective. *Annual Review of Sociology* 26:667-692.
- Small, M.L. (2009). *Unanticipated Gains: Origins of Network Inequality in Everyday Life*. New York: Oxford University Press.
- Smock, P. J., Manning, W.J., & Porter, M. (2005). Everything's there except money: How economic factors shape the decision to marry among cohabiting couples. *Journal of Marriage and Family* 67 (3): 680-696.
- Sonfield, A., Hasstedt, K., Kavanaugh, M. L., & Anderson, R. (2013). The social and economic benefits of women's ability to determine whether and when to have children. *Guttmacher Institute*.
- South, S. J. (1991). Sociodemographic differentials in mate selection preferences. *Journal of Marriage and the Family*, 53(4), 928-940.
- Stone, P. (2007). *Opting out? Why women really quit careers and head home*. Berkeley: University of California Press.
- Stone, P., & Lovejoy, M. (2004). Fast-track women and the "choice" to stay home. *The Annals of the American Academy of Political and Social Science*, 596(1), 62-83.
- Stucky, Scott. (2014). Burden of Student Loan Debt Stifles the Housing Market." *American Banker*, March 24th. <https://www.americanbanker.com/opinion/burden-of-student-loans-stifles-the-housing-market>
- Teachman, J. D., Polonko, K. A., & Leigh, G. K (1987). Marital timing: Race and sex comparisons. *Social Forces*, 66, 239–268.
- Teachman, J. D., Tedrow, L. M., & Crowder, K. D. (2000). The changing demography of America's families. *Journal of Marriage and the Family*, 62, 1234–1246.
- Uecker, J. E., & Stokes, C. E. (2008). Early marriage in the United States. *Journal of Marriage and Family*, 70, 835–846.

- Waite, L. J., & Gallagher, M. (2000). *The case for marriage: Why married people are happier, healthier, and better off financially*. New York: Broadway Books.
- Wilde, E. T., Batchelder, L., & Ellwood, D. T. (2010). *The mommy track divides: The impact of childbearing on wages of women of differing skill levels* (No. w16582). National Bureau of Economic Research.
- Witteveen, D., & Attewell, P. (2017). Family Background and Earnings Inequality among College Graduates. *Social Forces*, 95(4), 1539-1576.

Table 1: Descriptive Statistics for Sample and Subsample of Parents

Variable	Total	Parents Only
Has Loans	37.7	29.8
No Loans	62.3	70.2
<i>Education:</i>		
No College	36.6	40.8
Some College	37.1	38.1
Bachelor's Degree	18.7	15.0
Graduate Degree	7.6	6.4
<i>Education/Loan Groups:</i>		
No Loans and No College	36.6	40.8
No Loans and Some College	17.8	17.7
Loans and Some College	19.3	20.1
No Loans and BA+	7.9	6.4
Loans and BA+	18.4	15.1
Men	51.2	46.1
Women	48.8	53.9
White	59.2	55.5
Black	27.2	30.8
Latino/a	21.2	22.6
Other Race	0.9	1.0
<i>Mother's Education</i>		
Mother <HS	21.7	25.6
Mother HS	33.9	34.9
Mother Some College	21.1	19.9
Mother BA	10.1	7.8
Mother Graduate Degree	5.5	3.5
Mother's Education	7.7	8.2
Missing		
<i>Father's Education</i>		
Father <HS	18.2	20.7
Father HS	30.4	30.9
Father Some College	14.4	12.9
Father BA	9.4	7.5
Father Graduate Degree	7.0	5.0
Father's education missing	20.7	22.9
<i>Total N</i>	<i>8,954</i>	<i>5,457</i>

Table 2: Has Children by Age (Women Only): Regression Adjusted Predicted Means

	Loans, Degree (Reference)	No Loans, Degree	Loans, Some College, No Degree	No Loans, Some College, No Degree	No Loans, No College
18	3.9	2.3	13.8 ***	12.9 ***	20.4 ***###
19	6.5	3.1 *	20.4 ***	16.8 ***£	30.4 ***###
20	9.1	5.1 *	28.3 ***	23.3 ***#	38.4 ***###
21	11.8	6.7 *	34.9 ***	30.3 ***#	46.1 ***###
22	14.9	7.9 **	40.7 ***	35.7 ***#	51.0 ***###
23	17.1	11.0 *	46.5 ***	41.4 ***#	57.2 ***###
24	20.1	15.0 †	51.0 ***	48.3 ***	59.6 ***###
25	23.1	19.8	54.5 ***	52.5 ***	63.1 ***###
26	26.5	23.7	57.0 ***	56.5 ***	65.5 ***###
27	32.4	30.7	60.5 ***	59.2 ***	67.2 ***##
28	37.1	36.1	62.5 ***	61.2 ***	68.4 ***##
29	42.5	41.8	64.8 ***	63.2 ***	70.2 ***##
30	47.8	45.9	67.6 ***	64.5 ***	71.8 ***#
31	50.8	51.1	69.0 ***	66.2 ***	72.8 ***£
32	53.2	58.4	71.4 ***	68.3 ***	74.9 ***
33	58.7	66.1 *	73.7 ***	70.6 ***	75.2 ***
34	60.1	71.3 *	74.9 ***	70.3 **	75.3 ***
35	65.3	77.2 †	75.8 *	68.1	76.4 *

†p<.10 *p<.05 **p<.01 ***p<.001 denotes differences between those with loans and a degree and other groups in logistic regressions. £p<.10 #p<.05 ##p<.01 ###p<.001 denotes differences between those in last two columns and those with loans and some college education. Controls for parents' education, race, birth year.

Table 3: Has Children by Age (Men Only): Regression Adjusted Predicted Means

	Loans, Degree (Reference)	No Loans, Degree	Loans, Some College, No Degree	No Loans, Some College, No Degree	No Loans, No College
18	1.0	1.2	4.3 **	5.1 **	8.3 ***###
19	2.1	1.2	6.7 ***	7.1 ***	13.0 ***###
20	2.6	3.6	9.7 ***	11.1 ***	18.4 ***###
21	3.7	4.5	13.5 ***	15.3 ***	24.1 ***###
22	6.1	6.0	18.4 ***	19.9 ***	29.6 ***###
23	8.4	7.7	22.2 ***	25.2 ***	34.0 ***###
24	11.4	7.9	26.5 ***	28.7 ***	38.7 ***###
25	15.2	12.2	31.1 ***	32.5 ***	42.5 ***###
26	19.7	18.1	34.6 ***	35.7 ***	45.4 ***###
27	24.6	22.0	38.6 ***	39.4 ***	49.1 ***###
28	29.0	28.7	42.9 ***	42.9 ***	51.1 ***###
29	32.4	32.2	45.8 ***	45.5 ***	53.0 ***##
30	36.8	40.1	47.8 ***	47.9 ***	54.4 ***##
31	43.1	46.6	49.6 *	49.9 **	55.9 ***##
32	47.7	51.9	53.3 †	52.7 †	57.8 ***£
33	55.2	58.8	55.9	54.7	57.8
34	55.5	59.3	58.2	58.5	59.7
35	55.4	59.4	64.9	59.3	60.3

†p<.10 *p<.05 **p<.01 ***p<.001 denotes differences between those with loans and a degree and other groups in logistic regressions. £p<.10 ##p<.01 ###p<.001 denotes differences between those in last two columns and those with loans and some college education. Controls for parents' education, race, birth year.

Table 4: Has children by Age: Women who were childless at age 22: Regression Adjusted Predicted Means

	Loans, Degree (Reference)	No Loans, Degree	Loans, Some College, No Degree	No Loans, Some College, No Degree	No Loans, No College
23	2.4	2.7	9.7 ***	8.8 ***	12.4 ***
24	5.6	6.5	17.1 ***	19.4 ***	16.8 ***
25	8.9	11.0	23.0 ***	26.0 ***	23.9 ***
26	12.7	14.9	27.1 ***	32.2 ***£	28.3 ***
27	19.3	22.0	33.0 ***	36.3 ***	31.7 ***
28	24.6	27.6	36.2 ***	39.3 ***	34.1 ***
29	30.9	33.5	40.0 **	42.3 ***	37.5 *
30	37.0	38.0	44.7 **	44.4 **	40.6
31	40.7	43.6	47.0 *	46.9 *	42.6
32	43.5	51.5 *	50.8 *	50.4 *	45.6
33	49.0	59.3 *	53.8	53.2	46.9 £
34	50.4	64.8 **	55.5	54.0	47.9
35	57.4	72.2 *	58.5	52.3	48.9

*p<.05 **p<.01 ***p<.001 denotes differences between those with loans and a degree and other groups in logistic regressions. £p<.10 denotes differences between those in last two columns and those with loans and some college education. Controls for parents' education, race, birth year.

Table 5: Has children by Age: Men who were childless at age 22: Regression Adjusted Predicted Means

	Loans, Degree (Reference)	No Loans, Degree	Loans, Some College, No Degree	No Loans, Some College, No Degree	No Loans, No College
23	2.1	1.6	4.6 *	6.5 **	6.2 **
24	5.1	1.8 *	9.9 **	10.8 ***	12.7 ***£
25	8.8	5.9	15.5 **	15.6 ***	18.1 ***
26	13.3	11.5	19.5 **	19.6 **	22.2 ***
27	18.3	15.4	24.4 *	24.2 *	27.3 ***
28	22.7	22.1	29.7 **	28.5 *	30.2 **
29	26.3	25.6	33.3 **	31.7 *	32.6 **
30	30.8	33.4	35.7 †	34.7	34.6
31	37.5	40.6	37.3	37.3	36.6
32	42.2	46.1	41.4	40.5	39.3
33	50.4	53.2	44.4	42.1 *	39.1 **£
34	50.3	54.0	47.2	47.5	42.2 *
35	49.9	53.9	53.9	49.6	43.3 £

*p<.05 **p<.01 ***p<.001 denotes significant differences between those with loans and a degree and other groups in logistic regressions. £p<.10 #p<.05 ##p<.01 ###p<.001 denotes significant differences between those in last two columns and those with loans and some college education. Controls for parents' education, race, birth year.

Table 6: Age at first child, marriage, and timing of marriage and births: Regression Adjusted Means

	Loans, Degree (Ref.)	No Loans, Degree	Loans, Some College, No Degree	No Loans, Some College, No Degree	No Loans, No College
Age at first child	26.5	27.1 *	23.3 ***	23.3 ***	21.9 ***###
<i>Women</i>	25.8	26.8 **	22.4 ***	22.5 ***	21.1 ***###
<i>Men</i>	27.3	27.3	24.5 ***	24.4 ***	22.8 ***###
Age at first child, child after 22	28.4	28.5	26.8 ***	26.6 ***	26.3 ***###
<i>Women</i>	28.2	28.3	26.7 ***	26.1 ***#	26.2 ***£
<i>Men</i>	28.6	28.7	27.0 ***	27.1 ***	26.4 ***##
Age at first marriage	26.3	26.4	24.7 ***	24.8 ***	24.0 ***###
<i>Women</i>	25.9	26.1	24.2 ***	24.0 ***	23.1 ***###
<i>Men</i>	26.7	26.5	25.3 ***	25.7 **	24.9 ***
Age at first marriage, has children	25.5	25.5	24.3 ***	24.3 ***	23.8 ***##
<i>Women</i>	25.2	25.3	23.8 ***	23.7 ***	22.9 ***##
<i>Men</i>	25.8	25.8	24.7 ***	25.1 *	24.7 ***
Married before first child	64.8	74.9 **	41.6 ***	41.0 ***	28.8 ***###
<i>Women</i>	59.5	74.9 ***	38.5 ***	38.9 ***	29.1 ***###
<i>Men</i>	73.7	73.9	45.9 ***	43.9 ***	29.0 ***###
Married before first child + Age at first child controls	55.2	63.9 *	42.1 ***	41.2 ***	34.1 ***###
<i>Women</i>	49.5	62.7 **	40.1 **	39.9 **	35.5 ***#
<i>Men</i>	64.9	64.4	45.0 ***	43.0 ***	33.2 ***###
Married at first child, child after 22	76.1	85.3 **	57.2 ***	56.0 ***	44.6 ***###
<i>Women</i>	72.9	85.1 **	58.2 ***	56.2 ***	48.8 ***#
<i>Men</i>	81.0	84.6	57.0 ***	56.9 ***	42.1 ***###
Married at first child, child after 22, + age at first child controls	74.6	84.0 **	57.7 ***	56.9 ***	46.2 ***###
<i>Women</i>	71.6	84.0 **	58.8 ***	57.7 ***	50.2 ***#
<i>Men</i>	79.6	83.0	57.3 ***	57.0 ***	43.6 ***###

*p<.05 **p<.01 ***p<.001 denotes differences between those with loans and a degree and other groups. £p<.10 #p<.05 ##p<.01 ###p<.001 denotes differences between those in last two columns and those with loans and some college education in OLS and Logistic Regression Models. Controls for parents' education, race, sex, birth year.

Figure 1: Has Children by Age, Student Loans, Education: Men and Women

Figure 2: Has Children by Age: Men and Women Who Were Childless at Age 22

Figure 3: Ever Married by Age: Men and Women