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Attitudes Toward Marriage and Long-term Relationships across Emerging Adulthood

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ATTITUDES TOWARD MARRIAGE AND LONG-TERM RELATIONSHIPS
ACROSS EMERGING ADULTHOOD

by

KAITLIN A. HIPPEN

Under the Direction of Daniel L. Carlson, PhD

ABSTRACT

The current study expands upon existing developmental research on marital attitude change by examining how attitudes toward marriage and long-term relationships may vary across emerging adulthood. Utilizing five waves of data from the Center on Young Adult Health and Development's College Life Study, discrete-time survival analysis and latent basis growth curve analysis are employed to assess the change—and predictors of such change—in three measures of relationship attitudes (desire for marriage, desire for long-term relationships, and importance of marriage and long-term relationships) of over 900 college students. Results indicate positive change in all three measures of attitudes, with most emerging adults desiring and placing importance on marriage and long-term relationships from the very beginning of college. Predictors of attitude change included sex, race, experience of parental death, student status, educational aspirations, and total number of sex partners. Results suggest a need for more longitudinal research in this area.

INDEX WORDS: Marriage, Relationships, Attitudes, Attitude change, Emerging adulthood

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by

KAITLIN A. HIPPEN

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts in Sociology

in the College of Arts and Sciences

Georgia State University

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ACROSS EMERGING ADULTHOOD

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DEDICATION

This thesis is dedicated to my incredible parents, Sherrilyn A. McCullin and Randall D. Hippen, and grandparents, Annette Favorite and Ralph S. Favorite, whose sacrifice, unprecedented encouragement, and unconditional love made it possible for me to pursue higher education and complete this thesis. I would also like to dedicate this thesis to my significant other, Kevin L. Dunckel Jr., who moved 670 miles to support my educational career. Lastly, I would like to dedicate this thesis to my fourth grade teacher, Mrs. Nancy L. Barker, who pushed me to succeed and jumpstarted my love for learning.

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1 INTRODUCTION

In 1960, the median age at first marriage was 22.8 years old for men and 20.3 years old for women; today, the median age at first marriage is 28.7 years old for men and 26.5 years old for women (Bureau of the Census 2011). Marital delay is the product of economic growth and a shift in cultural values (Lesthaeghe 2010). Because marriage is now postponed until individuals finish college, become employed, and become financially independent, a new developmental stage has been established in the life course: emerging adulthood (Arnett 2000; Carroll, Willoughby, Badger, Nelson, McNamara Barry, and Madsen 2007; Gassanov, Nicholson, and Kock-Turner 2008; Sassler and Schoen 1999; Willoughby 2010). Emerging adulthood falls between adolescence and young adulthood and ranges from the late teens to the mid- to late-twenties; it is characterized by self-exploration and identity formation (Arnett 2000). During this period, emerging adults form attitudes (i.e. about relationships, marriage, fertility, education, and career paths) that guide future decisions (Arnett 2000; Fazio 1986). Attitudes toward, and decisions about relationships, are important because the choice to engage in long-term relationships, particularly marriage, has consequences for one's happiness, life-satisfaction, health, and psychological well-being (Evans and Kelley 2004; Kim and McKenry 2002; Musick and Bumpass 2012; Stack and Eshleman 1998; Umberson, Pudrovska, and Recsek 2010; Vanassche, Swicegood, and Matthijs 2012).

Existing research on emerging adults' marital attitudes is limited because it lacks information on if, and how, marital and long-term relationship attitudes change over the course of emerging adulthood (Willoughby 2010). A longitudinal analysis of marital and long-term relationship attitude change is necessary in order to better understand emerging adulthood. There is reason to believe that attitude change exists during emerging adulthood because emerging

adulthood is a period of self-exploration (Arnett 2000). Moreover, research suggests that marital attitude change occurs during adolescence (Willoughby 2010). To determine if there is evidence of marital and long-term relationship attitude change over the course of emerging adulthood, I perform discrete-time survival analysis and latent basis growth curve analysis using data from the Center on Young Adult Health and Development's College Life Study. Specifically, this study is driven by two research questions.

Research Question 1. How do attitudes toward marriage and long-term relationships change over time during emerging adulthood?

Research Question 2. What are the predictors of marital and long-term relationship attitude change among emerging adults?

2 BACKGROUND

2.1 Second Demographic Transition

Over the last two centuries, the United States' population has experienced a number of demographic shifts. In order to explain the historical context in which marriage has been increasingly postponed and thus emerging adulthood as a distinct life stage, these demographic shifts must first be explored. The First Demographic Transition that took place between 1800 and 1940 in the United States was characterized by a decline in fertility and mortality (Greenwood and Seshadri 2002; Lesthaeghe 2010). These declines were brought on by the technological advancements that introduced industrialization and decreased the role of agriculture in the family and in the job market, making it unnecessary for couples to have many children since they were no longer needed as a source of labor (Greenwood and Seshadri 2002). Following the First Demographic Transition, a Second Demographic Transition emerged in the 1950s as many other population changes took place; this transition is ongoing (Lesthaeghe 2010;

Lesthaeghe and van de Kaa 1986). The Second Demographic Transition is characterized by the delaying of age at first marriage and first birth, decreases in marriage, remarriage, and fertility, and increases in life expectancy, divorce, out-of-wedlock births, contraceptive use, premarital sex, premarital and postmarital cohabitation, single-parent families, egalitarianism, educational attainment, and economic independence of women (Lesthaeghe, Oppenheim Mason, and Jensen 1995; Lesthaeghe and Neels 2002; Lesthaeghe and Neidert 2006; Sassler and Schoen 1999). The extent to which these population changes have occurred varies regionally within the United States, specifically between less-educated, rural areas (particularly Southern and Midwestern states) and higher-educated, metropolitan areas (particularly Northern and Western states); for example, Southern states generally have earlier first marriages and lower rates of cohabitation, some Northeastern and Western states have later first marriages and moderate rates of cohabitation, and the remaining Northeastern and Western states have a larger population of individuals who never marry with high rates of cohabitation (Lesthaeghe 2010; Lesthaeghe and Neidert 2006).

A shift in needs and values both instigated and propagated the Second Demographic Transition (Lesthaeghe 2010). Specifically, rapid economic growth during the last century and a half “produced a shift in concerns from material needs (subsistence, shelter, physical and economic security) to a focus on non-material needs (freedom of expression, participation and emancipation, self-realization and autonomy, recognition)” (Lesthaeghe 2010:213). This is reflective of Maslow’s Hierarchy of Needs, which states that once basic needs (physiological and safety) have been met, psychological and intellectual needs (love, esteem, and self-actualization) can be focused on (Lesthaeghe 2010; Maslow 1943). As the needs of society changed, so did the values. Individuality and diversity became valued over community and social cohesion

(Lesthaeghe 1983; Lesthaeghe 2010; Lesthaeghe and Neels 2002). This change in needs and values has impacted the American family, particularly through the postponement of marriage.

2.2 Marital Delay

Some scholars suggest that a product of the Second Demographic Transition is marital delay (Lesthaeghe et al. 1995). The institution of marriage in the United States has undergone serious change in the last few decades, as evidenced in Table 1 below. As of 2010, U.S. men marry for the first time at a median age of 28.2 and U.S. women for the first time at a median age of 26.1 (Bureau of the Census 2011). Since 1960, the median age at first marriage has increased each decade by an average of 1.08 years for men and 1.16 years for women.

Table 1 Median age at first marriage, by gender: 1960-2010

| Year | Men | Women |
|------|------|-------|
| 2010 | 28.2 | 26.1 |
| 2000 | 26.8 | 25.1 |
| 1990 | 26.1 | 23.9 |
| 1980 | 24.7 | 22.0 |
| 1970 | 23.2 | 20.8 |
| 1960 | 22.8 | 20.3 |

(Bureau of the Census 2011)

Many scholars attribute the delaying of marriage in part to the increased economic independence of women and increased value American job markets have placed on higher levels of educational attainment (Lesthaeghe 2010; Oppenheimer 1988; Sassler and Schoen 1999). Over the last several decades, the number of people graduating from high school and college has increased drastically, as seen in Figure 1 below. In 1960, 42.5 percent of women and 39.5 percent of men completed high school, or the equivalent of a GED, and 5.8 percent of women and 9.7 percent of men received a Bachelor's or higher level of degree; while in 2010, 87.6 percent of women and 86.6 percent of men completed high school, or the equivalent of a GED, and 29.6 percent of women and 30.3 percent of men received a Bachelor's or higher level of

degree (National Center for Education Statistics 2012). That means that since 1960, the number of men and women with a high school diploma or GED has more than doubled and the number of men and women with at least a Bachelor’s degree has almost quadrupled (National Center for Education Statistics 2012). Though women and men have completed high school at similar rates over the last several decades, it was not until 2010 that women and men started completing college degrees at a similar rate. This can be seen in Figure 2.

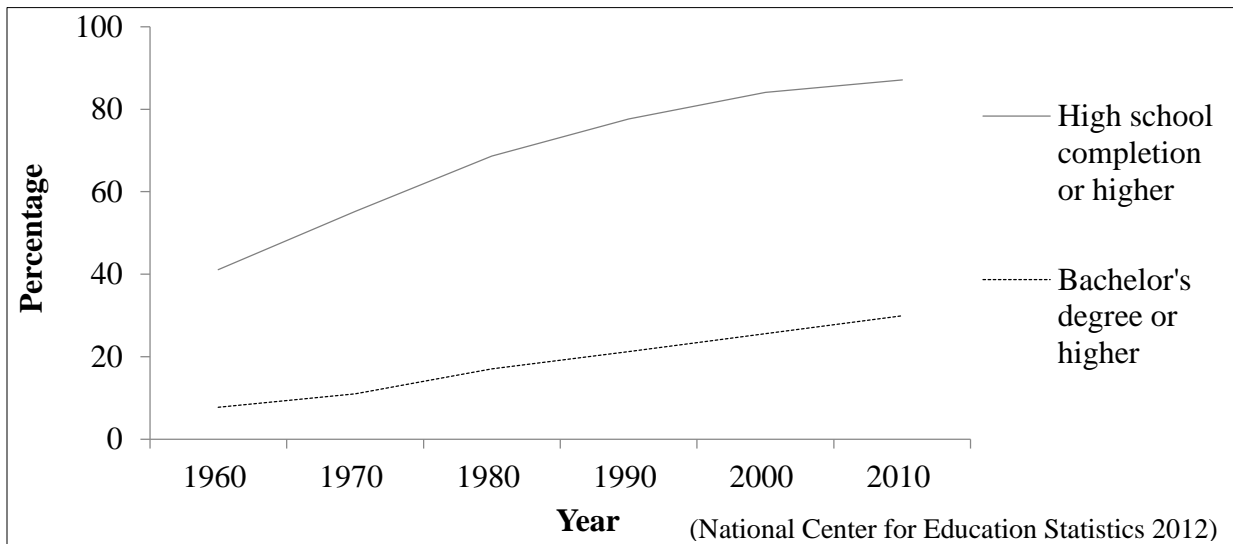


Figure 1 Educational attainment by year: 1960-2010

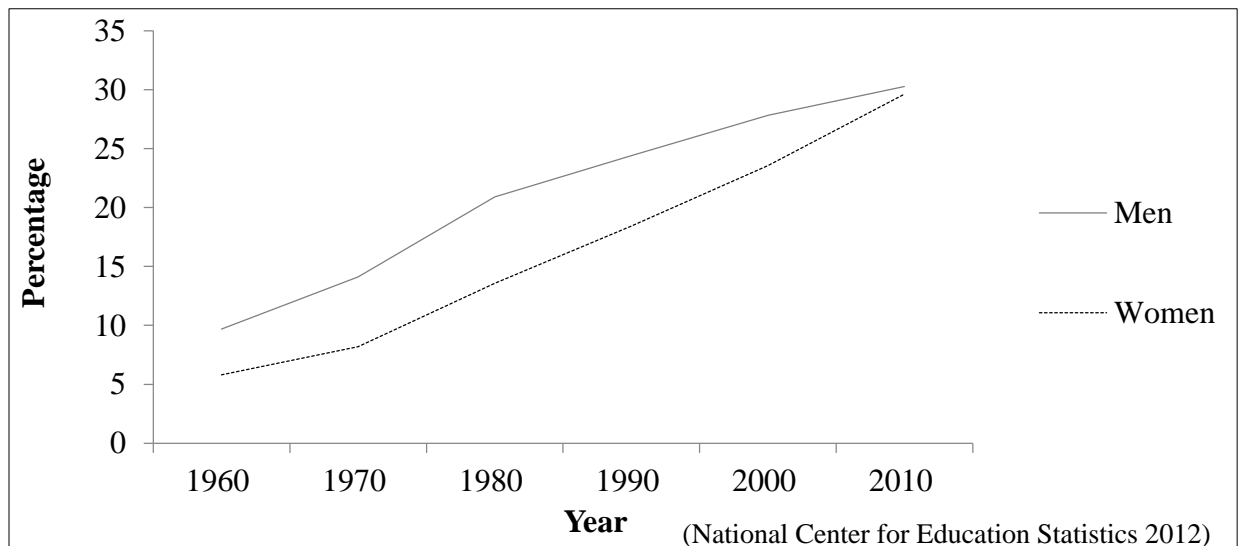


Figure 2 College degree attainment by gender and year: 1960-2010

Because U.S. men and women attend college at higher rates than ever before, many of them are delaying marriage until they finish school, find employment, and become financially independent (Carroll et al. 2007; Gassanov et al. 2008; Sassler and Schoen 1999; Willoughby 2010). Even women with very traditional gender attitudes—who think women should be homemakers and men should be breadwinners—put off marriage so that they can attain higher levels of education first (Barber and Axinn 1998). Marriage, then, has become a capstone achievement, rather than the foundation of adulthood like it has been in the past, with people of all economic backgrounds waiting until they are financially stable to marry (Cherlin 2004). Several studies find that those with higher educational attainment and higher socioeconomic status are more likely to marry than those with less education and lower socioeconomic status (Bramlett and Mosher 2002; Cherlin 2004; Clarkberg 1999; Copen, Daniels, Vespa, and Mosher 2012; Goldstein and Kenney 2001; Mahay and Lewin 2007; Sassler and Schoen 1999; Sweeney 2002). Goldstein and Kenney (2001) theorize that higher rates of marriage among the more highly educated can be attributed to greater gains received by both partners upon marrying someone with similar financial stability; because men and women are likely to date and marry people with similar characteristics, such as educational attainment and careers, those with higher educational attainment and income are likely to benefit at a greater rate from both their individual and combined income.

Though low-income individuals do wish to marry as much as wealthier individuals, they are more likely to never marry because of their lack of financial stability and resulting anxiety about marriage (Cherlin 2004; Edin and Kefalas 2005; Sweeney 2002). Some scholars attribute this dismissal of marriage to a lack of “marriageable men”—a term coined by Wilson (1987)—in the local marriage market for women to choose from (Lichter et al. 1992; Wilson 1987). The

financial stability of potential male partners is—both historically and presently—a common qualification for marriage among heterosexual women, particularly because of women’s past economic dependence on men; thus, marriageable men include those who are employed full-time with job stability and adequate income, which limits the pool of potential partners yet again (Lichter et al. 1992; Wilson 1987).

An increase in young men’s unemployment offers one potential reason for the decrease in the number of marriageable men available (Lichter et al. 1992). Increased unemployment can be explained by several changes over the last few decades, but one of the most important changes is that the job market increasingly places higher earning value on individuals with college and advanced degrees, making many jobs—especially higher-paying, stable jobs—unobtainable to those with no access to higher education (Levy and Michel 1991). A decrease in or lack of access to marriageable men in the local (and national) marriage market explains why some women may be more likely to postpone marriage until they find a marriageable man and are also more likely to never marry (Lichter et al. 1992).

Racial disparities in educational attainment and income indicate why some groups are more likely to marry than others because they introduce disparities in the number of marriageable men available in the local marriage market (Lichter et al. 1992). The racial discrepancy in the likelihood of marriage is quite apparent: 74 percent of White women, 74 percent of Asian women, 66 percent of Hispanic or Latina women (57 percent of U.S. born; 72 percent of foreign born), and 47 percent of Black women are expected to marry by age 30 (Copen et al. 2012). According to Lichter et al., “at age 25, for each unmarried black woman, there are on average only .304 unmarried black men with adequate earnings,” compared to .720 “unmarried White men with adequate earnings” per one unmarried White woman (1992:791).

This demonstrates a large gap in the proportion of marriageable men by race, showing that Black women are clearly disadvantaged in having access to marriageable men within their local marriage markets, and provides an explanation of why Black women are more likely to postpone marriage or never marry than any other racial group (1992).

Though economic factors are important, marital delay is also the result of a major shift in cultural values; what individuals want from a marriage has changed and even low-income individuals have shifted their views of marriage and its prerequisites (Cherlin 2004; Edin and Kefalas 2005). Marriage has transitioned into what Cherlin has termed an “individualized marriage,” from a marriage that was once based on companionship (2004). Self-development, flexible marital and gender roles, and problem solving via open communication characterize the individualized marriage (Cancian 1987; Cherlin 2004). Rather than forming a union solely for the purpose of having socially acceptable sexual intercourse, children, and combined bank accounts like people had in the past, individuals today marry for the purpose of having love and intimacy once they are already financially stable with previously developed careers (Edin and Kefalas 2005; Whitehead and Popenoe 2001). Giddens (1991) calls this new type of union a “pure relationship,” which is entered and exited at will by both partners dependent on their individual satisfaction.

This change in what individuals want from a marriage is particularly due to the previously mentioned economic growth and resulting shift in needs, in which individuals can focus on their non-material and self-fulfilling psychological needs instead of their basic physiological and safety needs since those are met much easier than they once were (Lesthaeghe 1983; Lesthaeghe 2010; Maslow 1943). Additionally, the introduction of birth control and change in beliefs about sexual morality over the last several decades have opened up room for

individuals to experience sex without having to get married and to enjoy it with as many people as they want within the context of both committed or casual relationships (Arnett 2004). Moreover, because marriage is increasingly reserved for individuals who are financially independent, have higher educational attainment, have higher income, and can afford a wedding, it is now regarded as a status symbol (Cherlin 2004). If a couple can marry, it means they have achieved a standard of living necessary for marriage (Cherlin 2004; Oppenheimer 1988; Sweeney 2002). Unfortunately this also means that low-income individuals are less likely to achieve access to this status symbol (Cherlin 2004; Edin and Kefalas 2005). Because individuals must now fulfill these prerequisites prior to marriage, a new developmental stage has appeared in the life course concomitant with marriage delay: emerging adulthood (Arnett 2000).

2.3 Life Course Perspective, Emerging Adulthood, and Attitude Formation

The life course perspective is an approach used to conceptualize and explain the processes of aging and human development throughout the life course; it considers age, social ties and relationships, timing and duration of roles and transitions, human agency, and the social, cultural, geographical, and historical contexts in which individuals age and develop (Elder and Giele 2009; Holstein and Gubrium 2000; Hutchison 2010). Over the decades, scholars have attempted to name and describe various life stages in which major changes occur; these socially constructed life stages are used to interpret where individuals are in their physical and psychological development compared to others in similar contexts, such as in the same age group (Hillier and Barrow 2011; Holstein and Gubrium 2000; Kendall 2013). Life stages are often based on social and economic circumstances and their conceptualization reflects larger social structural changes over the course of history; for this reason life stages can be redefined or removed, and new life stages can be added over time (Elder and Giele 2009; Furstenberg,

Rumbaut, and Setterson 2005; Hillier and Barrow 2011; Kendall 2013). This is apparent in the fact that life stages look very different for individuals born at different time periods (Elder, Johnson, and Crosnoe 2003).

Traditional life stages include those such as infancy (birth to age 2), early childhood (ages 3 to 5), middle childhood (ages 6 to 11), adolescence (ages 12 to 19), young adulthood (ages 20 to 39), middle adulthood (ages 40 to 59), and late adulthood (ages 60 and over) (Hillier and Barrow 2011; Kendall 2013; Rice 1992). It should be noted that although these stages are often described by a range of ages, their age parameters are only loosely defined and the characteristics of each life stage are not necessarily age-specific (Elder and Giele 2009). Life stages commonly revolve around and distinguish physical developments (e.g. puberty), and life transitions (i.e. getting married, having a child). Indeed, transitions mark the movement from one stage to the next, producing life trajectories in one's life course development (Elder 1998; Elder and Giele 2009).

Life stages are dynamic and are added, subtracted, and redefined as social structure changes. For example, middle adulthood has not always been considered a life stage, as life expectancy used to be much shorter (Kendall 2013). An additional example is that late adulthood has recently been broken down into three separate stages—*young-old* (ages 65 to 75), *old-old* (ages 75 to 90), and *oldest-old* (ages 90 and up)—reflecting the differences between those age groups as life expectancy has increased (Hillier and Barrow 2011). Another life stage that has been added into the life course is *emerging adulthood*, which follows adolescence and precedes young adulthood (Arnett 2000).

In the past, the life stage of young adulthood immediately followed the life stage of adolescence. Adolescence, which was not conceptualized as a life stage until the early 1900s, is

characterized by physical maturation (puberty and brain growth) and psychological change (increased cognitive ability and identity development and self-discovery), accompanied by physical, psychological, and social vulnerability (Furstenberg et al. 2005; McCarter 2010). Adolescents usually live at home with their parents or guardians, attend school, and are not considered to be full adults, nor are they considered to be children (Kendall 2013). Young adulthood, which is characterized by independence, marriage, children, and being employed, used to come directly after adolescence (Arnett 2000; Kendall 2013). However, now that many individuals in their late teens and early twenties postpone marriage and children to attend school and participate in other explorative opportunities, most do not feel as though they are adults yet and believe that they are still on their way to adulthood (Arnett 2000). These individuals, roughly aged 18-25 and often older, are called emerging adults.

Arnett (2000) coined the term “emerging adulthood” based on his empirical research to represent the developmental stage between adolescence and young adulthood. The distinct life stage of emerging adulthood is most evident in younger cohorts who turned 18 years old in the late twentieth century or later. This stage can be understood as a product of the Second Demographic Transition and the delaying of marriage (Arnett 2000; Carroll et al. 2007). The five main features of emerging adulthood are identity exploration, instability, self-focus, feeling in-between (distinct period between the adolescent life stage and the young adulthood life stage), and access to possibilities (Arnett 2004). Emerging adulthood is a time for experimentation, as it offers a temporarily dynamic lifestyle with no serious life commitments or responsibilities outside of oneself (Arnett 2000). As a “volitional stage,” emerging adulthood provides time for an exploration of “a variety of possible life directions in love, work, and world-views” (2000:469-470); it is characterized as a “self-oriented period” where individuals grasp at their

independence while also having their parents as a strong source of protection and support (Carroll et al. 2007:370).

During emerging adulthood, individuals work on developing autonomy so that they can move onto young adulthood; this means they must achieve financial independence, independent decision-making, and increased responsibility (Arnett 1997; Arnett 1998; Arnett 2000; Greene, Wheatley, and Aldava 1992; Scheer, Unger, and Brown 1994). Once an emerging adult feels self-sufficient, they will be ready to move onto young adulthood (Arnett 2000). In other words, recentering, which Tanner defines as “a shift in power, agency, responsibility, and dependence between emerging adults and their social contexts,” is the primary task for emerging adults (2006:27); during emerging adulthood, individuals must recenter themselves from a position of dependence to independence, and from parental regulation to self-regulation (Tanner 2006). These aspects of self-sufficiency that emerging adults hope to acquire align closely with the reasons behind delaying marriage. Emerging adults want to be finished with school, have a job, and be financially independent (Sassler and Schoen 1999). In addition to the process of becoming autonomous, emerging adults also partake in identity exploration. Before unraveling what identity exploration means for emerging adults, it is important to note that not all 18 to 25 year olds experience emerging adulthood in quite the same way (Arnett 2000; Hamilton and Hamilton 2006).

Similar to the other life stages, emerging adulthood is marked by heterogeneity in that individuals experience it differently and at varying lengths, with some reaching the next life stage before others (Arnett 2000; Hamilton and Hamilton 2006). According to Tanner (2006), the difference in emerging adulthood and other life stages lies in varying developmental histories that have or have not prepared individuals with resources that will aid them in becoming

autonomous; access or non-access to financial and social resources will determine the extent to which one experiences emerging adulthood. In fact, some resources both influence an individual's starting point in emerging adulthood and promote increased levels of development throughout emerging adulthood (2006). The context in which an individual experiences emerging adulthood is also essential in explaining the variation in individual experiences—the major contexts being college and non-college (2006). College-student and non-college-student emerging adults do share some characteristics such as instability, increased self-governance, feeling in-between, and exploration (2006). However, the “institutional contexts are established to support the developmental needs of age groups,” meaning that colleges often give more developmental support to college-student emerging adults than non-college-student emerging adults receive outside of the college institution; thus, emerging adulthood is most commonly connected to the college-context (2006:41).

Though the college-context of emerging adulthood is not characteristic of all 18-25 year olds, it is apparent that it is representative for many, especially as the number of individuals continuing their education after high school follows its current trajectory (Arnett 2004; Tanner 2006). According to the National Center for Education Statistics (2014a; 2014b), in 2012, approximately 17.7 million students were enrolled in a postsecondary degree-granting program, compared to 12 million students in 1990, and 2.9 million students were enrolled in a postbaccalaureate degree-granting program, compared to 1.9 million in 1990. Arnett (2000) says that some individuals may not have the opportunity to explore their identities because they have taken on parental or marital roles earlier in the lifespan; some lack the economic means to ascertain educational and life experiences (e.g. traveling) that would lead to identity exploration; and some may opt out of identity exploration because they simply do not desire it or feel they

have already found themselves earlier in the lifespan. Emerging adulthood within the college-context is most characteristic of middle- and upper-class individuals; those who cannot afford college or other opportunities to explore are typically from working class and poor families (Arnett 2000; Arnett 2004; Tanner 2006). Individuals who do not have the opportunities of emerging adulthood to increase their level of education or self-explore usually take on familial responsibilities earlier in life, such as having children (Hamilton and Hamilton 2006).

Additionally, many of them, though not all, have lower income due to less educational attainment and may move from one low-skill job to the next with little directionality (2006). For this reason, marital delay operates quite differently for 18-25 year olds who do have the opportunity to self-explore and increase their level of education than for those who do not have that opportunity or choose not to take it due to the various reasons previously stated. Economic growth and the cultural shift in values discussed earlier have much to do with this. Emerging adults who do have those opportunities will most likely postpone marriage because they are busy trying to reach financial stability through their education prior to marriage; whereas emerging adults who do not have those opportunities will most likely postpone marriage—or may not marry at all—because they are less likely to be financially stable and may not be taking the steps or have the resources to get there (Arnett 2000; Cherlin 2004; Hymowitz, Carroll, Wilcox, and Kaye 2013).

Emerging adults, particularly within the college-context, experience a lot of changes as they experiment with aspects of love, work, and world-views (Arnett 2000). For example, Arnett describes emerging adulthood as a volatile residential period, meaning that emerging adults often move from place to place, perhaps living on their own at times and with their parents at others (2000; Arnett 2004). Emerging adults may spend time seeking a variety of sexual experiences

and/or dating many people to see what types of characteristics they find important in a potential long-term partner without the pressure of having to settle down, especially because of the increasing normalization of premarital cohabitation, premarital sex, and ease of access to birth control (Arnett 2000). During this time, they also receive an education, changing their major until they find one that suits them—some even attending graduate school in addition to their undergraduate education; and may try out different jobs that will prepare them for a career and future work role, deciding where their skills are and what type of work is most satisfying (2000). Additionally, emerging adults may find themselves exploring a variety of worldviews, often introduced to them through their education or through traveling (2000). Though this developmental stage can be exciting, it may also be a time of failure, isolation, and discontent as emerging adults see what love, work, and worldview identities work best for them (2000).

An important aspect of emerging adulthood is attitude formation. An attitude is defined as, “a set of [positive or negative] beliefs that we hold in relation to an attitude object, where an attitude object is a person, thing, event or issue” (Crisp and Turner 2007:73). Attitudes are formed throughout one’s lifetime and are affected by how one perceives others think of the subject; the beliefs that inform attitudes are based on direct observation, acceptance of information from another person or group of people, and inference of new beliefs based on observations, and current knowledge (Pryor and Pryor 2005). During emerging adulthood, identity exploration leads to the questioning and possible reconstruction of current belief systems about an array of subjects and formation or reformation of new attitudes based on those reconstructed beliefs that will eventually motivate subsequent decisions and behavior (Arnett 2000; Fazio 1986).

Fishbein and Ajzen’s reasoned action approach, which is based on their theories of

reasoned action and planned behavior, postulates a relationship between attitudes and behaviors (Ajzen 1991; Fishbein and Ajzen 1975; Fishbein and Ajzen 2011). This approach states that an attitude toward a behavior is formed dependent upon beliefs about a behavior; these beliefs include a perceived norm—“perceived social pressure to engage or not engage in the behavior”—and perceived behavioral control—“beliefs about personal and environmental factors that can help or impede their attempts to carry out the behavior”; attitudes (based on beliefs, including perceived norm and perceived behavioral control) toward a behavior “lead to the formation of a behavioral intention, or a readiness to perform the behavior”; stronger behavioral intention increases the likelihood of performing the actual behavior (Fishbein and Ajzen 2011:20-21). Additionally, some researchers suggest that attitude consistency is more likely to be predictive of attitudes influencing actual behaviors (Manis 1978; Norman 1975). Identifying how emerging adults forecast their future roles by assessing their attitudes—and consistency of attitudes—toward work, family, and other aspects of life is essential to predicting their life outcomes, as their attitudes about roles are often “important precursors to the actual management of these roles once they are acquired” (Kerpelman and Schvaneveldt 1999:189). Feelings about love, relationships, and marriage are among the many beliefs and attitudes that emerging adults will question and reform (Arnett 2000).

2.4 Marital Attitudes and Variation Across Groups

Part of identity exploration in emerging adulthood is forming attitudes toward marriage and long-term relationships (Arnett 2000). Based on Fishbein and Ajzen’s (2011) reasoned action approach and marriage research, it can be stated that attitudes and beliefs about marriage and long-term relationships often affect and help predict actual behavior surrounding marriage and long-term relationships (Axinn and Thornton 1992; Clarkberg, Stolzenberg, and Waite 1995;

Hall 2006; Sassler and Schoen 1999). For example, Clarkberg et al. asked respondents in their study to rate the level of importance (“very important,” “somewhat important,” or “not important”) of “finding the right person to marry and having a happy family life”; they compared these responses to actual union formation and discovered that positive attitudes toward marriage “increase the probability of union formation in a given year quite substantially” (1995:615-620). Similarly, Axinn and Thornton asked respondents in their study to agree or disagree with the statement, “Married people are usually happier than those who go through life without getting married,” and to answer the question, “How much would it bother you if you... did not get married?”; Young women were more likely to get married if they agreed with the first statement and both young women and men were more likely to get married if they thought they would be bothered if they did not get married (1992:363).

Other attitudes toward marriage include beliefs about the benefits and costs of marriage, desire or disinclination to marry, level of importance of marriage, expectations of if and when marriage should occur, and what factors are involved in being ready for marriage (Axinn and Thornton 1992; Carroll et al. 2007; Carroll, Badger, Willoughby, Nelson, Madsen, and McNamara Barry 2009; Clarkberg et al. 1995; Crissey 2005; Dennison and Koerner 2006; Fowers, Lyons, Montel, and Shaked 2001; Gassanov et al. 2008; Laner and Russell 1994; Larson and Lamont 2005; Mayhay and Lewin 2007; Oropesa 1996; Peake and Harris 2002; Plotnick 2007; Sassler and Schoen 1999; Steinberg, Davila, and Fincham 2006; Willoughby 2010). Various attitudes toward marriage are critical because they are implicative of future behavior (Axinn and Thornton 1992; Clarkberg et al. 1995; Fishbein and Ajzen 2011; Hall 2006; Sassler and Schoen 1999). Behaviors regarding long-term relationships and marriage are important because, as stated previously, involvement in a long-term relationship, particularly marriage, is

one of the many predictors of happiness, life-satisfaction, health, and well-being (Evans and Kelley 2002; Kim and McKenry 2002; Musick and Bumpass 2012; Stack and Eshleman 1998; Umberson et al. 2010; Vanassche et al. 2012).

Several scholars have assessed attitudes toward marriage during emerging adulthood using cross-sectional data. The majority of emerging adults have positive attitudes toward marriage and long-term relationships despite wanting to wait to marry until after their education is complete (Carroll et al. 2007; Hall 2006; Kefalas, Furstenberg, Carr, and Napolitano 2011; Muraco and Curran 2012; Shurts and Myers 2012; Willoughby 2010). Researchers have identified two predominant groups of college-attending emerging adults in terms of attitudes toward marriage and marital delay: those who desire to marry earlier and those who desire to marry later (Carroll et al. 2007; Kefalas et al. 2011). According to these studies, emerging adults who desire to marry later in life are more likely to have an increased frequency of risk-taking behaviors and an acceptance of nonmarital cohabitation (Carroll et al. 2007; Willoughby and Dworkin 2009). This may be because those who are ready to get married in the near future are preparing to increase their level of responsibility and may therefore wish to partake in fewer risk-taking behaviors (Willoughby and Dworkin 2009). It is also important to note that the White emerging adults are more likely than emerging adults of color to demonstrate less risk-taking if they wish to get married (2009).

The marital attitudes of emerging adults also vary across sexual experience, gender, family structure, educational attainment and aspirations, and race. Sexual experience is positively associated with the level of importance placed on marriage, though “high-frequency engagers were also the most likely to say that being single had more advantages than being married” (Willoughby 2012:108). Marital attitudes also differ by gender. Women typically have more

positive attitudes toward marriage than men (Blakemore, Lawton, and Vartanian 2005; Carroll et al. 2007; Shurts and Myers 2012; Willoughby 2010; Willoughby and Dworkin 2009). Women also place more importance on marriage, expecting to marry at higher rates and at an earlier age than men, perhaps because many women perceive more social pressure to marry before age 30 than men (Arnett 2004; Willoughby 2010).

Additionally, marital attitudes vary by family structure. Children from divorced families, compared to continuously married families, are more likely to hear negative messages about marriage and therefore have more negative attitudes towards marriage; however, they are not likely to dismiss marriage completely and parental remarriage mitigates the negative effect parental divorce has on children's marital attitudes (Axinn and Thornton 1996; Burgoyne and Hames 2002; Shurts and Myers 2012; Simons, Burt, and Tambling 2013). Children from continuously married families are also more committed to the institution of marriage than children from single-parent families; children of single-parent and blended (i.e. remarried) families are more likely to feel unprepared for marriage, possibly due to increased experiences of parental marital conflict (Martin, Specter, Martin, and Martin 2003; Simons et al. 2013).

Educational attainment and aspirations play a role in marital attitudes as well, particularly in terms of marital readiness, age expectations, and desire to marry. Many emerging adults assign higher priority to increasing educational attainment rather than getting married and think of educational attainment completion as a requirement for marital readiness (Barber and Axinn 1998; Carroll et al. 2007; Carroll et al. 2009; Gassanov et al. 2008; Sassler and Schoen 1999; Willoughby 2010). Aspirations for higher educational attainment are thusly correlated with expecting to marry later in life because marriage is delayed until educational attainment is complete (Willoughby 2010). Once individuals are finished with their educational careers and

have begun working, there is an increase in the expectancy of marriage as they leave their student role and begin to appropriate adult roles such as spouse and parent (Gassanov et al. 2008).

Furthermore, marital attitudes vary by race. Emerging adults of color, particularly Black individuals, are less likely to have positive attitudes toward marriage than White emerging adults (Shurts and Myers 2012). As discussed earlier, this is apparent in the rates at which women marry in the United States; though Hispanic and Asian women marry at rates similar to White women, Black women marry at significantly lower rates: 74 percent of White women and 47 percent of Black women are married by age thirty (Copen et al. 2012). In examining both adolescents and emerging adults, researchers suggest that Black individuals have lower expectations to marry compared to White individuals and that that White adolescents place more importance on marriage than adolescents of color (Crissey 2005; Gassanov et al. 2008; Hoffnung 2004; Manning and Smock 2002; Willoughby 2010).

Current research on marital attitudes, particularly marital attitude formation during emerging adulthood, has a major limitation. It lacks a longitudinal perspective and fails to account for the probability that attitudes about marriage and relationships among emerging adults change over time (Tanner 2006; Willoughby 2010). Previous research has shown that other types of attitudes, such as attitudes toward religion and sex, change throughout emerging adulthood, so it is likely that attitudes toward marriage change as well (Arnett 2004; Koenig, McGue, and Iacono 2008; Lefkowitz 2005; Lefkowitz and Gillen 2006). This major limitation in current research to assess marital and long-term relationship attitude change seems extremely problematic if emerging adulthood is known for variation, self-exploration, questioning of worldviews and belief systems, and an overall theme of experimentation and change; it is only

reasonable to expect that marital attitudes will be questioned and possibly modified over the course of the emerging adulthood life stage, just as other attitudes (e.g. attitudes toward religion and sex) are questioned and modified.

2.5 Attitude Change

Attitude change is defined as, “a modification of an individual’s general evaluative perception of a stimulus or set of stimuli...[including] changes for any reason in a person’s general and enduring favorable or unfavorable regard for some person, object, or issue” (Cacioppo, Petty, and Crites, Jr. 1994:261). As stated, research on marital and long-term relationship attitude change during emerging adulthood is absent in the existing literature. Theoretical perspectives of marital and long-term relationship attitude change are also absent. However, theoretical perspectives about attitude change along other dimensions of life—such as gender ideology—offer insight into how attitudes toward marriage and long-term relationships change; these theoretical explanations for attitude change include interest-based explanations and exposure-based explanations, which utilize theories of socialization and social learning (Bandura 1971; Bolzendahl and Myers 2004; Carlson and Lynch 2013; Kroska and Elman 2009).

Interest-based explanations for attitude change indicate that individual interests and goals stimulate attitude development; as one’s interests and goals change, so will one’s attitudes (Bolzendahl and Myers 2004; Carlson and Lynch 2013; Kroska and Elman 2009). An interest-based explanation of marital and long-term relationship attitude change across emerging adulthood could be the following: an 18 year-old woman places little importance on marriage at this time in her life because she is interested in going to college and plans to postpone marriage until after she has finished school; however, she becomes pregnant at age 20, can no longer afford to go to school, and is now interested in raising her child full-time alongside her child’s

father; thus, she may now change her attitude toward the importance of marriage to reflect her change in interests.

Exposure-based and socialization explanations for attitude change suggest that exposure to ideas increases the likelihood that individuals will incorporate those ideas as their own; attitudes are then reshaped as individuals learn new information and encounter new experiences (Bolzendahl and Myers 2004; Carlson and Lynch 2013; Kroska and Elman 2009). Along these same lines, social learning theory posits that new attitudes and patterns of behavior “can be acquired through direct experience or by observing the behavior of others,” also known as “modeling” (Bandura 1971:3-5). Exposure-based, socialization, and social learning explanations of attitude change make the most theoretical sense for explaining marital and long-term relationship attitude change across emerging adulthood. Two main features of emerging adulthood are identity exploration and access to a plethora of possibilities (Arnett 2004). Thus, emerging adults actively seek new experiences, which, in turn, may lead to attitude change as emerging adults encounter new situations and adopt new ideas that they have learned as their own. For example, experiencing the divorce of a parent, learning about alternatives to marriage (i.e. cohabitation), or observing the marital conflict of one’s role models during emerging adulthood may all alter one’s attitudes toward marriage or long-term relationships based on exposure-based, socialization, and social learning explanations of attitude change.

Willoughby, a family scholar, states that there is an “implicit assumption in the developmental literature that marital attitudes are static,” though there is no research guiding that assumption (2010:1305). This assumption is problematic because it limits investigation of emerging adults’ marital and long-term relationship attitudes if possible dimensions of marital attitude change over time are ignored (2010). To address that problematic assumption,

Willoughby (2010) studied adolescents' attitudes about marriage and found that their attitudes did change over the course of four years of high school, with many of them placing an increasing amount of importance on marriage during each subsequent year. If research suggests that marital attitudes change across adolescence, it is also likely that attitudes toward marriage and long-term relationships change across emerging adulthood.

Numerous theories regarding attitude change across the life course explain why assessing attitudes in emerging adulthood is just as important as examining them in adolescence or in any other life stage. The life-long openness viewpoint and the life-cycle viewpoint both advocate the ability to change attitudes during all life stages, implying that attitude change during emerging adulthood is important in its own right as a life stage; the impressionable years viewpoint and the persistence viewpoint both support the notion that attitude formation and change, caused by socialization and increased perception of social pressure to change, is most likely to occur during pre-adult (particularly emerging adulthood) years, thus marking attitude change during these years as essential to the life course (Sears 1981; Visser and Krosnick 1998).

Research on other types of attitude change illuminate possible indicators of marital attitude change. Longitudinal research on attitudes toward fertility, mother's employment, sexual permissiveness, gender ideologies, and egalitarianism—which are also dimensions of life that have been influenced by the Second Demographic Transition and particularly impacted in terms of women's economic independence, increased educational attainment, and delaying of marriage and fertility—show that age, gender, race, socioeconomic status, number of siblings, relationship status, church attendance, religiosity, educational attainment, sexual behavior, and initial attitudes are all indicators of attitude change (Brewster and Padavic 2000; Hayford 2009; Kroska and Elman 2009; Lefkowitz 2005; Patrick, Heywood, Simpson, Pitts, Richters, Shelley, and

Smith 2013; Poteat and Anderson 2012; Sennott and Yeatman 2012; Wright 2013). These indicators of attitude change for other types of attitudes clearly affect potential processes associated with attitude change in some way, and it is reasonable to believe that they are likely to be associated with marital attitude change as well. Because there is no previous research on indicators of marital attitude change, analyzing the relationship between these possible indicators and marital attitude change is largely exploratory. Emerging adulthood, in addition to attitude formation during this time period, is still largely understudied and unknown due to its relatively new position in the life course, thus empirical research is needed (Arnett 2000). Additionally, research on attitudes toward marriage and long-term relationships lacks a longitudinal analysis of how attitudes change over time (Willoughby 2010). To address this absence of information, longitudinal data from Center on Young Adult Health and Development's College Life Study is used to investigate marital and long-term relationship attitude change across emerging adulthood.

3 METHODS

3.1 Data

The College Life Study is a ten-year longitudinal prospective panel study that examines the prevalence, correlates, and consequences of health-risk behaviors among college students during the transition from adolescence to young adulthood. The College Life Study's sample, which is a longitudinal panel sample, consists of 1,253 college students who attended the University of Maryland at College Park, a large, public university, starting in 2004. Using mixed-mode survey research techniques, respondents were interviewed annually either face-to-face, by telephone, or by Skype, in addition to a short paper-and-pencil questionnaire (an online questionnaire was administered to those who completed their interviews over the phone or Skype) that asked them about more sensitive topics. Each year the same sample of respondents

were recruited by email, phone, postal-mail, and Facebook to participate in the study again by scheduling an interview with a research assistant. Respondents chose whether they completed the survey at the office or over the phone or Skype. The interviews typically lasted between an hour-and-a-half to two hours and were administered using a very complex interview schedule.

Additionally, locator updates were completed on several occasions. Locator updates consisted of short emails or letters that thank the respondents for their continued participation in the study and asked them to update their contact information via an online survey, by mail, or by phone.

The participants in the College Life Study were first contacted at freshman orientation; 3,849 incoming first-time, first-year students, ages 17 to 19 were recruited to complete a screening survey, 89 percent (n = 3413) of which completed the screener (Arria, Caldeira, Vincent, O'Grady, and Wish 2008; Center for Young Adult Health and Development 2013). Of the 89 percent who participated in the screening survey, 1,449 students were selected to continue in the College Life Study after stratifying them by race and sex to represent the first-year class of 2004 (Arria et al. 2008). The researchers also oversampled students who had used drugs at some point in their lifetime, as the study was predominantly focused on health-risk behaviors (Caldeira, O'Grady, Vincent, and Arria 2012). Of the 1,449 students, 1,253 students completed the baseline interview and were re-interviewed on an annual basis for a total of eight years (Center for Young Adult Health and Development 2013). The sample of 1,253 students is relatively representative of the U.S. population of 17 to 19 year-olds during the early 2000's in terms of sex and race. The College Life Study sample consists of 48.5 percent males and 51.5 percent females; while, according to the 2000 Census, the U.S. population of 17 to 19 year-olds consisted of 51.3 percent males and 48.7 percent females (Bureau of the Census 2000). Additionally, the College Life Study sample consists of 73.1 percent White individuals, 9.3

percent Black or African American individuals, 14.9 percent individuals of another race, and 2.8 percent multiracial individuals; while the U.S. population of 17 to 19 year-olds consisted of 69.8 percent White individuals, 14.4 percent Black or African American individuals, 12.8 percent individuals of another race, and 3.0 percent multiracial individuals (2000). Of the 1,253 students who completed the baseline interview, 91.1 percent (n = 1142) completed the interview in wave 2, 87.9 percent (n = 1101) in wave 3, 87.5 percent (n = 1097) in wave 4, 81.3 percent (n = 1019) in wave 5, 79.8 percent (n = 1000) in wave 6, 78.4 percent (n = 982) in wave 7, and 75.9 percent (n = 951) in wave 8 (Center for Young Adult Health and Development 2013). Of all 1,253 respondents, 69.0 percent (n = 864) completed all eight of the interviews and 82.7 percent (n = 1036) completed five or more of the interviews (Center for Young Adult Health and Development 2013). Oversampling for drug use could pose a problem for the current study because it could make the sample less representative of the emerging adult population. Additionally, convenience samples are not generalizable, and thus the findings may not be representative of all emerging adults. However, as discussed previously, not all 18-25 year-olds experience emerging adulthood, and those that experience it do not always experience it in the same way. Thus the College Life Study sample will be sufficient in providing a preliminary understanding of how attitudes towards marriage operate over time for some emerging adults.

For this study, only the first five waves of data will be used. This is because the attitude variables of interest were not recorded in the same way during waves 6-8. Only participants who completed all of the first five interviews and who have valid responses recorded for each of the three attitude variables are included. Of the original 1,253 participants in the sample, 76.1 percent (n = 954) completed the first five waves of interviews and provided valid responses for the marital attitude variable; 75.4 percent (n = 945) completed the first five waves of interviews

and provided valid responses for the long-term relationship attitude variable; and 75.7 percent (n = 948) completed the first five waves of interviews and provided valid responses for relationship importance variable. Participants who identified as having ever been married (including currently married, separate/divorced, and widowed) during any of the first five waves are excluded. Only never married participants are included because those who are married or have been married before have clearly already desired marriage to some extent. Additionally, one of the basic tenets of emerging adulthood is the postponement of marriage and thus individuals who have not yet married are of most interest. Of the original 1,253 participants in the sample, only 1.6 percent (n = 16) had ever been married and are thus excluded. After removing those who had ever been married, the total sample for the marital attitude variable is 939; the total sample for the long-term relationship variable is 930; and the total sample for the importance variable is 933.

3.2 Measures

Descriptive statistics for all variables are displayed for each sample in Tables 2, 3, and 4. There are three primary dependent variables for this study: (a) respondent's desire for marriage, (b) desire for long-term relationship, and (c) the importance of marriage and long-term relationships to the respondent. Respondents were asked, "What are your thoughts about eventually settling down into a significant relationship, and/or getting married?" for which they gave an open-ended answer that was then coded by the interviewer in three separate ways. First, the response was coded in terms of the participant's desire for marriage using the codes "yes," "no," and "unsure." This variable has been recoded into two dichotomous variables: The first dichotomous variable is coded as 0 if the individual does not desire marriage or is unsure about her or his desire, and coded as 1 if the individual desires marriage; Second, the response was coded in terms of the participant's desire for a long-term relationship using the codes "yes,"

“no,” and “unsure.” This variable it has been recoded as 0 if the individual does not desire a long-term relationship or is unsure about her or his desire, and coded as 1 if the individual desires a long-term relationship; Third, the response was coded in terms of the importance the respondent places on marriage and long-term relationships; this is an ordinal level variable, and is coded as such: (0) The individual places no importance on marriage or long-term relationships; (1) the individual is unsure about the amount of importance she or he places on marriage or long-term relationships; (2) the individual believes marriage or long-term relationships are somewhat

Table 2 Descriptive statistics for all variables in the desire for marriage analysis

| | <i>M</i> | <i>SD</i> | Range |
|--|-----------|-----------|----------------|
| <i>Endogenous variables</i> | | | |
| Desires marriage | | | |
| Wave 1 | 0.89 | 0.31 | |
| Wave 2 | 0.89 | 0.31 | |
| Wave 3 | 0.91 | 0.29 | |
| Wave 4 | 0.93 | 0.26 | |
| Wave 5 | 0.93 | 0.25 | |
| <i>Time-invariant exogenous variables</i> | | | |
| Female | 0.55 | 0.50 | |
| Black/African American | 0.10 | 0.29 | |
| Multiracial | 0.03 | 0.18 | |
| Other race | 0.14 | 0.34 | |
| Mean neighborhood income | 72,986.10 | 32,940.95 | 20,291-298,653 |
| Homosexual, bisexual, or unsure of sexual orientation | 0.04 | 0.19 | |
| Total number of siblings | 1.70 | 1.06 | 0-7 |
| Experienced parental separation/divorce prior to emerging adulthood (EA) | 0.19 | 0.39 | |
| Experienced parental remarriage prior to EA | 0.10 | 0.30 | |
| Experienced parental death prior to EA | 0.04 | 0.19 | |
| Ever been in love or a relationship | 0.85 | 0.35 | |
| Ever had arguments/problems with boyfriend/girlfriend | 0.71 | 0.45 | |
| Religious attendance | 2.80 | 2.20 | 0-8 |
| Religious importance | 1.45 | 1.07 | 0-3 |
| Agnostic or Atheist | 0.11 | 0.32 | |
| Jewish or Muslim | 0.19 | 0.40 | |
| Other religion | 0.05 | 0.22 | |
| Multiple religions or no preference of religion | 0.08 | 0.27 | |
| Still enrolled in school after wave 4 | 0.38 | 0.48 | |
| <i>Time-varying exogenous variables</i> | | | |
| No plans to pursue further education | | | |
| Wave 1 | 0.13 | 0.34 | |
| Wave 2 | 0.12 | 0.32 | |
| Wave 3 | 0.14 | 0.35 | |
| Wave 4 | 0.13 | 0.33 | |
| Wave 5 | 0.26 | 0.44 | |
| Total number of sex partners | | | |
| Wave 1 | 3.59 | 9.28 | 0-99 |
| Wave 2 | 3.74 | 3.86 | 0-40 |
| Wave 3 | 4.68 | 4.86 | 0-60 |
| Wave 4 | 6.00 | 5.72 | 0-50 |
| Wave 5 | 6.65 | 7.97 | 0-100 |

important; and (3) the individual believes marriage or long-term relationships are very important. Inter-coder reliability was not measured for this variable, however, interviewers regularly reviewed together which responses elicited which codes in order to ensure accuracy. (Source for questions/codes: CYAHD 2004-2012 interview schedules.)

Table 3 Descriptive statistics for all variables in the desire for long-term relationships analysis

| | <i>M</i> | <i>SD</i> | Range |
|---|-----------|-----------|----------------|
| <i>Endogenous variables</i> | | | |
| Desires long-term relationship | | | |
| Wave 1 | 0.92 | 0.28 | |
| Wave 2 | 0.90 | 0.30 | |
| Wave 3 | 0.90 | 0.30 | |
| Wave 4 | 0.95 | 0.21 | |
| Wave 5 | 0.95 | 0.23 | |
| <i>Time-invariant exogenous variables</i> | | | |
| Female | 0.55 | 0.50 | |
| Black/African American | 0.10 | 0.29 | |
| Multiracial | 0.03 | 0.18 | |
| Other race | 0.14 | 0.34 | |
| Mean neighborhood income | 72,996.24 | 32,820.13 | 20,291-298,653 |
| Homosexual, bisexual, or unsure of sexual orientation | 0.04 | 0.19 | |
| Total number of siblings | 1.69 | 1.05 | 0-7 |
| Experienced parental separation/divorce prior to EA | 0.19 | 0.39 | |
| Experienced parental remarriage prior to EA | 0.10 | 0.30 | |
| Experienced parental death prior to EA | 0.04 | 0.19 | |
| Ever been in love or a relationship | 0.86 | 0.35 | |
| Ever had arguments/problems with boyfriend/girlfriend | 0.71 | 0.45 | |
| Religious attendance | 2.80 | 2.20 | 0-8 |
| Religious importance | 1.45 | 1.07 | 0-3 |
| Agnostic or Atheist | 0.11 | 0.32 | |
| Jewish or Muslim | 0.19 | 0.40 | |
| Other religion | 0.05 | 0.22 | |
| Multiple religions or no preference of religion | 0.07 | 0.26 | |
| Still enrolled in school after wave 4 | 0.38 | 0.48 | |
| <i>Time-varying exogenous variables</i> | | | |
| No plans to pursue further education | | | |
| Wave 1 | 0.13 | 0.34 | |
| Wave 2 | 0.12 | 0.32 | |
| Wave 3 | 0.14 | 0.35 | |
| Wave 4 | 0.12 | 0.33 | |
| Wave 5 | 0.26 | 0.44 | |
| Total number of sex partners | | | |
| Wave 1 | 3.59 | 9.31 | 0-99 |
| Wave 2 | 3.74 | 3.86 | 0-40 |
| Wave 3 | 4.67 | 4.86 | 0-60 |
| Wave 4 | 6.00 | 5.73 | 0-50 |
| Wave 5 | 6.67 | 7.99 | 0-100 |

For the first research question (How do attitudes towards marriage and long-term relationships change over time during emerging adulthood?), the independent variable is the wave number (1-5). For the second research question (What are the predictors of marital and long-term relationship attitude change for emerging adults?), the independent variables are sex at wave 1, race at wave 1, socioeconomic status prior to wave 1, sexual orientation at wave 1, number of siblings at wave 1, experience of parental separation or divorce prior to emerging adulthood (collected during wave 2), experience of parental remarriage prior to emerging

Table 4 Descriptive statistics for all variables in the relationship importance analysis

| | <i>M</i> | <i>SD</i> | Range |
|---|-----------|-----------|----------------|
| <i>Endogenous variables</i> | | | |
| Importance of relationships | | | |
| Wave 1 | 2.29 | 0.66 | |
| Wave 2 | 2.30 | 0.68 | |
| Wave 3 | 2.40 | 0.66 | |
| Wave 4 | 2.60 | 0.60 | |
| Wave 5 | 2.60 | 0.62 | |
| <i>Time-invariant exogenous variables</i> | | | |
| Female | 0.55 | 0.50 | |
| Black/African American | 0.10 | 0.30 | |
| Multiracial | 0.03 | 0.18 | |
| Other race | 0.14 | 0.34 | |
| Mean neighborhood income | 73,079.81 | 33,014.28 | 20,291-298,653 |
| Homosexual, bisexual, or unsure of sexual orientation | 0.04 | 0.19 | |
| Total number of siblings | 1.69 | 1.06 | 0-7 |
| Experienced parental separation/divorce prior to EA | 0.19 | 0.40 | |
| Experienced parental remarriage prior to EA | 0.10 | 0.30 | |
| Experienced parental death prior to EA | 0.04 | 0.19 | |
| Ever been in love or a relationship | 0.85 | 0.35 | |
| Ever had arguments/problems with boyfriend/girlfriend | 0.71 | 0.45 | |
| Religious attendance | 2.80 | 2.20 | 0-8 |
| Religious importance | 1.45 | 1.07 | 0-3 |
| Agnostic or Atheist | 0.11 | 0.32 | |
| Jewish or Muslim | 0.19 | 0.40 | |
| Other religion | 0.05 | 0.22 | |
| Multiple religions or no preference of religion | 0.08 | 0.27 | |
| Still enrolled in school after wave 4 | 0.38 | 0.48 | |
| <i>Time-varying exogenous variables</i> | | | |
| No plans to pursue further education | | | |
| Wave 1 | 0.13 | 0.34 | |
| Wave 2 | 0.12 | 0.32 | |
| Wave 3 | 0.14 | 0.35 | |
| Wave 4 | 0.12 | 0.33 | |
| Wave 5 | 0.26 | 0.44 | |
| Total number of sex partners | | | |
| Wave 1 | 3.60 | 9.31 | 0-99 |
| Wave 2 | 3.76 | 3.87 | 0-40 |
| Wave 3 | 4.69 | 4.87 | 0-60 |
| Wave 4 | 6.01 | 5.74 | 0-50 |
| Wave 5 | 6.65 | 7.99 | 0-100 |

adulthood (collected during wave 2), experience of the death of a parent prior to emerging adulthood (collected during wave 2), experience of ever having been in love or in a relationship during or prior to wave 1 (collected at wave 1), experience of ever having argued or had problems with a boyfriend or girlfriend during or prior to wave 1 (collected at wave 1), religious attendance at wave 1, importance of religion at wave 1, religious affiliation at wave 1, student status at wave 5, educational aspirations at each wave, and total number of sex partners at each wave.

Sex is a dichotomous variable, operationalized by “male” and “female,” with male set as the reference category. Race is operationalized by “White,” “Black/African American,” “other,” and “multiracial,” and is coded into three separate dichotomous variables, with White set as the reference category. Socioeconomic status is operationalized by the participant’s mean neighborhood income during their senior year in high school and is an interval-level variable. Residential neighborhood income is a good indicator of socioeconomic status because of SES segregation and clustering—individuals often live near others with the same socioeconomic status (Oakes 2012). Because mean neighborhood income is positively skewed, it is normally distributed by using its natural log. Sexual orientation is operationalized by “homosexual,” “bisexual,” “heterosexual,” and “unsure,” and is coded into a dichotomous variable where homosexual, bisexual, and unsure individuals are grouped together, with heterosexual set as the reference category. Although individuals who are “homosexual,” “bisexual,” and “unsure” may vary within their attitudes toward marriage and long-term relationships, there are very few individuals who fall into each of those categories; thus, limiting the ability to identify statistical differences. Number of siblings is an interval-level variable with a positive skew; it is thus mean-centered in order to normally distribute it.

Experience of parental separation or divorce prior to emerging adulthood, parental remarriage prior to emerging adulthood, death of a parent prior to emerging adulthood, ever having been in love or in a relationship during or prior to wave 1, and ever having argued or had problems with a boyfriend or girlfriend during or prior to wave 1 are all coded as dichotomous variables, with having never experienced such events set as the reference category. Religious attendance is an ordinal-level variable and is operationalized by (0) “never,” (1) “once a year,” (2) “more than once a year but less than once a month,” etc. Importance of religion is also an ordinal-level variable and is operationalized by (0) “not important,” (1) “slightly important,” (2) “moderately important,” and (3) “extremely important.” Religious affiliation is coded into several dummy variables, including “Agnostic or Atheist,” “Jewish or Muslim,” “other,” “multiple religions or no preference,” with “Catholic or Protestant” set as the reference category. Where or not students are still enrolled in school after the first four waves is based on their student status at wave 5, which is coded into a dichotomous variable with not being enrolled in school set as the reference category. Educational aspirations are operationalized by “plans to pursue further education,” and “does not plan to pursue further education,” with no plans set as the reference category. Total number of sex partners is an interval-level variable that includes both same-sex and opposite-sex partners, and is positively skewed; thus it is mean-centered in order to normally distribute it.

3.3 Hypotheses

Hypotheses have been constructed for the proposed research questions below.

Research Question 1. How do attitudes towards marriage and long-term relationships change over time during emerging adulthood?

Hypothesis 1.1. As time passes, respondents will be more likely to desire marriage.

Hypothesis 1.2. As time passes, respondents will be more likely to desire long-term relationships.

Hypothesis 1.3. As time passes, respondents will be more likely to place higher value on the importance of marriage and long-term relationships.

Research Question 2. What are the predictors of marital and long-term relationship attitude change for emerging adults?

Hypothesis 2.1. Sex, race, socioeconomic status, sexual orientation, number of siblings, experience of parental separation or divorce, experience of parental remarriage, experience of parental death, experience of having ever been in love or a relationship, experience of having ever had an argument or problems with a boyfriend or girlfriend, religious attendance, importance of religion, religious affiliation, student status, educational aspirations, and total number of sex partners are associated with attitude change in desire to marry.

Hypothesis 2.2. Sex, race, socioeconomic status, sexual orientation, number of siblings, experience of parental separation or divorce, experience of parental remarriage, experience of parental death, experience of having ever been in love or a relationship, experience of having ever had an argument or problems with a boyfriend or girlfriend, religious attendance, importance of religion, religious affiliation, student status, educational aspirations, and total number of sex partners are associated with attitude change in desire to pursue a long-term relationship.

Hypothesis 2.3. Sex, race, socioeconomic status, sexual orientation, number of siblings, experience of parental separation or divorce, experience of parental remarriage, experience of parental death, experience of having ever been in love or a

relationship, experience of having ever had an argument or problems with a boyfriend or girlfriend, religious attendance, importance of religion, religious affiliation, student status, educational aspirations, and total number of sex partners are associated with attitude change in the importance one places on marriage and long-term relationships.

3.4 Analytic Strategy

In order to answer the proposed research questions, two different techniques are utilized: discrete-time survival analysis and latent basis growth curve analysis. Both discrete-time survival analysis and latent basis growth curve analysis are able to assess whether or not attitude change occurs over time, in what direction it changes, and if covariates are associated with the potential change (Box-Steffensmeier and Jones 2004; Preacher, Wichman, MacCallum, and Briggs 2008). Discrete-time survival analysis is performed in STATA 13 and latent basis growth curve analysis is performed in SPSS AMOS 23.

Three sets of analyses are conducted on the dependent variables of interest: desire for marriage, desire for long-term relationships, and marriage/long-term relationship importance. Within the first two sets of analyses—based on the desire for marriage and desire for long-term relationships variables—three models are explored: the first examines change within the dependent variable using the wave number as the independent variable; the second incorporates time-invariant variables as the independent variables; the third adds in time-varying covariates. Within the third set of analyses—based on the marriage/long-term relationship importance variable—five models are explored: the first evaluates the intercept factor and the slope factor, along with their variances and covariances, as parameter estimates of change in marriage/long-term relationship importance over time; the second incorporates time-invariant covariates; the

third removes the time-invariant covariates and examines time-varying covariates; the fourth integrates both time-invariant and time-varying covariates; and the fifth model is a parsimonious model that removes any time-invariant covariates that are not significantly related to initial attitude or attitude change in the fourth model. This set of analyses is set up differently from the first two sets because growth curve analyses are more concerned with specifying models and testing model fit (Preacher et al. 2008).

The analytic strategy chosen for the first two sets of analyses, which are based on the desire for marriage and desire for long-term relationships variables, is discrete-time survival analysis. Discrete-time survival analysis offers the ability to model the likelihood of an event (e.g. desiring marriage) occurring over the course of several discretely defined points in time by using logit regression (Box-Steffensmeier and Jones 2004). It is the best analysis to use because desire for marriage and long-term relationships are dichotomous outcomes. Discrete-time analysis also offers several benefits that other regression analyses (i.e. OLS) do not (Allison 1984; Box-Steffensmeier and Jones 2004). For example, it can analyze longitudinal data, provide information on change over time not only in the sample as a whole, but also within individuals, account for right-censored and left-truncated cases; and account for both time-varying and time-invariant covariates (Allison 1984; Box-Steffensmeier and Jones 2004).

Central concepts of discrete-time survival analysis are event, risk, and hazard rate. According to Box-Steffensmeier and Jones (2004), an event is the transition from an initial state or condition to another, and risk is the probability of an initial state ending via the occurrence of said event. The hazard rate, according to Allison (1984), is the likelihood of an event occurring to an individual who is at risk for the occurrence of said event. In the current study, the event for the first major model is desiring marriage (coded as 1), where not desiring or uncertainty of

desire for marriage is regarded as a non-event (coded as 0). The event for the second major model is desiring long-term relationships (coded as 1), where not desiring or uncertainty of desire for long-term relationships is regarded as a non-event (coded as 0). At each wave, individuals are at risk of desiring marriage or of desiring long-term relationships. The hazard rate is the probability of desiring marriage or of desiring long-term relationships within a particular wave for those who have not yet desired marriage or not yet desired long-term relationships. After the hazard rates are calculated, maximum likelihood logit analysis is used to estimate the model with and without the covariates.

The analytic strategy chosen for the last set of analyses, which is based on the marriage/long-term relationship importance variable, is latent basis growth curve analysis. Growth curve analysis offers the ability to model growth in attitudes over time (Preacher et al. 2008). It is the best analysis to use because it can assess change in an ordinal-level dependent variable, while it also offers several benefits that other structural equation models (i.e. ANCOVA) do not (2008). For example, it can examine not only sample differences, but also individual differences in change over time; provide mean intercept and growth rate; and account for both time-varying and time-invariant covariates (2008). Two central concepts of growth curve analysis are the intercept factor and the slope factor. The intercept factor is the measure of the dependent variable at wave 1, while the slope factor is the rate of change in the dependent variable over time (2008).

There are several ways to model growth, such as exponential, latent basis, linear, multiphase, and quadratic (Ram and Grimm 2007). Given that this study is largely exploratory, latent basis growth curve analysis is the best model to use because, unlike linear growth curve analysis, it allows the growth pattern to be estimated directly from the data instead of setting the

slope coefficients to fixed values that model a predetermined growth pattern (2007). In all five of these models, the first and last slope coefficients are set to 0 and 4, respectively, whereas the second, third, and fourth slope coefficients are estimated by the data. The first slope coefficient is set to 0 so that the first wave of data indicates initial attitudes, and the last slope coefficient is set to 4 to specify the fifth wave of data as the last occasion of measurement (Preacher et al. 2008).

4 RESULTS

4.1 Desire for Marriage

Despite a decrease in the proportion of participants who do not desire or are unsure about their desire for marriage, the results of the discrete time survival analysis of desire for marriage suggest that the risk of desiring marriage decreases over time. Of the 939 participants in this sample, 931 participants desired marriage between wave 1 and wave 5. The life table (Table 5) describes the distribution of event occurrence (desiring marriage) over the course of the five waves. The survivor function, also represented by the Kaplan-Meier Survival Estimate (Figure 3), is the cumulative proportion of those who survive at each wave, meaning those who continue to not desire or be unsure about their desire for marriage at each wave. It shows that the proportion of participants who do not desire marriage or are unsure about their desire for marriage decreases over the course of the five waves, with 10.76 percent of the total sample not desiring or being unsure about their desire for marriage at wave 1 in contrast to 0.85 percent of the total sample at wave 5.

Table 5 Life Table

| Year | Interval | Number entering interval | Number desiring marriage | Number not desiring | Proportion of those who desire marriage | Proportion of those who do not desire marriage | Survivor Function | Hazard Ratio |
|------|----------|--------------------------|--------------------------|---------------------|---|--|-------------------|--------------|
| 1 | [1,2] | 939 | 838 | 101 | 0.89 | 0.11 | 0.11 | 1.29 |
| 2 | [2,3] | 101 | 61 | 40 | 0.60 | 0.40 | 0.04 | 0.47 |
| 3 | [3,4] | 40 | 16 | 24 | 0.40 | 0.60 | 0.03 | 0.27 |
| 4 | [4,5] | 24 | 9 | 15 | 0.38 | 0.62 | 0.02 | 0.33 |
| 5 | [5,6] | 15 | 7 | 8 | 0.47 | 0.53 | 0.01 | 0.93 |

Note: Participants who do not desire marriage also include those who are unsure about marriage.

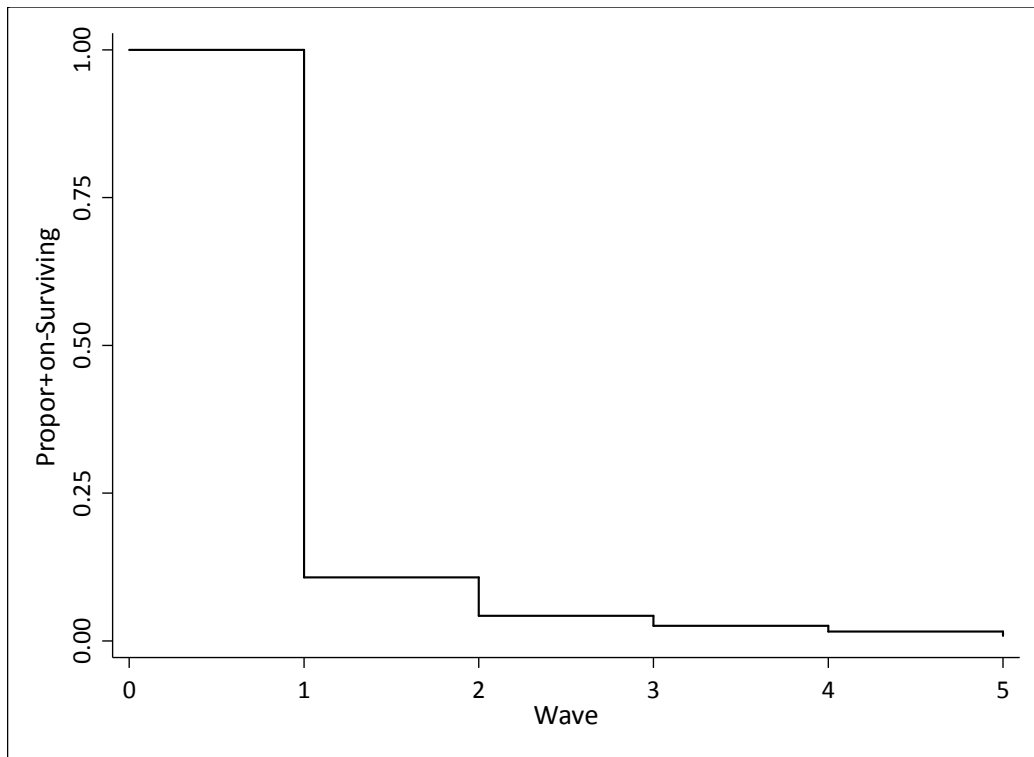


Figure 3 Kaplan-Meier Survival Estimate

However, the Smoothed Hazard Estimate (Figure 4) suggests that the risk of desiring marriage decreases over time. The hazard ratio (displayed in Table 5) also indicates that the risk, or the probability, of desiring marriage in a subsequent wave for those surviving – continuing to not desire or be unsure about their desire for marriage – decreases over time. For example, surviving respondents were at 0.47 times the odds of desiring marriage at wave 3 than at wave 2. This decrease in risk appears to taper off by wave 5, as the hazard ratio suggests that surviving respondents were at 0.93 times the odds of desiring marriage after wave 5 than at wave 5.

Maximum likelihood logit analysis was used to estimate the model with and without covariates. Results are displayed in Table 6. The coefficients indicate the logarithm of the odds (b) of desiring marriage in a given wave, as well as the multiplicative effects on the odds of desiring marriage (OR). Standard errors are shown in parentheses. Model 1 only includes wave number as a covariate. Model 2 includes wave number and all time-invariant covariates. Model 3

includes wave number, all time-invariant covariates, and all time-varying covariates. All three models show that the hazard rate varies significantly across wave.

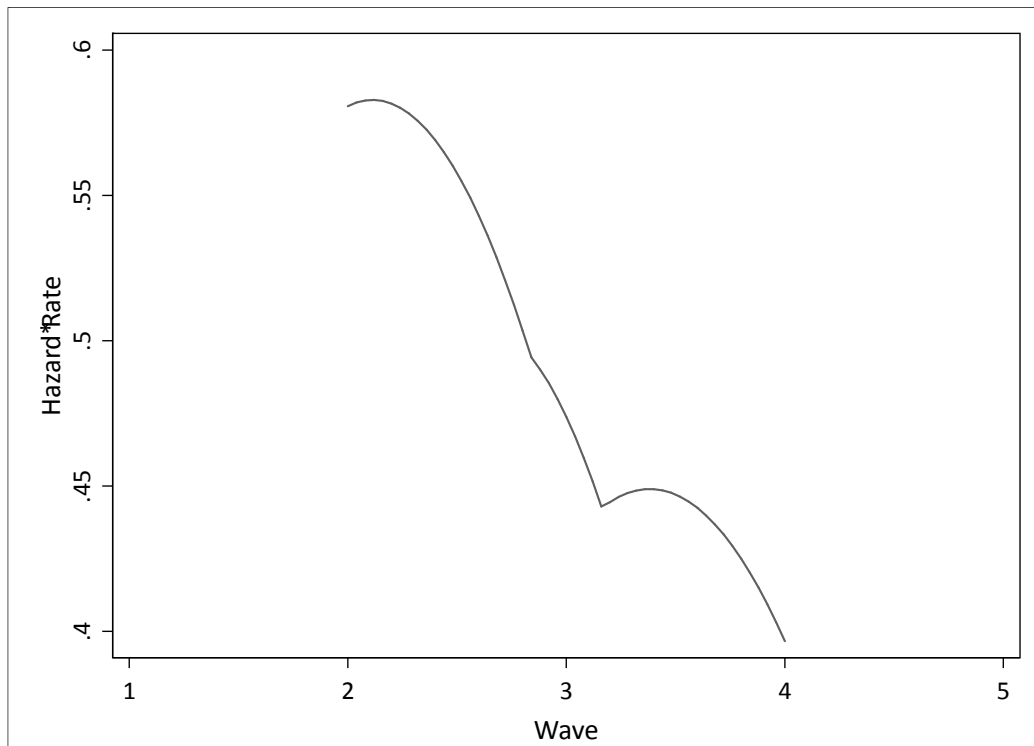


Figure 4 Smoothed Hazard Estimate

As shown in the life table (Table 5), Model 1 demonstrates that the hazard of desiring marriage declines across waves. That is, there is a diminishing likelihood that those who do not desire marriage will do so in the future. In Model 2, sex, race, experience of parental death prior to emerging adulthood, and student status at wave 5 are significant predictors of a surviving participant desiring marriage. Specifically, the hazard of female survivors desiring marriage across waves is, on average, 51 percent higher than male survivors desiring marriage across waves (OR = 1.51, $p \leq .05$), which means that female emerging adults who do not desire or are unsure of their desire for marriage at any given wave are 51 percent more likely than male emerging adults to desire marriage at the next wave. Meanwhile, multiracial emerging adults who do not desire or are unsure of their desire for marriage at any given wave are, on average,

Table 6 Logistic regression analyses of desire for marriage

| | Model 1 | | Model 2 | | Model 3 | |
|---|-----------------|-----------------|-----------------|----------------|-----------------|----------------|
| | b | OR | b | OR | b | OR |
| Wave | -0.93 (0.10)*** | 0.39 (0.04)*** | -0.72 (0.11)*** | 0.49 (0.05)*** | -0.71 (0.12)*** | 0.49 (0.06)*** |
| Female | | | 0.41 (0.20)* | 1.51 (0.31)* | 0.39 (0.21) | 1.47 (0.30) |
| Black/African American | | | -0.59 (0.36) | 0.56 (0.20) | -0.72 (0.37) | 0.49 (0.18) |
| Multiracial | | | -0.96 (0.43)* | 0.38 (0.17)* | -1.09 (0.44)* | 0.34 (0.15)* |
| Other race | | | -0.83 (0.27)** | 0.44 (0.12)** | -0.99 (0.27)*** | 0.37 (0.10)*** |
| Mean neighborhood income | | | -0.10 (0.27) | 0.90 (0.24) | -0.13 (0.27) | 0.88 (0.24) |
| Homosexual, bisexual, or unsure of sexual orientation | | | -0.14 (0.46) | 0.87 (0.40) | -0.09 (0.47) | 0.92 (0.43) |
| Total number of siblings | | | -0.02 (0.10) | 0.98 (0.09) | -0.00 (0.10) | 1.00 (0.10) |
| Experienced parental separation/divorce prior to EA | | | 0.28 (0.37) | 1.32 (0.49) | 0.28 (0.38) | 1.33 (0.50) |
| Experienced parental remarriage prior to EA | | | 0.02 (0.47) | 1.02 (0.48) | -0.06 (0.48) | 0.94 (0.45) |
| Experienced parental death prior to EA | | | -1.21 (0.44)** | 0.30 (0.13)** | -1.26 (0.44)** | 0.28 (0.13)** |
| Ever been in love or a relationship | | | 0.61 (0.32) | 1.83 (0.58) | 0.56 (0.32) | 1.76 (0.56) |
| Ever had arguments/problems with boyfriend/girlfriend | | | -0.02 (0.28) | 0.98 (0.28) | -0.03 (0.28) | 0.97 (0.27) |
| Religious attendance | | | 0.02 (0.07) | 1.02 (0.08) | 0.02 (0.07) | 1.02 (0.08) |
| Religious importance | | | 0.21 (0.14) | 1.23 (0.18) | 0.17 (0.14) | 1.19 (0.17) |
| Agnostic or Atheist | | | -0.50 (0.33) | 0.61 (0.20) | -0.65 (0.34) | 0.52 (0.18) |
| Jewish or Muslim | | | 0.26 (0.32) | 1.30 (0.42) | 0.18 (0.33) | 1.20 (0.39) |
| Other religion | | | -0.07 (0.43) | 0.93 (0.40) | -0.07 (0.43) | 0.94 (0.40) |
| Multiple religions or no preference of religion | | | -0.38 (0.37) | 0.69 (0.25) | -0.47 (0.37) | 0.63 (0.23) |
| Still enrolled in school after wave 4 | | | -0.47 (0.20)* | 0.62 (0.13)* | -0.53 (0.21)** | 0.59 (0.12)** |
| No plans to pursue further education | | | | | -0.86 (0.27)** | 0.42 (0.11)** |
| Total number of sex partners | | | | | 0.02 (0.03) | 1.02 (0.03) |
| Constant | 2.92 (0.16)*** | 18.51 (3.05)*** | 3.46 (3.06) | 31.76 (97.22) | 4.05 (3.10) | 57.36 (177.82) |

Note: Coefficients indicate the logarithm of the odds (b) of a surviving participant desiring marriage in a given wave, as well as the multiplicative effects on the odds of a surviving participant desiring marriage (OR). Standard errors are shown in parentheses.

*** $p \leq .001$. ** $p \leq .01$. * $p \leq .05$.

62 percent less likely than White emerging adults to desire marriage at the next wave (OR = 0.38, $p \leq .05$); emerging adults of an “other” race who do not desire or are unsure of their desire for marriage at any given wave are, on average, 56 percent less likely than White emerging adults to desire marriage at the next wave (OR = 0.44, $p \leq .01$); emerging adults who have experienced the death of a parent prior to emerging adulthood who do not desire or are unsure of their desire for marriage at any given wave are, on average, 70 percent less likely than emerging adults who have not experienced the death of parent prior to emerging adulthood to desire marriage at the next wave (OR = 0.30, $p \leq .01$); and emerging adults who are still enrolled in school at wave 5 who do not desire or are unsure of their desire for marriage at any given wave are, on average, 38 percent less likely than emerging adults who are not still enrolled in school at wave 5 to desire marriage at the next wave (OR = 0.62, $p \leq .05$).

After controlling for all other covariates in Model 3, sex is no longer a significant predictor of a surviving participant desiring marriage; however, race, experience of parental death prior to emerging adulthood, and student status at wave 5 remain statistically significant, and educational aspirations is also statistically significant. Specifically, emerging adults with no plans to pursue further education who do not desire or are unsure of their desire for marriage at any given wave are, on average, 58 percent less likely than emerging adults with plans to pursue further education to desire marriage at the next wave (OR = 0.42, $p \leq .01$). This finding suggests that plans for further education may account for a small portion of the effect sex has on desire for marriage since sex is no longer a significant predictor. Though sex and educational aspirations are not significantly related (based on supplemental analyses of these two variables), it appears as though there is some connection between the two: when an interaction term for sex and educational aspirations is added to the model, results show that male emerging adults with no

plans for further education who do not desire or are unsure of their desire for marriage at any given wave are, on average, 65 percent less likely than female emerging adults with no plans for further education to desire marriage at the next wave (OR = 0.35, $p \leq .01$; this supplemental analysis is not included in Table 6).

4.2 Desire for Long-term Relationships

Although there is a decrease in the proportion of participants who do not desire or are unsure of their desire for long-term relationships over time, the results of the discrete time survival analysis of desire for long-term relationships suggest that the risk of desiring long-term relationships decreases slightly over time. Of the 930 participants in this sample, 926 participants desired long-term relationships between wave 1 and wave 5. The life table (Table 7) describes the distribution of event occurrence (desiring long-term relationships) over the course of the five waves. The survivor function, also represented by the Kaplan-Meier Survival Estimate (Figure 5), shows that the proportion of participants who do not desire or are unsure about their desire for long-term relationships decreases slightly over the course of the five waves, with 8.28 percent of the total sample not desiring or being unsure about their desire for long-term relationships at wave 1, compared to just 0.43 percent of the total sample at wave 5.

Table 7 Life Table

| Year | Interval | Number entering interval | Number desiring LTR | Number not desiring | Proportion of those who desire LTR | Proportion of those who do not desire LTR | Survivor Function | Hazard Ratio |
|------|----------|--------------------------|---------------------|---------------------|------------------------------------|---|-------------------|--------------|
| 1 | [1,2] | 930 | 853 | 77 | 0.92 | 0.08 | 0.08 | 1.44 |
| 2 | [2,3] | 77 | 50 | 27 | 0.65 | 0.35 | 0.03 | 0.58 |
| 3 | [3,4] | 27 | 12 | 15 | 0.44 | 0.56 | 0.02 | 0.35 |
| 4 | [4,5] | 15 | 9 | 6 | 0.60 | 0.40 | 0.01 | 0.67 |
| 5 | [5,6] | 6 | 2 | 4 | 0.33 | 0.67 | 0.00 | 0.67 |

Note: LTR is an abbreviation for long-term relationships. Participants who do not desire long-term relationships also include those who are unsure about long-term relationships.

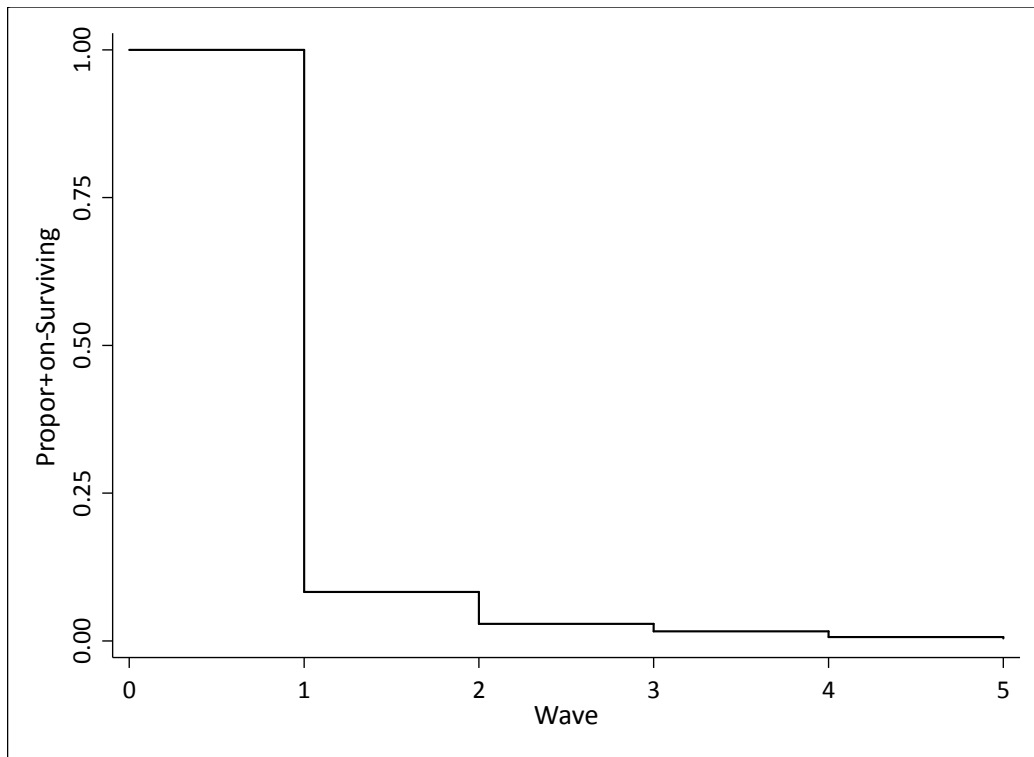


Figure 5 Kaplan-Meier Survival Estimate

The Smoothed Hazard Estimate (Figure 6) suggests that the risk of desiring long-term relationships decreases slightly over time. The hazard ratio (displayed in Table 7) also shows that the risk of desiring long-term relationships in a subsequent wave for those surviving – continuing to not desire or be unsure about their desire for long-term relationships – at the end of a wave decreases slightly over time. For example, surviving respondents were at 0.58 times the odds of desiring long-term relationships at wave 3 than at wave 2. This slight decrease in risk appears to taper off by wave 4, as the hazard ratio indicates that surviving respondents were at 0.67 times the odds of desiring marriage at wave 5 than at wave 4.

Maximum likelihood logit analysis was used to estimate the model with and without covariates. Results are displayed in Table 8. The coefficients indicate the logarithm of the odds (b) of desiring marriage in a given wave, as well as the multiplicative effects on the odds of desiring marriage (OR). Standard errors are shown in parentheses. Model 1 only includes wave

number as a covariate. Model 2 includes wave number and all time-invariant covariates. Model 3 includes wave number, all time-invariant covariates, and all time-varying covariates. All three models show that the hazard rate varies significantly across wave.

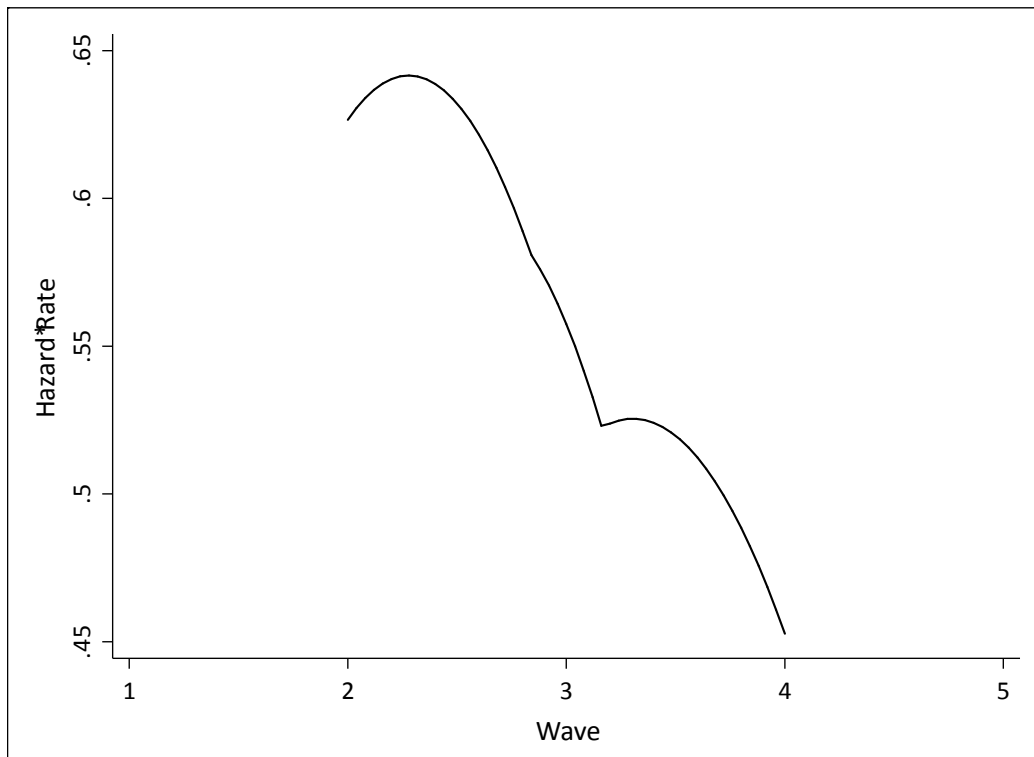


Figure 6 Smoothed Hazard Estimate

As shown in the life table (Table 7), Model 1 demonstrates that the hazard of desiring long-term relationships declines slightly across waves. That is, there is a slightly diminishing likelihood that those who do not desire long-term relationships will do so in the future. In Model 2, sex, race, and student status at wave 5 are significant predictors of a surviving participant desiring long-term relationships. Specifically, the hazard of female survivors desiring long-term relationships across waves is, on average, 78 percent higher than male survivors desiring long-term relationships across waves (OR = 1.78, $p \leq .05$), which means that female emerging adults who do not desire or are unsure of their desire for long-term relationships at any given wave are 78 percent more likely than male emerging adults to desire long-term relationships at the next

Table 8 Logistic regression analyses of desire for long-term relationships

| | Model 1 | | Model 2 | | Model 3 | |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| | b | OR | b | OR | b | OR |
| Wave | -1.01 (0.12)*** | 0.36 (0.04)*** | -0.80 (0.15)*** | 0.45 (0.07)** | -0.78 (0.15)*** | 0.46 (0.07)*** |
| Female | | | 0.58 (0.24)* | 1.78 (0.42)* | 0.57 (0.24)* | 1.76 (0.42)* |
| Black/African American | | | -0.62 (0.41) | 0.54 (0.22) | -0.72 (0.41) | 0.49 (0.20) |
| Multiracial | | | -0.79 (0.49) | 0.45 (0.22) | -0.88 (0.50) | 0.42 (0.21) |
| Other race | | | -0.74 (0.31)* | 0.48 (0.15)* | -0.85 (0.32)** | 0.43 (0.14)** |
| Mean neighborhood income | | | -0.22 (0.31) | 0.80 (0.24) | -0.25 (0.31) | 0.78 (0.24) |
| Homosexual, bisexual, or unsure of sexual orientation | | | -0.08 (0.57) | 0.92 (0.53) | 0.01 (0.59) | 1.01 (0.60) |
| Total number of siblings | | | -0.01 (0.11) | 0.99 (0.11) | 0.00 (0.11) | 1.00 (0.11) |
| Experienced parental separation/divorce prior to EA | | | 0.16 (0.42) | 1.18 (0.49) | 0.16 (0.43) | 1.18 (0.50) |
| Experienced parental remarriage prior to EA | | | 0.06 (0.55) | 1.06 (0.58) | 0.00 (0.55) | 1.00 (0.56) |
| Experienced parental death prior to EA | | | -0.75 (0.55) | 0.47 (0.26) | -0.77 (0.56) | 0.46 (0.26) |
| Ever been in love or a relationship | | | 0.68 (0.39) | 1.97 (0.77) | 0.64 (0.39) | 1.90 (0.74) |
| Ever had arguments/problems with boyfriend/girlfriend | | | -0.36 (0.35) | 0.70 (0.24) | -0.37 (0.35) | 0.69 (0.24) |
| Religious attendance | | | -0.02 (0.08) | 0.98 (0.08) | -0.02 (0.08) | 0.98 (0.08) |
| Religious importance | | | 0.30 (0.16) | 1.35 (0.22) | 0.27 (0.16) | 1.32 (0.21) |
| Agnostic or Atheist | | | -0.41 (0.37) | 0.67 (0.24) | -0.52 (0.37) | 0.60 (0.22) |
| Jewish or Muslim | | | 0.19 (0.36) | 1.21 (0.43) | 0.14 (0.36) | 1.15 (0.41) |
| Other religion | | | 0.22 (0.55) | 1.25 (0.69) | 0.23 (0.56) | 1.26 (0.70) |
| Multiple religions or no preference of religion | | | -0.04 (0.44) | 0.97 (0.43) | -0.13 (0.45) | 0.88 (0.39) |
| Still enrolled in school after wave 4 | | | -0.59 (0.24)* | 0.55 (0.13)* | -0.64 (0.24)** | 0.53 (0.13)** |
| No plans to pursue further education | | | | | -0.62 (0.31)* | 0.54 (0.17)* |
| Total number of sex partners | | | | | 0.01 (0.02) | 1.01 (0.02) |
| Constant | 3.30 (0.20)*** | 27.20 (5.37)*** | 5.22 (3.48) | 185.58 (645.66) | 5.78 (3.52) | 324.52 (1141.00) |

Note: Coefficients indicate the logarithm of the odds (β) of a surviving participant desiring a long-term relationship in a given wave, as well as the multiplicative effects on the odds of a surviving participant desiring a long-term relationship (OR). Standard errors are shown in parentheses.

*** $p \leq .001$. ** $p \leq .01$. * $p \leq .05$.

wave. Additionally, emerging adults of an “other” race who do not desire or are unsure of their desire for long-term relationships at any given wave are, on average, 52 percent less likely than White emerging adults to desire long-term relationships at the next wave (OR = 0.48, $p \leq .01$); and emerging adults who are still enrolled in school at wave 5 who do not desire or are unsure of their desire for long-term relationships at any given wave are, on average, 45 percent less likely than emerging adults who are not still enrolled in school at wave 5 to desire long-term relationships at the next wave (OR = 0.55, $p \leq .05$).

After controlling for all other covariates in Model 3, sex, race, and student status at wave 5 remain statistically significant. Educational aspirations is also statistically significant. Specifically, emerging adults with no plans to pursue further education who do not desire or are unsure of their desire for long-term relationships at any given wave are, on average, 46 percent less likely than emerging adults with plans to pursue further education to desire long-term relationships at the next wave (OR = 0.54, $p \leq .01$).

4.3 Importance of Marriage and Long-term Relationships

Latent basis growth curve analysis was used to estimate the importance of marriage and long-term relationships model with and without covariates. Unstandardized (b) results are displayed in Table 9. Standard errors are shown in parentheses. Fit indices indicate close approximate fit for Model 1 (NFI = 0.94, IFI = 0.96, CFI = 0.96, RMSEA = 0.06) and excellent fit for Model 3 (NFI = 0.98, IFI = 0.99, CFI = 0.99, RMSEA = 0.03). However, fit indices indicate poor fit for Models 2, 4, and 5, suggesting that the selected time-invariant variables are poor predictors of change in attitude about the importance of marriage and long-term relationships (Model 2: NFI = 0.63, IFI = 0.64, CFI = 0.62, RMSEA = 0.14; Model 4: NFI = 0.79, IFI = 0.82, CFI = 0.81, RMSEA = 0.07; Model 5: NFI = 0.74, IFI = 0.75, CFI = 0.74,

RMSEA = 0.15). The chi-square test statistics indicate a rejection of the null hypothesis of a perfectly fitting model for all 5 models (Model 1: $\chi^2 = 42.86$, $df = 11$, $p \leq .001$; Model 2: $\chi^2 = 1416.04$, $df = 70$, $p \leq .001$; Model 3: $\chi^2 = 92.24$, $df = 51$, $p \leq .001$; Model 4: $\chi^2 = 1847.57$, $df = 300$, $p \leq .001$; Model 5: $\chi^2 = 1385.68$, $df = 66$, $p \leq .001$). This suggests that these models do not fit the data; however, this is partially due to the sensitivity of the chi-square test statistic to large sample sizes.

The mean intercept value is 2.29 for Model 1 ($p \leq .001$), which means that, on average, individuals rated the importance of marriage and long-term relationships as somewhere between “somewhat important” and “very important,” but closer to “somewhat important,” at wave 1. In other words, individuals generally have positive attitudes toward marriage and long-term relationships at the beginning of emerging adulthood. The slope loadings are estimated to be 0.00, 0.16, 1.54, 3.74, and 4.00 for Model 1. These loadings indicate a nonlinear change in relationship importance. Change in attitude towards the importance of marriage and long-term relationships appears to happen very quickly at first, with a slope loading of 0.16 for wave 2, rather than 1.00, as would be expected with a linear change in relationship importance. However, this change slows down over time, with the slope loading for wave 3 at 1.54, which is almost exactly halfway through college (taking place roughly between sophomore and junior year), and the slope loading for wave 4 at 3.74, which is almost a year after college has ended for many emerging adults. The mean slope value is 0.08 for Model 1 ($p \leq .001$). This means that, on average, individuals rated marriage and long-term relationships as slightly more important at each subsequent wave over the course of five waves, though this change happened at irregular intervals as indicated by the nonlinear slope loadings. The covariance between intercept and slope is -0.02 ($p \leq .001$) and the correlation is -0.55 , indicating an inverse relationship between

Table 9 Latent basis growth curve analysis of relationship importance

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|---|-----------------|-----------------|-----------------|-----------------|-----------------|
| | b(SE) | b(SE) | b(SE) | b(SE) | b(SE) |
| Fit statistics | | | | | |
| χ^2 | 42.86*** | 1416.04*** | 92.24*** | 1847.57*** | 1385.68*** |
| df | 11 | 70 | 51 | 300 | 66 |
| NFI | 0.94 | 0.63 | 0.98 | 0.79 | 0.74 |
| IFI | 0.96 | 0.64 | 0.99 | 0.82 | 0.75 |
| CFI | 0.96 | 0.62 | 0.99 | 0.81 | 0.74 |
| RMSEA | 0.06 | 0.14 | 0.03 | 0.07 | 0.15 |
| Slope loadings | | | | | |
| Wave 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Wave 2 | 0.16 (0.25) | 0.78 (0.04)*** | 0.11 (0.28) | 0.70 (0.04)*** | 0.75 (0.04)*** |
| Wave 3 | 1.54 (0.23)*** | 1.44 (0.04)*** | 1.48 (0.25)*** | 1.35 (0.04)*** | 1.40 (0.04)*** |
| Wave 4 | 3.74 (0.25)*** | 2.20 (0.04)*** | 3.71 (0.28)*** | 2.07 (0.04)*** | 2.11 (0.04)*** |
| Wave 5 | 4.00 | 4.00 | 4.00 | 4.00 | 4.00 |
| Intercept | 2.29 (0.02)*** | 2.69 (0.58)*** | 2.30 (0.02)*** | 2.71 (0.58)*** | 2.19 (0.03)*** |
| Slope | 0.08 (0.01)*** | -0.28 (0.50) | 0.08 (0.01)*** | -0.27 (0.50) | 0.12 (0.03)*** |
| Intercept variance | 0.18 (0.02)*** | 0.22 (0.01)*** | 0.18 (0.02)*** | 0.22 (0.01)*** | 0.22 (0.01)*** |
| Slope variance | 0.01 (0.00)*** | 0.22 (0.01)*** | 0.01 (0.00)*** | 0.22 (0.01)*** | 0.22 (0.01)*** |
| Intercept/slope covariance | -0.02 (0.00)*** | -0.16 (0.01)*** | -0.02 (0.00)*** | -0.16 (0.01)*** | -0.15 (0.01)*** |
| Intercept/slope correlation | -0.55 | -0.72 | -0.55 | -0.72 | -0.67 |
| Female → intercept | | 0.18 (0.04)*** | | 0.17 (0.04)*** | 0.19 (0.04)*** |
| Female → slope | | -0.05 (0.03) | | -0.05 (0.03) | -0.05 (0.03) |
| Black/African American → intercept | | -0.10 (0.07) | | -0.11 (0.07) | |
| Black/African American → slope | | -0.02 (0.06) | | -0.02 (0.06) | |
| Multiracial → intercept | | -0.11 (0.11) | | -0.11 (0.11) | |
| Multiracial → slope | | 0.01 (0.09) | | 0.01 (0.09) | |
| Other race → intercept | | -0.09 (0.06) | | -0.10 (0.06) | |
| Other race → slope | | -0.01 (0.05) | | -0.01 (0.05) | |
| Mean neighborhood income → intercept | | -0.06 (0.05) | | -0.06 (0.05) | |
| Mean neighborhood income → slope | | 0.03 (0.04) | | 0.03 (0.04) | |
| Homosexual, bisexual, or unsure of sexual orientation → intercept | | -0.19 (0.10) | | -0.20 (0.10) | |
| Homosexual, bisexual, or unsure of sexual orientation → slope | | 0.01 (0.09) | | 0.02 (0.09) | |
| Total number of siblings → intercept | | 0.02 (0.02) | | 0.02 (0.02) | |
| Total number of siblings → slope | | -0.01 (0.02) | | -0.01 (0.02) | |
| Experienced parental separation/divorce prior to EA → intercept | | 0.07 (0.07) | | 0.05 (0.07) | |
| Experienced parental separation/divorce prior to EA → slope | | -0.05 (0.06) | | -0.04 (0.06) | |
| Experienced parental remarriage prior to EA → intercept | | -0.02 (0.09) | | -0.01 (0.09) | |
| Experienced parental remarriage prior to EA → slope | | 0.04 (0.08) | | 0.03 (0.08) | |
| Experienced parental death prior to EA → intercept | | -0.03 (0.10) | | -0.03 (0.10) | |
| Experienced parental death prior to EA → slope | | -0.00 (0.09) | | 0.00 (0.09) | |
| Ever been in love or a relationship → intercept | | 0.08 (0.07) | | 0.08 (0.07) | |
| Ever been in love or a relationship → slope | | 0.03 (0.06) | | 0.04 (0.06) | |

| | | | | |
|---|--------------|----------------|-----------------|-----------------|
| Ever had arguments/problems with boyfriend/girlfriend → intercept | 0.04 (0.05) | 0.03 (0.05) | | |
| Ever had arguments/problems with boyfriend/girlfriend → slope | 0.01 (0.05) | 0.01 (0.05) | | |
| Religious attendance → intercept | 0.02 (0.01) | 0.02 (0.01) | | |
| Religious attendance → slope | 0.00 (0.01) | 0.00 (0.01) | | |
| Religious importance → intercept | 0.06 (0.03)* | 0.06 (0.03) | | |
| Religious importance → slope | 0.00 (0.02) | 0.00 (0.02) | | |
| Agnostic or Atheist → intercept | -0.08 (0.07) | -0.10 (0.07) | | |
| Agnostic or Atheist → slope | -0.00 (0.06) | -0.01 (0.06) | | |
| Jewish or Muslim → intercept | 0.03 (0.05) | 0.02 (0.05) | | |
| Jewish or Muslim → slope | -0.01 (0.05) | 0.00 (0.05) | | |
| Other religion → intercept | -0.01 (0.09) | 0.00 (0.09) | | |
| Other religion → slope | 0.01 (0.08) | 0.00 (0.08) | | |
| Multiple religions or no preference of religion → intercept | -0.02 (0.08) | -0.02 (0.08) | | |
| Multiple religions or no preference of religion → slope | 0.03 (0.07) | 0.02 (0.07) | | |
| Still enrolled in school after wave 4 → intercept | -0.06 (0.04) | -0.07 (0.04) | | |
| Still enrolled in school after wave 4 → slope | 0.00 (0.03) | 0.02 (0.03) | | |
| No plans to pursue further education | | | | |
| Wave 1 → Relationship importance at wave 1 | | -0.09 (0.06) | -0.13 (0.05)* | -0.11 (0.05)* |
| Wave 2 → Relationship importance at wave 2 | | -0.12 (0.06)* | -0.21 (0.05)*** | -0.20 (0.05)*** |
| Wave 3 → Relationship importance at wave 3 | | -0.03 (0.05) | -0.07 (0.05) | -0.06 (0.05) |
| Wave 4 → Relationship importance at wave 4 | | -0.05 (0.06) | 0.03 (0.05) | 0.04 (0.05) |
| Wave 5 → Relationship importance at wave 5 | | -0.01 (0.04) | -0.22 (0.07)*** | -0.20 (0.06)** |
| Total number of sex partners | | | | |
| Wave 1 → Relationship importance at wave 1 | | 0.00 (0.00) | 0.00 (0.00) | 0.00 (0.00) |
| Wave 2 → Relationship importance at wave 2 | | -0.01 (0.01) | -0.00 (0.01) | 0.00 (0.01) |
| Wave 3 → Relationship importance at wave 3 | | 0.00 (0.00) | -0.00 (0.00) | 0.00 (0.00) |
| Wave 4 → Relationship importance at wave 4 | | -0.01 (0.00)* | -0.01 (0.00)** | -0.01 (0.00)*** |
| Wave 5 → Relationship importance at wave 5 | | -0.01 (0.00)** | -0.01 (0.01)* | -0.01 (0.01)* |

*** $p \leq .001$. ** $p \leq .01$. * $p \leq .05$.

the initial level of relationship importance and change in importance. Additionally, the intercept and slope variances are statistically significant (intercept variance: $b = 0.18$, $p \leq .001$; slope variance: $b = 0.01$, $p \leq .001$), suggesting that initial relationship importance and change in relationship importance vary and that predictors of variation across respondents should be examined.

Model 3, which is the only other model with close approximate fit and which assesses time-varying covariates only, shows that several variables predict variation across respondents: educational aspirations at wave 2, total number of sex partners at wave 4, and total number of sex partners at wave 5 are significant predictors of relationship importance. Specifically, on average, individuals with no plans to pursue further education during wave 2 rate the importance of marriage and long-term relationships lower than individuals with plans to pursue further education; on average, for each additional sex partner at wave 4, the importance of marriage and long-term relationships decreases by 0.01; and, on average, for each additional sex partner at wave 5, the importance of marriage and long-term relationships decreases by 0.01.

5 DISCUSSION

The purpose of this study was to expand upon the limited body of research on attitude formation during emerging adulthood. More specifically, this study aimed to explore indicators of marital attitude change during emerging adulthood and provide a longitudinal investigation of such change. To meet these objectives, discrete time survival analyses and latent basis growth curve analyses were conducted using longitudinal data from the Center on Young Adult Health and Development's College Life Study to examine marital and long-term relationship attitude change across emerging adulthood.

5.1 Summary and Implications of Findings

Results from these three analyses indicated that attitudes toward marriage and long-term relationships do change across emerging adulthood. Desire to marry, desire for long-term relationships, and importance of marriage and long-term relationships changed across the five waves of data. Each of these measures indicated that emerging adults have increasingly positive attitudes toward marriage and long-term relationships across emerging adulthood. These findings expand upon Willoughby's (2010) research on marital attitude change across adolescence by continuing to show that marital attitudes are more dynamic than previously assumed in marital attitude research. It was also found that sex, race, experience of parental death, student status, educational aspirations, and total number of sex partners are predictors of marital and long-term relationship attitude change for emerging adults.

Results from all three analyses (desire for marriage, desire for long-term relationships, marriage and long-term relationship importance) showed that most emerging adults desired and placed importance on marriage and long-term relationships from the beginning of this study, with most attitude change occurring in a positive direction. Exposure-based, socialization, social learning, and interest-based explanations of attitude change may explain why so many individuals desired and valued marriage from the very beginning of emerging adulthood, why those that did not desire or value marriage at the beginning of emerging adulthood eventually did, and why several individuals were entrenched in their negative attitudes toward marriage and long-term relationships from the beginning of emerging adulthood until the end (Bandura 1971; Bolzendahl and Myers 2004; Carlson and Lynch 2013; Kroska and Elman 2009). Though marriage is increasingly postponed into the lifetime, it is still highly valued in our society and the socialization around it takes place well before emerging adulthood. Thus, it is not surprising that

so many individuals began emerging adulthood with a desire for marriage and long-term relationships. The new life experiences that some emerging adults sought and endured during this time period led to new interests and goals with subsequent attitudes toward marriage and long-term relationships that either supported or negated earlier socialization processes.

The findings of a discrete time survival analysis of desire for marriage provided support for hypothesis 1.1. The proportion of emerging adults who desire marriage increased over the course of five waves. However, the risk of desiring marriage in the future for those who continued to not desire (or be unsure about their desire for) marriage decreased over time. A discrete time survival analysis of desire for long-term relationships showed similar results and provided support for hypothesis 1.2. The proportion of emerging adults who desired long-term relationships increased over time. However, the risk of desiring long-term relationships also decreased slightly over time for those who continuously did not desire (or were unsure about their desire for) long-term relationships. Thus, there was a diminishing likelihood that those who do not desire marriage, as well as those who do not desire long-term relationships, would do so in the future.

While most emerging adults developed a desire for marriage and long-term relationships over the course of the five waves, a small portion maintained their adverse position. This means that there is a group of emerging adults who are entrenched in their negative attitudes toward marriage and long-term relationships. The finding that the proportion of participants who desired marriage and long-term relationships increased over time confirmed expectations based on previous research by Willoughby (2010). The finding that those who maintained an adverse position would be less likely to ever change that position was somewhat unexpected because it was not discussed in Willoughby's (2010) findings. However, Fishbein and Ajzen's (1975; 2011)

reasoned action approach makes some sense of this finding. It would suggest that these entrenched emerging adults perceived the norms and behavioral control around marriage and long-term relationships differently from those who desired marriage between the first and last wave. Thus, the behavioral intentions formed by the attitudes of these entrenched emerging adults lead to a decrease in the likelihood of them actually getting married. Additionally, the attitude consistency of these entrenched emerging adults suggests that they are even more likely to never marry or participate in long-term relationships in the future (Manis 1978; Norman 1975). Similarly, emerging adults who consistently desired marriage or long-term relationships are even more likely to get married or engage in long-term relationships in the future (Axinn and Thornton 1992; Clarkberg et al. 1995; Fishbein and Ajzen 2011; Hall 2006; Manis 1978; Norman 1975; Sassler and Schoen 1999).

The findings of two maximum likelihood logit analyses on predictors of desire for marriage and long-term relationships provided partial support for hypothesis 2.1 and 2.2. The positive relationship between sex and attitude change in desire for marriage and long-term relationships was consistent with cross-sectional and longitudinal research on marital attitudes of women and men (Blakemore, Lawton, and Vartanian 2005; Carroll et al. 2007; Shurts and Myers 2012; Willoughby 2010; Willoughby and Dworkin 2009). It is particularly interesting that sex became insignificant once educational aspirations were added to the analysis on desire for marriage. Though no significant relationship was found between sex and educational aspirations, it is clear that there is a complex connection between sex, educational aspirations, and desire for marriage. This relationship needs further examination. Additionally, the negative relationship between race (particularly multiracial individuals and individuals of an “other” race) and desire for marriage and long-term relationships was consistent with cross-sectional and longitudinal

research on marital attitudes by race (Copen et al. 2012; Crissey 2005; Gassanov et al. 2008; Hoffnung 2004; Manning and Smock 2002; Shurts and Myers 2012; Willoughby 2010).

Cross-sectional research on educational attainment and marital attitudes sheds some light on the negative relationship found between both education variables (enrolled in school at wave 5 and no plans to pursue further education) and desire for marriage and long-term relationships. Emerging adults who were enrolled in school at wave 5 were either students who had not yet graduated from undergrad or students who had graduated and were now enrolled in an advanced degree program. Although positive attitudes toward marriage and long-term relationships may be delayed for those seeking to pursue higher levels of education, it does not mean that they will never desire such relationships in the future. Because completing one's education, finding employment, and becoming financially independent are now seen as prerequisites for marriage, it makes sense that emerging adults who were still enrolled in school, especially in advanced degree programs that may last years, would not yet be ready for marriage or long-term relationships (Carroll et al. 2007; Gassanov et al. 2008; Sassler and Schoen 1999; Willoughby 2010). Despite this finding, these emerging adults may be more likely to desire marriage and long-term relationships once they complete their education since previous research shows that higher educational attainment is related to a higher likelihood of marriage (Barber and Axinn 1998; Bramlett and Mosher 2002; Cherlin 2004; Clarkberg 1999; Copen et al. 2012; Goldstein and Kenney 2001; Mahay and Lewin 2007; Sassler and Schoen 1999; Sweeney 2002). Moreover, the negative relationship between no plans to pursue further education and desire for marriage and long-term relationships is consistent with lower educational attainment's association with a lower likelihood of marriage (Bramlett and Mosher 2002; Cherlin 2004;

Clarkberg 1999; Copen et al. 2012; Edin and Kafalas 2005; Goldstein and Kenney 2001; Mahay and Lewin 2007; Sassler and Schoen 1999; Sweeney 2002).

Though there is no previous cross-sectional or longitudinal research on the relationship between parental death and marital attitudes, the finding that there was a negative relationship between these two variables was not surprising. Previous research has indicated that children from single-parent families and divorced families are more likely to have negative attitudes about marriage than children from continuously married families (Axinn and Thorton 1996; Burgoyne and Hames 2002; Martin et al. 2003; Shurts and Myers 2012; Simons et al. 2013). Emerging adults who experienced the death of a parent prior to emerging adulthood probably experienced some of the same issues that children of single-parent and divorced families faced with the added trauma of the loss of a parent. In any of these family structures, one less active parent in the household means one less role-model for marriage and one less parent to pass along positive messages about marriage. Additionally, the loss of a parent probably had effects on the child's living parent and the messages that that parent may have passed along to the child about marriage.

The results from a latent basis growth curve analysis of marital and long-relationship importance provided support for hypothesis 1.3. Findings showed that individuals have generally positive attitudes toward relationships at the onset of emerging adulthood, with most emerging adults rating relationships as somewhat important, if not very important. Results also demonstrated that attitudes toward relationships change over time in a positive direction, though the rate at which they change is nonlinear – meaning that change does not happen at evenly spaced intervals throughout emerging adulthood. Additionally, the analysis showed that initial relationship importance and change in relationship importance over time vary both intra-

individually, meaning “[within-person] change over time,” and inter-individually, meaning “[between-person] variability in intraindividual change” (Preacher et al. 2008:2). This finding suggested that predictors of variation in relationship importance should be examined.

Findings of the latent basis growth curve analysis also provided partial support for hypothesis 2.3. Upon investigation of both time-invariant and time-varying covariates, results showed time-varying covariates alone were most fitting in predicting variation in changes in relationship importance. The finding that time-varying covariates best predicted time-varying attitudes about marriage and long-term relationships shows how dynamic attitudes are for emerging adults. The identity exploration that occurs during emerging adulthood clearly plays a complex role in how relationship attitudes form and change over time.

The negative relationship between total number of sex partners and relationship importance was consistent with cross-sectional research on sexual experience and longitudinal research on attitude change (Arnett 2000; Lefkowitz 2005; Willoughby 2012; Wright 2013). Additionally, the negative relationship between relationship importance and no plans to pursue further education corroborates with previous research showing that higher educational attainment begets higher likelihood of marriage (Barber and Axinn 1998; Bramlett and Mosher 2002; Cherlin 2004; Clarkberg 1999; Copen et al. 2012; Goldstein and Kenney 2001; Mahay and Lewin 2007; Sassler and Schoen 1999; Sweeney 2002). It is interesting that plans to pursue further education was a significant predictor of relationship importance only at wave 2. Perhaps there is something about sophomore year of college that strengthens the relationship between educational aspirations and relationship importance in a way that other years do not. Further exploration is needed to find out why relationship importance changes nonlinearly in the way that it appeared to in this study.

5.2 Limitations

This study has several limitations that may have potentially impacted the findings. First, this study intended to investigate change in attitudes toward marriage and long-term relationships across emerging adulthood, which theoretically takes place roughly between the ages of 18 and 25 (Arnett 2000), yet the data was limited to respondents who were at about 18 years of age at wave 1 and at about 22 years of age at wave 5 due to the inconsistent measure of relationship attitudes after wave 5. Thus, attitude change was explored only partially across emerging adulthood. Second, the measures of attitudes toward marriage and long-term relationships were limited in dimensions of attitudes and only allowed for a limited set of responses. In the same vein, the attitude measures limited the types of analyses that could be used to assess attitude change. For example, discrete time survival analysis was used to examine change in attitudes toward marriage and long-term relationships because of their level of measurement; however, survival analysis does not allow for an examination of respondents who might have changed their attitudes more than once throughout the first years of emerging adulthood, which is likely given that emerging adulthood is characterized by change. Furthermore, the measures used did not account for why attitude change occurs, only that it does and that it varies across some groups.

Third, results are not generalizable to the overall population of emerging adults, as the sample was limited to emerging adults at one, large public university. Emerging adulthood and the associated change in relationship attitudes is likely to happen in very different ways for individuals who do not attend college, who attend colleges in other geographic locations, or who attend other types of universities. Fourth, there is a large possibility of left-truncation. The data does not account for changes in attitude prior to the origination of the study. Even a year earlier

the questions might have elicited a larger group of respondents with negative attitudes toward marriage and long-term relationships.

Lastly, several additional covariates were of interest as possible predictors of attitude change but were not included in the study because there was very little variation in the variables. For example, age at first childbirth and total number of children could not be used because only 10 respondents reported having a child by wave 5 and none of those respondents reported having had more than one child. Additionally, student status (enrollment or non-enrollment in school) was originally intended to be a time-varying covariate; however, more than 95 percent of the respondents were enrolled in school during the first four waves.

5.3 Conclusion

This is the first study to examine change in attitudes toward marriage and long-term relationships across emerging adulthood. By utilizing data from the Center on Young Adult Health and Development's College Life Study, this study expanded upon Willoughby's (2010) research on marital attitude change across adolescence by continuing to show that marital attitudes are more dynamic than previously assumed. Furthermore, results demonstrated how self-exploration and identity formation lead to attitude change during emerging adulthood (Arnett 2000). Though research shows that individuals are continuing to delay marriage, this study finds that marriage still appears to be desirable and important to most emerging adults—increasingly so as they age.

The findings of this study contribute to the current climate of marriage delay by demonstrating how marriage exemplifies a capstone of achievement—an insignia of a college degree, the successful acquisition of employment, and the attainment of economic stability. While many emerging adults desired and placed higher levels of importance on this capstone of

achievement from the very beginning of college, almost all of them desired it by the time they were out of school. This indicates that there is not only a delay in the actual pursuit of marriage, but also a delay in the onset of positive attitudes toward marriage for some emerging adults. The negative relationship between being enrolled in school during the fifth wave of the study and attitudes toward marriage suggests that this delay in marriage is contingent on the completion of school.

Furthermore, this study has implications for the life course perspective in that it advances our understanding of the changing life course of younger adults. Forty-five years ago, many of the women and men in this study would have already been married by the end of wave five. However, only 1.6 percent of the original College Life Study sample had ever been married by the end of the first five waves. The findings of this study suggest that the values, attitudes, and behaviors of younger adults are indeed different than in the past and that demographic changes in educational attainment, the economic independence of women, and the delaying of marriage have carved out a new developmental space for emerging adulthood (Arnett 2000). This study provides support for Arnett's (2000) tenets of emerging adulthood, showing that it is a period of attitude formation, marked by heterogeneity, even in the single context of one college campus.

One major policy implication of this study is that marriage promotion programs should focus their efforts on individuals who are nearing the end of their educational careers. It is clear marital delay is now a societal norm, particularly for those seeking higher education. Targeting marriage promotion programs toward individuals at the beginning of their college careers may be less effective if the college students plan to wait until after they have completed their education to marry. Additionally, programs should be cognizant of the finding that some emerging adults may never desire marriage or long-term relationships and that those adults may be even less

likely to desire marriage and long-term relationships over time. While more research is needed on what distinguishes these entrenched emerging adults from others, it is advised that marital promotion for this group may be fruitless.

Despite the aforementioned limitations, the findings suggest that change in attitudes may occur for many individuals (e.g. almost a quarter of respondents changed their response at least once about their desire for marriage) across emerging adulthood and that there are exciting possibilities for exploration, particularly in terms of predictors of variation in such change. Future research should address the limitations of the current study by developing more thorough measures of relationship attitudes, tracking them over longer periods of time, and across a more diverse sample of emerging adults.

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