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MARRIAGE AND MENTAL HEALTH AMONG YOUNG ADULTS

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Abstract

Marriage is widely thought to confer mental health benefits, but little is known about how this relationship may vary across the life course. Early marriage—which is non-normative—could have no, or even negative, mental health consequences for young adults. Using survey data from Waves 1 and 3 of the National Longitudinal Study of Adolescent Health ($N = 11,743$), I find that married young adults exhibit similar levels of psychological distress as young adults who are in any kind of romantic relationship. Married and engaged young adults report lower rates of drunkenness than others. Married young adults—especially those who first married at age 22–26—report higher life satisfaction than those in other types of relationships or no relationship at all, as well as those who married at younger ages. Explanations for these findings are examined, and their implications are discussed.

Social scientists have amassed a considerable amount of evidence showing that married individuals enjoy better mental health than never-married and previously-married individuals (Gove, Hughes and Style 1983; Ross 1995; Horwitz, White, and Howell-White 1996; Brown 2000; Simon 2002; Lamb, Lee, and DeMaris 2003; Marcussen 2005). Marriage is typically thought to increase psychological, social, and economic resources (Williams and Umberson 2004; Liu, Elliot, and Umberson 2010), and to help individuals avoid the stress of relationship dissolution (Williams and Umberson 2004; Simon and Barrett 2010; Liu et al. 2010).

As one recent study notes, however, studies of marriage and mental health tend to focus on the average effects of marriage on mental health, and few investigations have sought to identify potential moderators of this relationship (Frech and Williams 2007). In other words, though marriage on average may confer mental health benefits, this positive association may not hold across different contexts or groups of people. For some, marriage may be unrelated to mental health or even harmful to it. Marital timing may be one important contingency of the marriage and mental health relationship. Particularly, marriage at an early, non-normative age may not be as salutary as marriage at a more culturally-appropriate age (Williams and Umberson 2004).

Moreover, other recent evidence suggests it is important for research on marriage and mental health to specify the relationship circumstances of unmarried adults with the recognition that they are a heterogeneous group with different levels of social support, resources, and relationship stability (Bierman, Fazio, and Milkie 2006). Not only is it important to make these relationship distinctions, but so too, according to Bierman and colleagues (2006), is it important to map the domains of mental health that marriage affects (and in what ways). Marriage may have different effects on internalizing problems, externalizing problems, and subjective well-being.

This study asks and answers four research questions: (1) What is the effect of marriage on mental health—vis-à-vis other relationship circumstances—in young adulthood? (2) Does the effect differ by domain of mental health? (3) Does the effect vary by age at first marriage? and (4) What explains the effect? I address these questions by focusing exclusively on a cohort of young adults and assessing differences in mental health outcomes between ever-married individuals and those in other types of relationships, as well as differences in these outcomes by age at first marriage. In so doing, I compare the mental health of ever-married young adults to fine-grained categories of never-married young adults: singles, unengaged daters, engaged daters, unengaged cohabitators, and engaged cohabitators. I also consider several mental health outcomes, including internalizing problems, externalizing problems, and subjective well-being. Finally, I am able to test five explanations—selection, socioeconomic differences, parenthood, relationship stability, and differences in psychological resources—for the mental health differences among married young adults and those in different types of relationship circumstances.

AGE AT MARRIAGE AND MENTAL HEALTH: A LIFE COURSE PERSPECTIVE

According to the life course perspective, the effect of roles and transitions is contingent on their timing (Elder 1985; Williams and Umberson 2004). In some cases, “the timing of an event may be more consequential than its occurrence” (Elder 1995:114). This may be especially true for marriage, where most agree there is a culturally-appropriate time to marry (Settersten and Hägestad 1996). In particular, it has become increasingly non-normative (both statistically and culturally) to marry at early ages. The US median age at first marriage now stands at 28 years for men and 26 for women (United States Census Bureau 2009). Just 4% of 18–19-year-old women, 23% of 20–24-year-old women, 2% of 18–19-year-old men, and 13% of 20–24-year-old men have ever married (US Census Bureau 2011). The probability of marriage increases quickly, however, through the 20s and 30s such that 86% of women and 81% of men will marry by age 40 (Goodwin, McGill, and Chandra 2009). Thus, those who transition to marriage at an early age—especially those who marry in their teens, but also those who marry in their early 20s—may be less likely to enjoy positive mental health benefits from marriage. Early marriages are notorious for their relatively low survival rates (Lehrer 2008), which suggests early marriages may be distinct from later marriages in terms of marital quality and may not confer the same mental health benefits. Moreover, the benefits of marriage’s social approval (Marks 1996) may not extend to those who marry young and receive less societal support.

Indeed, it is possible that early marriage confers no mental health benefit, or even contributes to *more* mental health problems than other relationship arrangements—or not being in a relationship at all. One study of New Jersey young adults found that early marriage was not associated with depression among men or women, and curtailed alcohol problems only among women (Horwitz and White 1991). Another more recent study of young adults found mixed effects of marriage on mental health that varied across outcomes and by race and gender: Early marriage was protective against binge drinking only for Whites, and it was associated with higher depression among Black men (Harris, Lee, and DeLeone 2010). Still, as that study notes, “The relationships between marriage and cohabitation with health during the transition to adulthood are not well understood despite substantial research on marriage and health, and increasing attention to health during the transition to adulthood” (Harris et al. 2010:1107).

THE HETEROGENEITY OF YOUNG ADULT RELATIONSHIPS

Recent research on marriage and mental health differentiates among married adults and those who are living in cohabiting relationships (e.g., Brown 2000; Kim and McKenry 2002; Lamb et al. 2003; Marcussen 2005), as well as those in non-cohabiting romantic relationships (Ross 1995; Fleming, White, and Catalano 2010; Simon and Barrett 2010). Ross (1995) argues that the salutary mental health benefits of marriage are the result of underlying social attachment and support. Relationships of different types fall along a continuum of social attachment, from singles to non-cohabiting romantic relationships to cohabiting relationships to marriage. The mental health advantages accrue as individuals move from less attachment to more attachment, and thus marriage has the most benefits. Relatedly, Simon and Barrett (2010) find that young adults who are in a romantic relationship have better mental health than those not in a relationship, in part because relationships provide social integration and heightened feelings of self-worth, and in part because those in a relationship are less likely to have experienced a recent breakup. Making these relationship distinctions is especially important during the transition to adulthood when marriage is not yet the norm and the pathways to adulthood have diversified (Mouw 2005). Among 18–25-year-olds, just 20% are married, 25% are not in a relationship, 20% are cohabiting, and 35% are dating (Scott et al. 2011). Among those who are dating and cohabiting, many are engaged to be married, which signals a commitment to marry among the partners and likely increased attachment vis-à-vis their unengaged counterparts. Thus, especially among young adults, we might conceive of a continuum of social attachment ranging from single to unengaged dating to unengaged cohabiting to engaged dating to engaged cohabiting to marriage (though the ordering of unengaged cohabiting and engaged dating is not entirely clear). Engagement has been mostly absent from the literature over the past half century, but the relational support and commitment that accompanies it may have positive mental health benefits. Some recent evidence, for example, suggests engaged young adults curb their substance abuse (Bachman et al. 1997; Bachman et al. 2002). In general, then, a more nuanced and fine-grained measure of relationship status is appropriate for determining the mental health effects of marriage, especially among young adults who are just beginning to transition into adult roles.

DOMAINS OF MENTAL HEALTH

Studies of mental health typically focus on mental health *problems* (George 2007). The typical approach in the marriage and mental health literature has been to examine internalizing problems, usually measured by the Center for Epidemiologic Studies Depression scale, and externalizing problems, measured by substance (especially alcohol) use and abuse. These measures have proven valuable especially to scholars who are interested in gender differences in the effect of marriage on mental health, as women tend to internalize and men tend to externalize their mental health problems. But good mental health is about more than avoiding problems; it is also about overall well-being (Bierman, Fazio, and Milkie 2006). Indeed, research suggests that psychological well-being is comprised of both positive affect and the absence of distress (Ryff and Keyes 1995; Williams 2003). Focusing attention on one or the other of these components may fail to capture the full effect of marriage on mental health.

EXPLAINING THE MARRIAGE AND MENTAL HEALTH ASSOCIATION

The causal relationship between marriage and mental health is usually explained by marital resources—economic, social, and psychological—and by relational stability, or the absence of stress from breakups. Selection into marriage by those with fewer mental health problems may also be part of the explanation. These explanations are more or less relevant for the

mental health of married young adults. There are several potential explanations for why marriage may improve or impede the mental health of young adults in particular.

Selection into Marriage by Prior Mental Health

Some scholars argue that at least part of the association between marriage and mental health is the result of selection (Mastekaasa 1992; Horwitz et al. 1996; Stutzer and Frey 2006). In other words, married people do not have better mental health because they are married; rather, people with better mental health are the ones who get married. Although many other longitudinal studies find no evidence of selection into marriage by prior mental health (Kim and McHenry 2002; Simon 2002; Lamb et al. 2003), selection remains a plausible explanation for this relationship. Depressed or unhappy individuals may not be particularly motivated to find a partner, and even if they are they are probably not the most appealing marital match for others seeking a marriage partner. The selection argument, however, is different for earlier marriers than for “on-time” marriers. Early marriage may be selective of individuals with *poorer* mental health. Forthofer et al. (1996) found that psychiatric disorders were positively associated with marriage before age 19, though the effects were weak and not often statistically significant. Still, they argue there may be some validity to the argument that distressed individuals marry early to escape difficult circumstances. Similarly, Gotlib, Lewinsohn, and Seeley (1998) found that a history of major depressive disorder predicted early marriage among women (but not men). Thus, if early marriage is negatively associated with mental health, selection may explain that relationship. But if early marriage has a positive effect on mental health, selection is likely not a good explanation and may actually suppress some of the beneficial effect of marriage on mental health.

Socioeconomic Resources

Marriage is typically thought to increase economic resources (Waite 2009). Married couples are able to benefit from specialization within their family, economies of scale, and the added insurance an able-bodied partner provides against unexpected events (Waite 2009). In turn, these economic resources reduce depression by alleviating stress from economic hardship and by providing the opportunity to seek treatment when mental health problems do arise (Ross, Mirowsky, and Goldstein 1990; Liu et al. 2010). Again, however, this line of argumentation is different for young adults. According to Uecker and Stokes (2008), young adults who marry early are more likely to be socioeconomically disadvantaged: They have parents who are less educated and less wealthy, and they themselves have lower educational aspirations and high-school grade point averages. Early marriage may also curb both educational attainment and earnings (Marini 1985; Teachman, Polonko, and Scanzoni 1986; Loughran and Zissimopoulos 2008). Therefore, whether due to selection or causation, heightened socioeconomic resources are unlikely to underlie any positive effect of marriage on mental health among early marriers, but they may help explain a negative effect of marriage on mental health among young adults who have married.

Parenthood

Children typically diminish the mental health of their parents, and these deleterious effects are stronger for those who are not married (McLanahan and Adams 1989; Nomaguchi and Milkie 2003; Evenson and Simon 2005). The negative effect of children is usually explained by a “role strain” argument—that is, parents with children may find it difficult to balance work and family roles (McLanahan and Adams 1989)—or by citing the increased economic and logistical stress created by parenthood (Nomaguchi and Milkie 2003). While children may have negative effects on psychological outcomes like depression and life satisfaction, they may also reduce certain behaviors like binge drinking (Bachmann et al. 2002). Given that fertility remains higher among married women despite the dramatic rise in nonmarital

childbearing (Martin et al. 2010), parenthood may explain a negative effect of marriage on young adults' mental health or suppress a positive effect on mental health.

Relationship Stability

Marriage is often accompanied by a sense of relationship permanence, and despite the relatively high rate of divorce in the United States, marriages are much more likely to last than other relationships like cohabitations (Brines and Joyner 1999). Since relationship dissolution may harm mental health, relationship stability may explain positive effects of marriage on mental health. For example, Brown (2000) attributes the heightened depression of cohabitators (vis-à-vis married individuals) to their relationship instability. Once instability is accounted for in her models, there is no statistically significant difference between marrieds and cohabitators with respect to depression. Moreover, single young adults who have experienced a recent breakup have more psychological distress than those who are in a romantic relationship (Simon and Barrett 2010). Of course, early marriages are notoriously unstable. Their short-term survival, however, is somewhat high: 78 percent of women's teenage marriages last at least three years, as do 86 percent of those begun in the early 20s (men's three-year marital survival rates are 64 percent for teenage marriers and 84 percent for marriages commenced in their early 20s) (Goodwin, Mosher, and Chandra 2010). Relationship stability may help explain a positive effect of marriage on young adults' mental health, but it would likely suppress a negative effect.

Psychological Benefits

Marriage may provide a number of psychological benefits. Marriage may provide enhanced feelings of meaning and purpose, improved sense of self, and heightened sense of mastery (Marks 1996; Bierman et al. 2006). However, in young adulthood many of these psychological benefits may not be restricted to marriage, as other types of relationships are more normative at this time. Young adults receive a valued social identity, self-worth, and social integration not just from marriage but from nonmarital romantic relationships as well (Simon and Barrett 2010). Moreover, many of marriage's benefits may stem from social approval of the relationship (Marks 1996), which may not apply in many contexts where early marriage is viewed as unwise. Thus, it is not clear whether married young adults reap these benefits in the same way as other married adults.¹

DATA

The data for this study come from Waves 1 and 3 of the National Longitudinal Study of Adolescent Health (Add Health). Add Health was funded by the National Institute of Child Health and Human Development (NICHD) and 23 other federal agencies. It is a school-based panel study of health-related behaviors and their causes, with emphasis placed on social context and social networks. Wave 1 was conducted in 1994 and 1995 and consisted of in-depth interviews with 20,745 American youth in grades 7–12. The 132 schools included in the study were chosen from a sampling frame of U.S. high schools and were nationally representative with respect to size, urbanicity, ethnicity, type (e.g., public, private, religious), and region. Because the study is school-based, it does not represent those who had dropped out of school at Wave 1. Wave 3 was conducted in 2001 and 2002, when respondents were 18–28 years old, and consisted of interviews with 15,197 of the Wave 1 respondents. For this study, I restrict the sample to those who were unmarried at Wave 1, participated in the detailed relationship inventory, and have a valid sample weight ($N =$

¹Some might construe some of these psychological benefits as aspects of mental health. They are certainly the most proximate explanation for mental health differences. Because of this, I include psychological variables in the final models of my analysis. Including these items as mediators thus does not obscure the affect of the other mediators in the previous models.

11,743).² Missing values on the independent variables in the study were imputed using indicator/dummy variable adjustment; mean values for these variables were imputed and a dummy variable flag was included to identify these respondents in the models (Cohen et al. 2003).

MEASURES

Dependent Variables

For this study I analyze three dependent variables: (1) psychological distress, (2) frequency of drunkenness, and (3) life satisfaction.

The measure of psychological distress is an abbreviated form of the Center for Epidemiologic Studies Depression scale (CES-D). The CES-D scale consists of 20 items measuring psychological distress over the prior week. Examples include agreement with statements like “You felt sad” and “You were depressed.” Wave 3 of Add Health included nine of these items. The summed index has a potential range of 0–27, with higher scores indicating higher psychological distress, though in the sample the range is only 0–26. The alpha coefficient of reliability is .80.

The second measure of mental health is the frequency of drunkenness over the past year. Young adults were asked, “During the past 12 months, on how many days have you been drunk or very high on alcohol?” A response of “none” was coded 0; a response of “every day or almost every day” was coded 6.

My final measure of mental health is life satisfaction. All respondents were asked, “How satisfied are you with your life as a whole?” Respondents could respond anywhere from “very dissatisfied” to “very satisfied.” This measure is dichotomized such that a response of “very satisfied” is coded 1 and all other responses coded 0. Treating this variable as an ordinal variable and analyzing it with ordered logit regression techniques produced similar results to those presented here but violated the parallel regression assumption.

Key Independent Variable

The key independent variable for this study is the relationship status of the respondent at Wave 3. I divide respondents into six relationship categories: single, unengaged daters, engaged daters, unengaged cohabitators, engaged cohabitators, and ever-married. This means divorced young adults are included with married young adults, rendering this a stricter, more conservative test of the effects of marriage. This is optimal for two reasons. First, measuring marriage in this way does not allow for the possibility that married individuals have better mental health because those with poor mental health select out of marriage through divorce. Second, because early marriage is associated with higher divorce rates, this yields a fuller assessment of the impact that marriage has on the mental health of young adults. Models separating out divorced young adults produced results substantively similar to those presented here, but divorced young adults fared worse than married young adults on two of the three outcomes (the difference in the third—psychological distress—was not statistically significant but was substantively large).

²Those who had never had a romantic or sexual relationship may not be represented in these data. To help assess how this might affect my results, in ancillary analyses I included those who were missing from the relationship inventory and reported never having had sex at the Wave 3 interview. These respondents are similar to the other single respondents in their psychological distress and life satisfaction, and including this group with the other singles does not significantly alter the effect of being single in the results presented for these two outcomes. This group of virgins is less likely than marrieds (and other singles), however, to get drunk more frequently. Including them with the other singles in the models reduces the effect of being single, but it is still substantively and significantly positive in all models when these respondents are added to the sample. Because many of these respondents may have had romantic partners (but not sexual partners), I only include respondents who provided the detailed relationship data.

I also differentiate the ever-married respondents by their age at first marriage. I create three categories for age at first marriage: married as a teenager, married at ages 20 or 21, and married at ages 22–26. Because never-married respondents are missing information for their age at marriage, a multiplicative interaction term cannot be created. I construct these three categories in order to retain adequate cell sizes and because they mark the normative timing of important educational transitions that typically precede marriage (Mouw 2005). Teenage marriers married before or just after the completion of high school, those marrying at age 20 or 21 likely married before the completion of a four-year college degree or after the completion of an associate's degree, and marrying at 22 or above allows time for a traditional student to complete a four-year college degree. Age at first marriage is determined by comparing the month and year of their first marriage to that of their birth.

Explanatory Variables

I test how several variables may explain the association between marriage and mental health. To begin, I include Wave 1 mental health measures (although there is no comparable Wave 1 life satisfaction measure). The Wave 1 CES-D measure is the full 20-item index and has an alpha of .87. The Wave 1 measure for frequency of drunkenness is nearly identical to the Wave 3 measure and is coded the same way.

Socioeconomic factors may also explain the relationship between marriage and mental health. I include a series of dummy variables (still in high school, never went to college, went to college but dropped out without earning a degree, two-year college student, earned an Associate's degree, four-year college student, and earned a Bachelor's degree or higher) to measure respondents' educational attainment at Wave 3. To measure the respondents' personal earnings, I created an eight-category earnings variable. The lowest category (coded 1) is for those earning less than \$10,000/year; the highest category (coded 8) is for those earning \$75,000/year or more at Wave 3.

Parenthood is a binary variable. Respondents who identified at least one “son” or “daughter” on their household roster at Wave 3 are considered to have a co-resident child and are coded 1 for the dummy indicator. These children include biological, adopted, and step children.

To test how marriage may affect mental health through relationship stability, I incorporate a Wave 3 measure of the respondents' number of sexual partners over the last year. This question refers specifically to vaginal sex and is coded as three binary variables: zero partners, one partner, and two or more partners.

Finally, I include a four-item index tapping respondents' self-image at Wave 3. The items in the index measure respondents' agreement (from 1=strongly disagree to 5=strongly agree) that they (1) have many good qualities, (2) have a lot to be proud of, (3) like themselves just the way they are, and (4) are doing things just about right. The summed index ranges from 4–20 and has an alpha of .86.

Control Variables

I control for a number of demographic and personal characteristics that may influence one's mental health and their standing in the marriage market. I control for a continuous measure of age in years, gender, living in the South, urbanicity, race, BMI classification, the interviewer reports of the respondents' physical attractiveness and the attractiveness of their personality, and their employment status. All controls are measured at Wave 3 except for gender, region, urbanicity, and race, which are Wave 1 measures. Descriptive statistics for all variables are listed in Table 1.

ANALYTIC APPROACH

Tables 2–4 are series of multivariate regression models predicting each of the three mental health outcomes (one table per outcome). These tables all follow the same modeling strategy. In Panels A, ever-married respondents are the reference group for the relationship status variables. Model 1 includes the relationship status variables and control variables. Model 2 adds the Wave 1 CES-D variable (and, for Table 3, the Wave 1 drunkenness measure), Model 3 adds socioeconomic measures, Model 4 adds the parenthood measure, Model 5 adds number of recent sex partners, and Model 6 adds the self-image index. This iterative approach allows me to assess the impact of each set of mediators on the relationship status effects.

Panels B of Tables 2–4 examine the influence of age at first marriage. The models include the same independent variables as those in Panel A, but these models split the ever-marrieds by their age at first marriage to explore how marriages that are closer to on-time—such as marriages among those in their mid-20s—may differ from those that are much earlier—such as teenage marriages. In order to account for the complex multistage sampling design of Add Health, I generate all analyses using *svy* estimators in Stata 11.

RESULTS

Panel A of Table 2 reports coefficients from OLS regression models predicting psychological distress in young adulthood. Engaged daters display less psychological distress than ever-marrieds in all six models, though this is explained somewhat by selection (engaged daters had lower Wave 1 CES-D scores than ever-marrieds), socioeconomic differences (engaged daters are more highly educated than ever-marrieds), and self-image (engaged daters have a more positive self-image than ever-marrieds). Interestingly, engaged cohabitators do not exhibit the same low levels of psychological distress, even after accounting for several potential mediating factors. Model 2 of Panel A also reveals an important suppression effect; once prior psychological distress is considered, single young adults have higher psychological distress than ever-married young adults. This suggests (and ancillary analyses confirm) that respondents with higher levels of psychological distress are more likely to select into marriage than to be single. The deleterious effects of being single are explained in large part by relationship stability (Model 5): Single young adults are more likely than ever-marrieds to have two or more sex partners in the last year (results not shown), which is in turn related to higher psychological distress. Adding self-image in Model 6 further reduces the coefficient for singles from .37 to .20, and the effect is no longer statistically significant.

Panel B breaks up the ever-marrieds into age-at-first-marriage categories. These models include all the independent and control variables from the parallel models in Panel A. These findings suggest that no group fares significantly better in terms of psychological distress than those who married for the first time at ages 22–26. Two groups, however, report more psychological distress than those who married at ages 22–26: singles and teenage marriers. The teenage marriage effect appears to be a function of selection into teenage marriage by those with higher pre-existing levels of psychological distress; once Wave 1 CES-D is considered, the difference between teenage marriers and 22–26-year-old marriers is reduced greatly and is no longer statistically significant. The positive effect of being single on psychological distress is, as in Panel A, mostly a function of relationship instability among this group. The coefficient is no longer significant in Model 5 of Panel B. It may also be explained somewhat by lower self-image among singles. It is also noteworthy that the positive association between both types of cohabitators and higher psychological distress is

not statistically significant net of control variables. It is sizable, however, but even that appears to be a function of selection as the effect size is greatly reduced in Model 2.

Panel A of Table 3 reports incidence rate ratios from negative binomial regression models predicting young adults' frequency of drunkenness. According to Model 1, singles and unengaged daters get drunk at more than twice the rate of ever-marrieds, and unengaged cohabitators get drunk at about 1.80 times the rate, net of controls. Very little of this difference stems from prior (Wave 1) differences in drinking behavior or psychological distress (see Model 2). Each of the explanatory variables in Models 3–5—socioeconomic status, parenthood, and relationship stability—reduces the disparity between ever-marrieds and these groups somewhat, but adding self-image does very little in Model 6, and the effects remain positive and statistically significant in the final models. Engaged daters and engaged cohabitators resemble ever-marrieds in their drinking behavior, a finding that is consistent across all models in Table 3.

Panel B reports the results for frequency of drunkenness with first married at ages 22–26 as the reference group. Unengaged adults have higher rates of drunkenness than do 22–26-year-old marriers—findings that mirror those of Panel A where the comparison group was ever-marrieds. Interestingly, those who married at age 20 or 21 get drunk less frequently than those who marry later (at ages 22–26). This appears to be due in part to the higher educational attainment of the latter group, as the difference is no longer significant in Model 3. Each of the explanatory variables in Models 2–5 slightly reduces the effects of singleness, unengaged dating, and unengaged cohabiting, but differences remain in the final model between these groups and those who marry at age 22–26.

Table 4 displays odds ratios from logit regression models predicting respondent reports of being very satisfied with their life. There is a clear association between marriage and higher life satisfaction (compared to all other groups) in these models. Model 2 suggests this has little to do with selection based on prior psychological distress. In Model 3, the difference between engaged cohabitators and the ever-married is no longer statistically significant once socioeconomic status is considered. Otherwise, the marital life satisfaction advantage is robust to a number of potential mediating variables. While the odds ratios diminish slightly from Models 4 to 5—when relationship stability is added—they remain strong and significant the $p < .001$ level. Accounting for self-image in Model 6 only widens the life-satisfaction gap between ever-marrieds and other respondents, and the significant difference between engaged cohabitators and ever-marrieds re-emerges.

In Model 1 of Panel B, all groups are less likely to report being very satisfied with their lives than are those who married for the first time at ages 22–26, including those who married as teenagers and those who married at ages 20 or 21. These differences withstand the addition of Wave 1 CES-D score in Model 2, suggesting selection is not the key story here. Socioeconomic status (in Model 3) reduces the effect of marrying at ages 20–21 to nonsignificance and partially explains other effects, like the engaged cohabitor and teenage marrier effect. Accounting for relationship stability attenuates the relationships only very slightly, and adding self-image in Model 6 somewhat suppresses the effects; in the final model, all groups except those who first married at ages 20 or 21 report significantly lower life satisfaction than those who first married at ages 22–26.

DISCUSSION AND CONCLUSION

Taking a life course perspective, I have investigated the relationship between marriage and mental health in young adulthood. I examined three aspects of mental health—psychological distress, drinking behavior, and life satisfaction—and six different relationship arrangements

—being single, dating and unengaged, dating and engaged, cohabiting and unengaged, cohabiting and engaged, and ever-married. I also explored how this connection may vary by age at marriage and tested several potential explanations for the marriage-mental health connection among young adults.

Several key conclusions can be reached from these analyses. In terms of psychological distress, marriage's benefits are limited but not absent. Married young adults have lower psychological distress than single young adults, but they do not have a clear advantage over young adults in any other type of romantic relationship. In fact, young adults who are engaged and not cohabiting have lower levels of distress than do married young adults. This may be the result of their more normative and socially approved transition to adulthood, and may also reflect the excitement of an impending wedding and new marriage. Why engaged cohabitators do not exhibit similarly low levels of psychological distress is not clear. It may be that living together in a "marriage-like" relationship somewhat dampens the excitement and anticipation of an impending wedding.

Marriage has a clearer benefit when it comes to drunkenness. Married young adults get drunk less frequently than single ones and those who are not engaged. Engaged young adults—both cohabiting and not—look similar to married young adults in this regard. Engaged young adults may be curbing their drinking habits as they prepare for their transition to marriage. Marriage and engagement likely carry with them a heightened sense of responsibility and obligation and a less active social calendar which leads to less drunkenness (Umberson and Williams 1999; Bachman et al. 2002). Frequent drunkenness among young adults may not be entirely about externalizing mental health problems, however. Given the strong positive association between educational attainment and drunkenness and the strong negative association between educational attainment and psychological distress, it is likely that this variable is capturing, at least in part, a "partying" lifestyle characteristic of many college students.

Married young adults are much more satisfied with their lives than are other young adults (with the possible exception of engaged cohabitators). The marriage premium for life satisfaction is strong and robust to a number of potentially explanatory factors, including selection, socioeconomic status, parenthood, relationship stability, religious participation, and psychological gains. Married young adults are likely benefiting from the emotional and social support that accompanies marriage (with its heightened social attachment) and that has not been gauged adequately by this study's measures. Marriage may also provide a degree of certainty, finality, and sense of satisfaction deriving from "accomplishing" one of the tasks involved in the transition to adulthood, the task some consider the capstone to adulthood (Cherlin 2004). Those who have not married may still experience anxiety about locating and securing a lifelong (ideally, at least) partner.

Somewhat surprisingly, there appears to be little gain to waiting until one's mid-20s to marry for two of the three mental health outcomes under examination. Although teenage marriers have more psychological distress than those who married at ages 22–26, this difference is the result of selection and not causation. Only in terms of life satisfaction do more "on-time" (though still early) marriers outpace teenage marriers and those who marry at age 20 or 21. Waiting until later to marry may do little good in terms of avoiding mental health problems but much good in terms of improving overall well-being. This latter finding suggests social approval for marriage—which is likely higher for those marrying at ages 22–26 than for those marrying earlier—may be a key mechanism explaining marriage's effect on overall well-being. This finding also highlights the importance of considering multiple domains of mental health in studies such as this one.

This study has also tested a number of potential mechanisms that may explain the relationship between marriage in young adulthood and mental health. I have found no evidence that differences in married young adults' mental health are attributable to selection into marriage by those with better mental health. Instead, teenage marriage is selective of those with relatively high psychological distress, suggesting that—if anything—marriage's mental health benefits in young adulthood are *masked* by differences in pre-existing psychological distress. Selection plays virtually no role in explaining differences between married young adults and others in terms of frequency of drunkenness and life satisfaction. Economic resources also do little to explain marriage's mental health effects during this stage of the life course. Marriage at these ages is likely both selective of those with less education and earnings potential (Booth et al. 2008; Uecker and Stokes 2008) and an obstacle to educational attainment and higher earnings (Marini 1985; Teachman et al. 1986; Loughran and Zissimopoulos 2008). In either case, differential socioeconomic resources do not explain much of the differences between married young adults and other young adults' mental health; if anything, like selection by prior mental health, the fewer resources available to married young adults suppress the effect of marriage (*vis-à-vis* singles) on psychological distress and explain some of the engaged dating advantage over marriage. Socioeconomic resources do little in the way of explaining differential levels of either drunkenness or life satisfaction.

Perhaps the best mediators of those tested are relationship stability—measured here by the number of sex partners in the last year—and self-image. Not having multiple sex partners (which indicates relationship stability) explains almost 30% of married young adults' psychological distress advantage over single young adults. Exiting relationships can lead to psychological distress among young adults (Simon and Barrett 2010), and marriage—though not indissoluble—buffers many young adults from that distress. More positive self-image explains the rest of the marrieds' lower psychological distress compared to singles and about 23% of engaged daters' lower psychological distress (compared to married young adults). Still, self-image is less helpful in explaining differences in frequency of drunkenness (where parenthood may be a key factor) and life satisfaction. In the end, marriage's effects are often robust to these selection factors and mediating variables.

While this study has mapped the effects of marriage and mental health in young adulthood and the moderating effect of age at first marriage on those effects, future studies may wish to explore the social contexts in which these effects hold true. Individuals' immediate social context, including both structural (e.g., neighborhood disadvantage) and cultural (e.g., local age norms) factors, may buffer or exacerbate the effect of marriage on mental health (Clarke and Wheaton 2005). The conclusion that social approval explains some of the age-at-marriage effect on life satisfaction could be further tested to see whether this effect is more or less present in contexts where early marriage is more or less affirmed.

Because many studies of marriage and mental health focus on gender differences, I did conduct ancillary analyses to test for gender interactions. None were significant for psychological distress. Three were significant for frequency of drunkenness: the effect of being single and of being an unengaged cohabitor (*vis-à-vis* ever-married) is positive for men, but even more positive for women. The effect of engaged dating was negative for men but not significant for women. For life satisfaction, unengaged cohabiting men reported lower satisfaction than ever-married men, but the effect was even more negative for unengaged cohabiting women. The same pattern is true for unengaged daters, but only in the final model. These results corroborate the findings of several other studies that suggest perhaps “the future of marriage has arrived” (e.g., Williams 2003) in terms of converging gendered effects of marriage on mental health.

Finally, and importantly, this study cannot speak to the long-term effect of an early marital transition, only relatively short-term effects. Given longer exposure to the difficulties associated with early marriage, those who marry early may exhibit higher levels of mental health problems as they age. Furthermore, using a sample with a restricted age range such as this makes it difficult to reject the hypothesis that early marriage confers mental health benefits because these individuals are still in a “honeymoon” phase of their relationship (VanLaningham, Johnson, and Amato 2001; Kim and McHenry 2002). Other studies with a wider age range in the sample are necessary to address this issue.

Conclusion

Researchers have only recently begun to move beyond the average effects of marriage on mental health and examine the contexts associated with better or worse mental health among those who are married. This study has furthered research efforts by focusing on marriage (vis-à-vis other types of relationships) in young adulthood, when marriage is non-normative and considered “early.” In general, marriage in young adulthood is not detrimental to mental health. Being in any sort of relationship is good for psychological distress, being married or engaged to be married curbs drunkenness, and married young adults—especially those who marry at ages 22–26—are more satisfied with their lives. These findings suggest that marriage’s mental health benefits are apparent, at least in many ways, among young adults who have married at a relatively early age.

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Table 1

Descriptive Statistics for Study Variables

	Mean	SD	Range
<i>Dependent Variables</i>			
CES-D score	4.46	4.05	0–26
Frequency of drunkenness	1.27	1.47	0–6
Very satisfied with life	.37	—	0, 1
<i>Key Independent Variables</i>			
Single	.26	—	0, 1
Unengaged dater	.31	—	0, 1
Engaged dater	.05	—	0, 1
Unengaged cohabitor	.11	—	0, 1
Engaged cohabitor	.06	—	0, 1
Ever-married	.20	—	0, 1
First married as a teenager	.07	—	0, 1
First married at ages 20 or 21	.07	—	0, 1
First married at ages 22–26	.06	—	0, 1
<i>Explanatory Variables</i>			
CES-D score, Wave 1	10.97	7.56	0–54
Frequency of drunkenness, Wave 1	.67	1.25	0–6
Still in high school	.01	—	0, 1
Never went to college	.41	—	0, 1
Went to college, dropped out	.12	—	0, 1
Two-year college student	.10	—	0, 1
Earned Associate's degree	.04	—	0, 1
Four-year college student	.21	—	0, 1
Earned Bachelor's degree or higher	.11	—	0, 1
Personal earnings	2.40	1.55	1–8
Zero sex partners in last year	.15	—	0, 1
One sex partner in last year	.54	—	0, 1
Two or more sex partners in last year	.30	—	0, 1
Self-image	16.87	2.27	4–20
<i>Control Variables</i>			
Age	21.83	1.85	18–28
Female, Wave 1	.50	—	0, 1
Lives in the South, Wave 1	.38	—	0, 1
Lives in urban area, Wave 1	.27	—	0, 1
Lives in rural area, Wave 1	.16	—	0, 1
Lives in suburban area, Wave 1	.57	—	0, 1
White, Wave 1	.69	—	0, 1
Black, Wave 1	.15	—	0, 1
Hispanic, Wave 1	.10	—	0, 1

	Mean	SD	Range
Asian, Wave 1	.04	—	0, 1
Co-resident child(ren)	.22	—	0, 1
Underweight	.03	—	0, 1
Normal weight	.51	—	0, 1
Overweight	.25	—	0, 1
Obese	.21	—	0, 1
Interviewer report attractive physically	3.50	.81	1–5
Interviewer report attractive personality	3.65	.84	1–5
Unemployed	.29	—	0, 1
Employed parttime	.21	—	0, 1
Employed fulltime	.50	—	0, 1

Notes: Indicator variables for missing values not displayed. Variables are Wave 3 unless otherwise noted.

Table 2
Coefficients from Ordinary Least Squares Regression Models Predicting CES-D Score

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Panel A. Coefficients for Relationship Status and Explanatory Variables and Model-fit Statistics from Full Models with Ever-Married Respondents as Reference Group</i>						
<i>Relationship Status</i>						
Single	.26	.39*	.55**	.51**	.37*	.20
Unengaged daters	-.22	-.00	.19	.16	.02	-.06
Engaged daters	-.65**	-.60*	-.47*	-.51*	-.53*	-.41*
Unengaged cohabitators	.09	.09	.11	.09	.02	-.04
Engaged cohabitators	.08	.01	-.01	-.03	-.03	-.05
<i>Explanatory Variables</i>						
CES-D, Wave 1		.17***	.16***	.16***	.16***	.13
Still in high school		1.16	1.16	1.16	1.17	1.13
Went to college, dropped out		-.70***	-.70***	-.71***	-.72***	-.70***
Two-year college student		-.24	-.24	-.25	-.23	-.10
Earned Associate's degree		-.95***	-.95***	-.97***	-.95***	-.81***
Four-year college student		-.83***	-.83***	-.85***	-.81***	-.59***
Earned Bachelor's degree or higher		-.92***	-.92***	-.95***	-.93***	-.67***
Personal earnings		-.05	-.05	-.05	-.05	-.02
Co-resident child(ren)		-.10	-.10	-.10	-.08	.01
Zero sex partners in last year		.14	.14	.14	.14	.07
Two or more sex partners in last year		.53***	.53***	.53***	.53***	.39**
Self-image		-.59***	-.59***	-.59***	-.59***	-.59***
Constant	7.41***	6.56***	5.59***	5.61***	5.37***	15.08***
R-squared	.04	.14	.15	.15	.15	.25
<i>Panel B. Coefficients for Relationship Status Variables from Full Models with First Married at Ages 22-26 as Reference Group</i>						
Single	.58**	.52**	.55**	.53**	.37	.21
Unengaged daters	.11	.12	.20	.17	.01	-.05
Engaged daters	-.32	-.47	-.47	-.49	-.53	-.40
Unengaged cohabitators	.41	.22	.11	.10	.01	-.03

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Engaged cohabitators	.41	.13	-.01	-.01	-.03	-.04
First married as a teenager	.65*	.26	.03	.04	.01	-.02
First married at ages 20 or 21	.27	.09	-.02	.00	-.01	.05

* p < .05

** p < .01

*** p < .001

Notes: Reference groups are ever-married (Panel A) or first married at ages 22–26 (Panel B), never went to college, one sex partner in last year, suburban, White, and normal weight. Models include, but do not display, controls for age, gender, region, urbanicity, race-ethnicity, body mass index classification, physical attractiveness, attractiveness of personality, and work status. Models in Panel B include the same controls as well as the explanatory variables displayed in Panel A. N = 11,636

Table 3
Incidence Rate Ratios from Negative Binomial Regression Models Predicting Frequency of Drunkenness

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Panel A. Incidence Rate Ratios for Relationship Status and Explanatory Variables and Model-fit Statistics from Full Models with Ever-Married Respondents as Reference Group</i>						
<i>Relationship Status</i>						
Single	2.16***	2.11***	2.01***	1.78***	1.69***	1.66***
Unengaged daters	2.10***	2.06***	1.92***	1.70***	1.53***	1.52***
Engaged daters	1.08	1.06	1.04	.92	.91	.91
Unengaged cohabitators	1.80***	1.72***	1.69***	1.56***	1.49***	1.48***
Engaged cohabitators	1.13	1.09	1.09	1.04	1.04	1.04
<i>Explanatory Variables</i>						
CES-D, Wave 1		.99*	1.00	1.00	1.00	.99*
Frequency of drunkenness, Wave 1		1.16***	1.16***	1.17***	1.15***	1.15***
Still in high school		.84	.84	.83	.87	.87
Went to college, dropped out		1.19***	1.19***	1.15**	1.15**	1.15**
Two-year college student		1.18**	1.18**	1.14**	1.16**	1.18**
Earned Associate's degree		1.02	1.02	.98	1.00	1.01
Four-year college student		1.28***	1.28***	1.22***	1.28***	1.30***
Earned Bachelor's degree or higher		1.30***	1.30***	1.21***	1.26***	1.29***
Personal earnings		1.03*	1.03*	1.02*	1.02	1.02
Co-resident child(ren)				.73***	.74***	.74***
Zero sex partners in last year					.85**	.84***
Two or more sex partners in last year					1.45***	1.44***
Self-image					.96***	.96***
-2 log likelihood	32350.4	32035.0	31887.4	31790.2	31361.3	31281.8
<i>Panel B. Incidence Rate Ratios for Relationship Status Variables from Full Models with First Married at Ages 22-26 as Reference Group</i>						
Single	2.01***	1.93***	1.90***	1.76***	1.65***	1.62***
Unengaged daters	1.95***	1.88***	1.82***	1.68***	1.50***	1.48***
Engaged daters	1.00	.97	.98	.91	.89	.89

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Unengaged cohabitators	1.67***	1.58***	1.60***	1.54***	1.45***	1.44***
Engaged cohabitators	1.05	.99	1.03	1.03	1.02	1.01
First married as a teenager	.99	.95	1.02	1.08	1.06	1.05
First married at ages 20 or 21	.80*	.80*	.83	.88	.87	.88

* p < .05

** p < .01

*** p < .001

Notes: Reference groups are ever-married (Panel A) or first married at ages 22–26 (Panel B), one sex partner in last year, suburban, White, and normal weight. Models in Panel A include, but do not display, controls for age, gender, region, urbanicity, race-ethnicity, body mass index classification, physical attractiveness, attractiveness of personality, and work status. Models in Panel B include the same controls as well as the explanatory variables displayed in Panel A. N = 11,453

Table 4

Odds Ratios from Logit Regression Models Predicting Very Satisfied with Life

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
<i>Panel A. Odds Ratios for Relationship Status and Explanatory Variables and Model-fit Statistics from Full Models with Ever-Married Respondents as Reference Group</i>						
<i>Relationship Status</i>						
Single	.48***	.46***	.40***	.40***	.43***	.43***
Unengaged daters	.58***	.54***	.46***	.45***	.50***	.46***
Engaged daters	.64**	.63**	.57***	.56***	.57***	.48***
Unengaged cohabitators	.54***	.53***	.52***	.51***	.53***	.51***
Engaged cohabitators	.73*	.74*	.75	.75	.75	.72*
<i>Explanatory Variables</i>						
CES-D, Wave 1		.96***	.96***	.96***	.96***	.98***
Still in high school		.80	.81	.81	.79	.76
Went to college, dropped out		1.01	1.01	1.01	1.01	1.01
Two-year college student		1.20*	1.20*	1.20*	1.18*	1.12
Earned Associate's degree		1.17	1.17	1.17	1.15	1.09
Four-year college student		1.92***	1.92***	1.92***	1.87***	1.82***
Earned Bachelor's degree or higher		1.74***	1.74***	1.74***	1.70***	1.56***
Personal earnings		1.00	1.00	1.00	1.00	.98
Co-resident child(ren)			.99	.99	.97	.91
Zero sex partners in last year				.94	.94	.98
Two or more sex partners in last year				.70***	.70***	.73***
Self-image				1.54***	1.54***	1.54***
-2 log likelihood	15091.1	14875.1	14738.2	14733.4	14662.6	13126.3
<i>Panel B. Odds Ratios for Relationship Status variables from Full Models with First Married at Ages 22-26 as Reference Group</i>						
Single	.35***	.35***	.33***	.33***	.36***	.33***
Unengaged daters	.41***	.40***	.37***	.37***	.41***	.36***
Engaged daters	.46***	.47***	.46***	.46***	.47***	.38***
Unengaged cohabitators	.39***	.40***	.42***	.42***	.44***	.40***

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Engaged cohabitators	.53***	.56***	.61**	.61**	.61**	.56**
First married as a teenager	.54***	.59**	.67*	.67*	.68*	.62**
First married at ages 20 or 21	.73*	.76*	.82	.82	.83	.78

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

Notes: Reference groups are ever-married, never went to college, one sex partner in last year, suburban, White, and normal weight. Models include, but do not display, controls for age, gender, region, urbanicity, race-ethnicity, body mass index classification, physical attractiveness, classification, physical attractiveness, attractiveness of personality, and work status. Models in Panel B include the same controls as well as the explanatory variables displayed in Panel A. N = 11,688