

Depression and the Psychological Benefits of Entering Marriage

Although hundreds of studies clearly show that marriage is strongly and positively associated with psychological well-being for men and women (Williams 2003; Simon 2002; Horwitz et al. 1996; Alan and Booth 1991; Horwitz and White 1991; Gove 1983), emerging evidence indicates that these benefits do not apply equally to all individuals. To date, no prior research has examined whether those who are depressed prior to entering marriage receive the same psychological benefits from marriage. We hypothesize that depressed individuals receive few or no psychological benefits from entering marriage in part because the depression of one spouse and the demands it creates in the marriage undermines marital communication and marital quality. We analyze two waves of data from the National Survey of Families and Households (NSFH) to test this hypothesis. We focus on a transition to marriage rather than on marital status itself to control for pre-marital levels of depression. We also separate those who are depressed prior to entering marriage from the non-depressed and compare their later levels of depression to similar individuals who remain continually unmarried.

The Mental Health Benefits of Marriage

On average, the currently married report higher levels of psychological well-being (measured by lower rates of depression, substance abuse, and/or alcoholism) than never married, divorced, widowed, or separated individuals. Moreover, several longitudinal studies find that transitions into marriage are associated with declines in depression among women and declines in alcohol use and abuse among men (Williams 2003; Simon 2002; Simon and Marcussen 1999; Marks and Lambert 1998; Waite 1995). However, other studies indicate that entering marriage is associated with negligible and insignificant changes in psychological well-being, at least among younger adults (Horwitz and White 1991). Inconsistencies of this sort may partly reflect

the fact that, in focusing on the average effects of marriage on health and well-being, researchers have not yet specified the range of factors that moderate this association.

The idea that all individuals do not benefit equally from marriage is not a novel one. But surprisingly little research has examined for whom and under what circumstances marriage actually confers mental health benefits. With a few exceptions, studies have not moved beyond identifying the sociodemographic moderators of this association. This body of research suggests a great deal of variability in the benefits of marriage. For example, although men and women receive similar psychological benefits from marriage (Williams 2003; Simon 2002; Marks and Lambert 1998), the impact of transitions into marriage on mental health varies by age and race. Men and women over age 40 are more psychologically resilient to a transition out of marriage than their younger (age 19-34) counterparts (Marks and Lambert 1998). Regarding race, marital status differences in mental health are greater among whites than blacks (Williams et al. 1992b).

In addition to sociodemographic factors, marital quality is also an important moderator of the link between marriage and mental health. In a recent longitudinal study of the mental health benefits of transitions into marriage by gender, Williams (2003) found that married individuals who report low levels of marital quality report higher levels of distress than their continually unmarried counterparts. As a result, individuals who report above average marital quality are the sole beneficiaries of mental health gains in marriage (Williams 2003). Additionally, Horwitz and colleagues (1996) found that the length of marriage, strength of social support from friends and relatives, economic wealth, and the presence of children did not significantly affect mental health gains in marriage once marital quality was taken into account.

Research that continues to clarify how and why the benefits of marriage are conferred to individuals is important because this body of research as a whole is often interpreted as evidence

that all individuals can expect to benefit from marriage. An emerging body of research indicates that this is not always the case. In continuing with this examination of the differential benefits of marriage between groups, we separate the previously depressed and non-depressed prior to marrying, and compare the psychological well-being of each group after entering marriage to that of their continually unmarried counterparts.

Marriage and Psychological Well-being: The Importance of Prior Mental Health

Despite the wealth of research on marital status and mental health and emerging evidence that the benefits of marriage do not apply equally to all, no prior research has taken into account the psychological well-being of either spouse *prior* to marriage. There is ample reason to believe that depressed men and women will not report the same gains in psychological well-being that non-depressed men and women report after marrying. An individual's pre-marital depression affects that individual's subjective views of the marriage, as well as communication between partners within the marriage (Bradbury et al. 2000; Houk & Daniel 1994; McLeod & Eckberg 1993). For depressed individuals, all of these factors can undermine the psychological benefits of marriage. Even if they receive the same levels of emotional support from marriage, depressed spouses may be less likely than others to psychologically benefit from this support (Bradbury et al. 2000; Houk & Daniel 1994; McLeod & Eckberg 1993). In addition, a depressed spouse may both require more caring and support than the other spouse is able or expects to provide, and may provide little support in return (Turner & Turner 1999; McLeod & Eckberg 1993).

Variations in spousal reliance can create strain within the marriage as one spouse cares for the other without an equal return of emotional support. Because they are predisposed to having poor marital communication and a negative view of the marriage, depressed persons may

experience worse marital quality and therefore, fewer psychological benefits of marriage. In addition, a depressed spouse can increase the depression of his or her spouse through emotional contagion, a non-specific ‘catching’ of the depression of a loved one (Hatfield et al. 1993). Marital quality then, is lowered for both spouses. All of these factors may reduce the psychological benefits of marriage for depressed individuals.

In a novel study on the concordance of depression among married couples, McLeod and Eckberg (1993) found that couples with at least one depressed spouse report lower levels of marital satisfaction than couples in which neither spouse is depressed. Both spouses in a married couple with at least one depressed member were also more likely to report that their partner was less satisfying and more demanding than couples in which neither spouse was depressed. Interestingly, the authors did not conclude that two depressed spouses have significantly worse marital quality than couples where only one spouse is depressed. This is important, because it suggests that only one depressed spouse may be enough to harm the quality of the marriage for both.

Given that the psychological benefits of marriage depend on marital quality (Williams 2003), McLeod and Eckberg’s (1993) observation that depression undermines marital quality strongly suggests that depressed individuals may receive few benefits from marriage. However, their study was not designed to test this hypothesis and we are aware of no studies since that have done so. Some of our models will test this idea by controlling for depression prior to marrying (in order to clarify the depression-marital quality causation link), and measuring whether the psychological benefits of marriage depend on the quality of the marriage, controlling for baseline depression. We develop a set of hypotheses that directly address this new direction in research on marital status and mental health research. We include predictions for all men and

women who transition to marriage (H1), and then separate the previously depressed from the previously non-depressed respondents to assess whether premarital depression moderates the psychological well-being benefits of a marital transition (H2). We also add positive and negative measures of marital quality as moderators to test whether the psychological well-being benefits of marriage depend on the emotional support provided through a marriage, measured through marital happiness and marital disagreements (H3-6).

<Table 1 about here >

Because research has consistently demonstrated the mental health benefits of a transition to marriage, we expect that, controlling for baseline differences in depression, men and women who experience a transition to marriage will (on average) report better psychological well-being than the continually unmarried (*Hypothesis 1*). However, if high levels of marital quality are necessary for a spouse to benefit psychologically from marriage relative to the continually unmarried, then the depression of that spouse can compromise the psychological benefits of marriage through a decrease in communication, excessive emotional neediness shown by the depressed spouse, and lowered reports of marital quality reported by both spouses (Williams 2003; Goodman & Shippey 2001; Horwitz et al. 1997; Hatfield et al. 1993; McLeod and Eckberg 1993). Pre-marital levels of depression will have a negative effect on marital quality and, therefore, will undermine the otherwise positive consequences of marriage for mental health. Therefore, we predict that depressed individuals who transition to marriage will not report better psychological well-being at Time 2 than the depressed who remain continually unmarried. In

contrast, those who are not depressed prior to marrying will report better psychological well-being at Time 2 than their continually unmarried non-depressed counterparts (*Hypothesis 2*).

Prior research indicates that a single depressed individual within a marriage is enough to disrupt marital quality for both individuals (McLeod and Eckberg 1993). Therefore, any differences between depressed and non-depressed individuals in the psychological benefits may be due in part to marital quality. We first attempt to replicate prior research which indicates that among all couples, marital quality moderates the psychological well-being benefits of marriage (*Hypotheses 3-4*). Men and women who transition to marriage and experience high levels of marital happiness (*Hypothesis 3*) or low levels of marital conflict (*Hypothesis 4*) should report better psychological well-being at Time 2 than the continually unmarried. However, we further hypothesize that the effects of marital happiness and marital conflict on the psychological benefits (or costs) of marriage will depend on the pre-marital levels of depression reported by the main respondent (*Hypothesis 5-6*). Specifically, although high marital happiness and low marital conflict should increase the psychological benefits of marriage (compared to remaining unmarried), we expect this moderating role to be smaller for those who are depressed prior to entering marriage. In contrast, the negative effects of low marital happiness and high marital conflict on psychological well-being relative to remaining continually unmarried should be amplified among those who are depressed prior to entering marriage. If this hypothesis is supported, depressed individuals who enter a marriage characterized by low marital quality will be substantially more depressed at Time 2 than depressed individuals who remain unmarried.

Gender Differences in Depression and Marital Quality

Prior research suggests that the role of prior depression may differ for men and women. Women who are depressed are more reliant on those who have close interpersonal relationships with them than (all) men and those women who are not depressed (Turner & Turner 1999; Joiner Jr. 1994). Women's depression also fluctuates more than men's with changes in marital quality (Horwitz et al. 1997). Additionally, Tower and Kasl (1995) find that among elderly couples, men's depression explains three times (7.5%) the variation in women's depression and marital quality as women's depression explains in men (1.9%). To account for these gender differences, we conduct separate analyses for men and women. For these reasons and because men are less likely to express psychological distress through depression than are women, we suspect that the hypothesized associations will be more modest in men than in women.

DATA AND MEASUREMENTS

The National Survey of Families and Households

The National Survey of Families and Households (NSFH) is a nationally representative, panel study with two waves of data available for the full baseline sample (Sweet and Bumpass 1996). A randomly selected head of household and several 'focal' children were interviewed for the first wave from 1987-1988, with an overall response rate of 75% (Sweet and Bumpass 1990). The second wave interviewed spouses and cohabiting partners along with the original respondents. Both adults in the household during the second wave completed a self-enumerated questionnaire that assessed (among many other variables) their psychological well-being, their history of substance abuse, and the quality of their marriages. Interviews were conducted for the second wave of the NSFH from 1992-1994. Seventy-seven percent of the respondents interviewed in Wave 1 remained in Wave 2, although not all of these respondents provide the

data necessary for this analysis. We first limited the sample to those respondents who were unmarried at T1. All respondents married at T1 (including those who exited out of marriage at T2) were dropped. Second, we dropped those respondents over the age of 55. Third, we dropped those respondents missing data on psychological well-being at T1 or T2. The final sample N was 3,066.

Independent Variables

Psychological Well-Being

The CES-D, or Center for Epidemiological Studies Depression Scale, is a twenty-item self-enumerated test that measures the frequency of an individual's symptoms of depression. The NSFH abbreviates this scale to twelve items, and extends its original 0-3 scale to a 0-7 scale measuring the number of days in the last week a respondent "felt like they could not shake off the blues", "slept restlessly", or "felt lonely". We aggregate these twelve items into a single continuous T2 depression scale with scores ranging from 0-84. We construct a dichotomous measure for the main respondent's T1 depression. The dichotomous variable separates individuals who are depressed from individuals who are not.

Our decision to dichotomize T1 respondent depression while keeping T2 depression as a continuous variable rests on a theoretical and methodological distinction between depression as a measure of psychopathology and depression as an indicator of (a lack of) psychological well-being. Consistent with prior research, our hypotheses state that transitions into marriage will be generally associated with improved psychological well-being (i.e., a decline in the overall level of depression as measured with the continuous CES-D scale). However, we also expect that the extent of the increase in psychological well-being associated with a transition into marriage will differ depending upon whether a respondent exhibits a relatively extreme level of depression that

likely approximates the severity of symptoms seen among those with a diagnosis of clinical depression. For this reason, we employ dichotomous measures of T1 respondent depression.

We code main respondents (men and women) as depressed at T1 if they score 23 or more points on the abbreviated CES-D scale in the NSFH. Although these cut-offs differ from the traditional cut-off of 16 used in the twenty-item original version of the CES-D, they represent a point estimate (20%) of overall depression rates at any given time in the United States (American Psychiatric Association 2000). Additionally, the traditional cut-off of 16 applies to a 0-3 scale of responses, while the NSFH uses a 0-7 scale to measure the frequency of each symptom of depression in the last week. The cut-offs used in this analysis separate the top 20th percentile of scores in the full first wave of the NSFH and the full second wave of spousal data (before sample deletions were made), a percentile cutoff identified by Ensel (1986), and used by Koropeckyj-Cox (1996) to identify probable cases of clinical depression¹.

Although the CES-D is not used to diagnose individuals with depression, it is a well-validated and widely used indicator of mental health status in general populations. Researchers using the CES-D have noted its reliability in predicting diagnoses of clinical depression (Koropeckyj-Cox 1996; Roberts and Vernon 1983). Those men and women who are referred to as ‘depressed’ or ‘previously depressed’ in this study are not necessarily clinically depressed; however, they are experiencing symptoms of depression that are more frequent and more severe than the remainder of the population.

Marital Transitions

A marital transition occurs when an unmarried individual at T1 (this includes never married, widowed, separated, or divorced individuals) and remains married to the

same spouse at the time of the T2 interview. We code a marital transition as a dummy variable where marrying by T2=1. We compare those who report a marital transition to the never-married. Dummy variables are added to the analysis to control for respondents who were unmarried but divorced/separated or widowed at T1.

Marital Quality (at T2)

Measures of marital happiness and marital disagreement are used to measure marital quality. These measures have been used in previous NSFH research on marital quality (Skinner et al. 2002; Brown and Booth 1996), and remain excellent measures of respondents' overall assessments of their marriages. While these previous studies use four and five indicators (respectively) of marital quality, I retain the two indicators that seem to best measure the emotional support that a marriage provides.

Marital happiness is measured using three questions that assess a respondent's overall happiness with their marriage, with their spouse's love and affection, and with their spouse's understanding (loads as 1 factor/ $\alpha = .89$). Scores range from 1 (very unhappy) to 7 (very happy), with a total range of scores between 3-21. Marital disagreement is measured through the frequency (1=never and 6=almost every day) of disagreements that a couple has about money, sex, and the time spent together (loads as 1 factor/ $\alpha = .69$). Both scores are standardized, with all average scores and the continually unmarried coded as zero.

Control Variables

Age

In general, incidence of substance abuse and depression declines as an individual ages; however, married individuals report a greater decline of psychological distress with age than do unmarried individuals (Horwitz et al. 1996). Mirowsky found that men and women report

depression as a U-shaped curve with age, and that more women than men report depression (Mirowsky 1996). This curve flattens when socioeconomic factors, especially full-time employment in women, are taken into account. We initially conducted analyses using an age-squared and an age variable (measured in years at T1), but age-squared was not significant and was therefore dropped from the final model. Other variables were not affected.

Employment

Full-time employment lowers depression in women by providing an additional support network and a steady income, leaving women less financially and emotionally dependent on their spouses (Cleary and Mechanic 1983; VanFossen 1981). A lack of employment can affect women negatively to the same degree that a job outside the home affects women positively. Employed men, especially when employed full-time, have better psychological well-being than unemployed men (Bird 1997; Turner 1995; Jackson 1985). Employment also indirectly affects mental health when a steady income reduces the economic hardship that men and women perceive, thereby reducing depression (Ross, Mirowsky and Goldsteen 1990). We control for employment status with a dichotomous variable that distinguishes those who are employed full-time and those employed part-time from a comparison group of individuals who are not employed.

Children

The presence of children under the age of eighteen in the home reduces the psychological well-being of men and women compared to those who do not have children. Women report even poorer psychological well-being and lower marital quality when they are both employed and responsible for finding childcare (Horwitz et al. 1997; Cleary and Mechanic 1983). Ross,

Mirowsky, and Goldsteen (1990) explain that children may have a negative impact on the mental health of married men and women because children undermine the two most important benefits of marriage – social support and an increased income. We use a dichotomous variable to separate respondents who have children under the age of eighteen in the home at T1 from those who do not.

Socioeconomic Status

Socioeconomic status is strongly associated with mental and physical health and several studies indicate that education is a stronger positive predictor of health status than income (Williams et al. 1992a&1992b). Because of the high degree of missing data on income in the NSFH, we measure socioeconomic status using the respondent's T1 education (measured by highest degree earned)².

Race

Williams et al. (1992b) report that differences in the incidence and severity of mental illness differ by race and gender, with black women reporting more substance abuse than white women, and white men reporting more alcohol abuse than black men. Black individuals are also less likely than whites to marry over the course of their lives, with black men entering into marriage slightly less often than black women (Waite 1995). We control for race/ethnicity with a dichotomous variable coded 1 for Non-whites and 0 for Whites.

Times Married

The number of times an individual has been married could compromise the psychological benefits of marriage. The rate of divorce among remarriages is higher than among first marriages (Cherlin 1992). It would make sense that those who remarry are likely to report higher psychological distress than those in their first marriages if these marriages have a

significantly higher rate of dissolution. We control for the number of times a respondent has married by T1.

Selection Bias

Researchers often point to the importance of selection bias in explaining the psychological benefits couples report through marriage. For example, the greater psychological well-being of the married compared to the unmarried could be due in part to a lower propensity of depressed individuals to. Past research examining the role of selection bias in to the association between depression and marriage has been inconclusive (Horwitz et al. 1996; Forthofer et al. 1996; Mastekaasa 1992, Horwitz and White 1991), with the most recent work (Simon 2002) concluding that mental health does not predict an individual's selection into marriage³. Age, race, gender, education, the presence of children, and income do predict entry into marriage (Simon 2002; Mirowsky 1996; Waite 1995; Williams et al. 1992). This analysis controls for these variables. Although some researchers find that selection effects are unlikely, it does remain possible that men and women who are not psychologically distressed are more likely to enter into and benefit from marriage. Controlling for Time 1 depression decreases the possibility of selection bias, but it remains possible that selection effects are taking place.

The direction of causation is also a methodological concern. Does depression affect marital quality, or does marital quality affect depression? VanFossen (1981) and Menaghan (1985) concluded that it is more likely for a marriage to affect emotional state than vice versa. Although it seems plausible for this relationship to act reciprocally, VanFossen was unable to find evidence for reverse causation. Amato and Booth (1991), however, find that negative emotional states (in their study, stress) do precede a marriage, and can lead to a marital dissolution (1991: 404).

Analytic Approach

We conduct analyses using Ordinary Least Squares regression in STATA 8. Data are not weighted because NSFH oversampling is controlled for through age, race, and marital status controls. Supplementary analyses indicate that weighting the data does not change the results presented here. All coefficients are of a similar magnitude and in the same direction.

Unweighted means and standard deviations of all variables in the analysis are shown in Table 1.

<Table 1 about here>

RESULTS

Women

Model 1 of Table 2 confirms results that have been established in prior research (Williams 2003; Simon 2002; Horwitz et al. 1996; Alan and Booth 1991; Horwitz and White 1991; Gove 1983). Controlling for baseline differences in depression, women who experience the transition into marriage report better psychological well-being than their continually unmarried counterparts. Women who marry by T2 report levels of depression an average of 3.564 points lower than continually unmarried women. This supports Hypothesis 1.

Model 2 includes an interaction term between a woman's T1 depression and a transition to marriage to test Hypothesis 2: Do the psychological benefits that are commonly associated with a transition to marriage depend on the woman's prior depression at T1? Including this interaction term tests whether the psychological well-being benefits associated with a transition to marriage are afforded differently to depressed and non-depressed respondents. With the added interaction, we see that the psychological benefits of marriage are observed only among women

who were depressed at T1. These women report symptoms of depression that are an average of $[-1.871 + 5.259] 7.13$ points lower than their continually unmarried counterparts, controlling for baseline differences in depression. Among non-depressed women, the transition to marriage is not significantly associated with depression at T2.

This finding is contrary to our Hypothesis 2 prediction that the previously depressed will not report better psychological well-being relative to the continually unmarried. It appears, however, that previously depressed women benefit substantially from marriage. The results also clarify past research suggesting that, on average, women who marry report better psychological well-being than their unmarried counterparts. Once women who are depressed prior to marriage are separated from women who are not, the non-depressed women do not appear to benefit psychologically from marriage. Marriage has unique effects on women, depending on the presence of depression prior to marrying.

<Table 2 about here>

In Model 3, an additional internal moderator represents the interaction between a marital transition and a woman's marital happiness at T2 to test Hypothesis 5: Do the psychological well-being benefits of marriage depend on the happiness of the marriage? Internal moderators add an interaction term to an independent variable (in this case, the transition to marriage) to test whether a third variable (here, marital happiness) moderates the psychological benefits of marriage normally attributed to a marital transition alone (Mirowsky 1999). T2 marital happiness is continuous and standardized, with all average scores [and all who are continually unmarried] coded as zero. The significant negative coefficient for the marital transition * T2 marital happiness term indicates that, controlling for baseline differences in depression, the benefits of marriage in improving psychological well-being depend on women's marital

happiness. Figure 1 illustrates the average predicted T2 depression of unmarried women and of married women at various levels of marital happiness. For unmarried women, estimated T2 depression was calculated by solving the Model 3 regression equation, substituting the mean for all control variables. A similar approach was used to calculate T2 depression for women who experienced the transition to marriage, except separate values of T2 depression were calculated at a range of values of T2 marital quality.

<Figure 1 Here>

Women with average levels of marital happiness experience significantly better psychological well-being than their continually unmarried counterparts ($p < 0.05$). Separate analyses (not included here) show that those women with marital quality even one-half point or more below the (standardized) mean do not differ significantly from their continually unmarried counterparts, controlling for baseline differences in depression.

In Model 4, an additional internal moderator represents the interaction between a marital transition and a woman's marital disagreement at T2 to test Hypothesis 4: Do the psychological well-being benefits of marriage depend on the level of disagreement in the marriage? As with marital happiness, T2 marital disagreement is continuous and standardized, with all average scores the continually unmarried coded as zero. The significant positive coefficient for the marital transition * T2 marital disagreement term indicates that, controlling for baseline differences in depression, the benefits of marriage in improving psychological well-being for women depends on the level of marital disagreement. Figure 2 illustrates the average predicted T2 depression of unmarried women and of married women at various levels of marital disagreement. For unmarried women, estimated T2 depression was calculated by solving the Model 4 regression equation, substituting the mean for all control variables. A similar approach

was used to calculate T2 depression for women who experienced the transition to marriage, except separate values of T2 depression were calculated at a range of values of T2 marital disagreement.

<Figure 2 about here>

Unlike the results for marital happiness, women with average levels of marital disagreement do not differ significantly in psychological well-being from the never-married, controlling for baseline differences in depression. Below-average levels of marital disagreement are necessary for women to benefit significantly from a transition to marriage.

In Model 5 we include a three-way interaction between a marital transition, a woman's depression at T1, and marital happiness at T2. This allows a test of Hypothesis 5, that the effect of marital happiness in moderating the association between a transition to marriage and psychological well-being is equally important for depressed and non-depressed women. This three-way interaction term is not significant. This indicates that the importance of marital happiness in moderating the psychological benefits received from marriage does not depend on a woman's pre-marital levels of depression. More specifically, as shown in Model 2, depressed women receive greater psychological benefits from marriage than their non-depressed counterparts, and this is equally true for those who have high levels of marital happiness and those who have low levels of marital happiness.

Model 6 includes a three-way interaction between a marital transition, a woman's depression at T1, and her marital disagreement at T2. This tests Hypothesis 6, that the effect of marital disagreement in moderating the association between a transition to marriage and psychological well-being is equally important for depressed and non-depressed women. This three-way interaction term is not significant.

Model 7 includes all significant interactions from the previous models. Here we see results similar to those in previous models, with the exception that marital happiness is no longer significant once marital disagreement is taken into account.

Results – Men

We test men's results using models identical to those used for women. Model 1 confirms that on average, men who transition to marriage report better psychological well-being than men who remain continually unmarried, even controlling for baseline differences in depression. Men who marry report T2 depression levels 3.364 points lower than continually unmarried men. As with women, this finding supports Hypothesis 1.

In Model 2, we see results slightly different from those found among women. Adding an interaction to test whether the psychological well-being benefits of marriage depend on the T1 depression of men shows that non-depressed men who marry report T2 depression scores that are 2.118 points lower than their continually unmarried male counterparts. This difference is significant.

Additionally, the difference between the T2 depression levels of recently married and continually unmarried men is much greater among men who were depressed at T1, compared to men who were not depressed. Among depressed men, those who marry report depression levels that are $[-2.118 + -6.049]$ 8.167 points lower than their continually unmarried counterparts. Similar to the women's results, these results suggest that previously depressed men benefit more from marriage than non-depressed men. This finding is contrary to our expected finding through Hypothesis 2.

<Table 3 about here>

We add an additional internal moderator to Model 3 to test whether the psychological well-being benefits of marriage depend on men's marital happiness at T2. This interaction term is significant; men benefit most from a marriage with higher levels of marital quality. Figure 3 illustrates the predicted T2 depression of men, based on their transition to marriage and the quality of their marriage. Separate analyses show that married men with average levels of marital happiness also have depression scores that are significantly lower than those of the never-married.

<figure 3 about here>

These findings generally support Hypothesis 3. Although we expected men and women to benefit from marriage only when their marriages had above-average marital happiness, both appear to benefit at levels of marital quality at or above the mean. Separate analyses show that the effect of a transition to marriage on the psychological well-being of men is not significant for those with lower than average levels of marital happiness.

We add an additional internal moderator to Model 4 to test whether the psychological well-being benefits of marriage depend on men's levels of marital disagreement at T2. This interaction term is significant; the psychological benefits of a transition to marriage depend on the level of disagreement in the marriage. Figure 4 illustrates the predicted T2 depression of men, based on their transition to marriage and the level of disagreement in the marriage. Separate analyses show that married men with average levels of marital disagreement also have depression scores that are significantly lower than their never-married counterparts.

<figure 4 about here>

Model 5 includes a three-way interaction between a marital transition, men's marital happiness at T2, and men's depression at T1 to test Hypothesis 5, that the effect of marital happiness in moderating the association between a transition to marriage and psychological well-being is equally important for depressed and non-depressed men. This three-way interaction term is not significant; marital happiness is equally important to men, regardless of their pre-marital levels of depression.

Model 6 includes a three-way interaction term between a marital transition, marital disagreement, and men's pre-marital levels of depression. This tests Hypothesis 6, that the effect of marital disagreement in moderating the association between a transition to marriage and psychological well-being is equally important for depressed and non-depressed men. This three-way interaction term is not significant.

Model 7 includes all significant interactions from the previous models. Here we see results similar to those in previous models for men. All previously significant values retain their statistical significance.

DISCUSSION AND CONCLUSIONS

The effect of a transition to marriage on psychological well-being has been of great interest among researchers. Whereas many studies have focused on the average gains in psychological well-being one receives through marriage, we have found that those men and women depressed prior to marrying experience larger gains than those who were not depressed. That depressed men and women benefit from a transition to marriage is surprising, but there are several reasons why this could be the case. Although our predictions that the depressed would not benefit from marriage were based on prior research indicating that the depressed have poorer

marital quality and view their marriage more negatively than a non-depressed spouse, it could also be the case that any amount of social support is highly valuable to a depressed person. Marriage provides a level of companionship that a depressed person may need more than a non-depressed person. Lin and Ensel (1984) find some support for this assertion; they report in a longitudinal study on depression-mobility that a stable or expanded network of social support has a stronger impact on the previously depressed than on the non-depressed. In the same vein, a sense of ‘mattering to others’ decreases depressive symptomatology (Taylor and Turner 2001). A transition to marriage may give a depressed person the sense that they matter to their spouse and their new social ties, whereas someone who was not depressed prior to marrying may have always felt that they matter to others. High levels of marital quality, also shown in this analysis to increase psychological well-being, can also add to these gains.

Overall, we find that men and women report very similar patterns in the relationships between prior depression, a transition to marriage, and psychological well-being. Depressed men and women both experience greater psychological well-being benefits from a transition to marriage than their non-depressed and continually unmarried counterparts. The role of marital quality (measured by both marital happiness and marital disagreement) in moderating the association of a marital transition with psychological well-being also follows a similar pattern in men and women; all men and women with above to above-average levels of marital happiness and below-average levels of marital disagreement report significantly better psychological well-being than their never-married counterparts. This finding is consistent with prior research (Williams 2003). It is important to note, however that although our results indicate that women who were not depressed prior to marriage do not benefit psychologically from marriage and whereas non-depressed men do benefit from marriage, separate analyses indicate that this gender

difference is not statistically significant. For both men and women, the effects of entering marriage on the psychological well-being of the previously non-depressed are quite modest, especially when compared to the effects of marriage among the previously depressed.

Although previous research has demonstrated that high levels of depression have a negative effect on marital quality for both spouses (McLeod and Eckberg 1993), our Models 5-8 for men and women show that there is no interactive effect between pre-marital levels of depression, marital quality, and a transition to marriage. This could be because marital quality is assessed during Wave 2, when the previously depressed respondent has already married and is benefiting psychologically from that marriage. This individual's marital quality may reflect their new state of lower depression, making their results statistically indistinguishable from those of their non-depressed married counterparts. This makes sense, given our unexpected results in Model 2, where we see that previously depressed individuals report greater gains from marriage than the nondepressed.

Women express psychological distress through depression at a rate far greater than men (Umberson & Williams 1999; Blehar 1997; Horwitz et al. 1996; Mirowsky 1996). Men are much more likely to externalize distress through alcoholism or violence (Simon 2002). Scholars have recently argued that this makes depression a less accurate indicator of psychological distress in men than in women. Although Simon (2002) recommends that alcoholism in men and depression in women ought to be recognized as "functional equivalents" when measuring psychological well-being, such a separation could be problematic in the NSFH. The NSFH uses the CES-D (*see measurements*) to assess the frequency of a person's symptoms of depression in the last week. Because the CES-D is an indirect assessment of psychological distress (it does not ask respondents whether they have been diagnosed or believe they are clinically depressed),

depression and alcoholism cannot be fairly compared from T1 to T2 using NSFH data. The NSFH1 lacks an indirect test for alcoholism, as it requires an individual to admit at T1 that he or she is an alcoholic⁴. Further, too few men and women who experienced a transition to marriage admitted they were alcoholics at T1 to permit a comparison between men and women using separate measures of psychological distress.

The causal mechanisms through which pre-marital levels of depression affect the psychological benefits of marriage are incomplete without detailed information on the characteristics of the spouse. While we assumed that pre-marital levels of depression compromise marital quality through lowered levels of communication and contagion of depression for the non-affected spouse, it appears that other factors are at work in increasing the psychological well-being of a depressed individual through marriage. Our analysis does not consider the depression levels of the spouses or their reports of marital quality. Spousal depression could contribute significantly to the respondent's psychological well-being after marrying, regardless of the pre-marital levels of depression. Spousal depression could also contribute to a respondent's perceived marital quality. While this information is available in the NSFH, there are too few cases to allow for a thorough analysis of the effects of spousal depression on the main respondent. Future research should take into account comprehensive data from both spouses to better understand the mechanisms through which psychological well-being is affected by a transition into marriage.

It is important to note that in our sample, those who have transitioned to marriage have been married for five years at most. Future research should consider how the previously depressed and non-depressed benefit as their marriages progress, and whether marriages with a depressed spouse are more likely to end in divorce. It could also be the case that the previously

depressed spouse begins to give more social or economic support to the other spouse after their initial gains in psychological well-being. Alternatively, the birth of a child or other life event could cause a new depressive episode.

There is also likely heterogeneity among the depressed. Future research should consider factors that predict marriage among the depressed. It is also important to widen the scope beyond a transition to marriage and to look at events that are most likely to lead to depressive episodes across the life course. If a transition to marriage seems to have positive results, then what other life events are likely to result in psychological well-being gains among the depressed, and what life events are likely to result in a drop in psychological well-being?

A final consideration is the measurement of depression. Although the CES-D is a widely used and valid tool for measuring symptoms of psychological distress, some scholars advocate the use of a true diagnostic measure of several indicators of psychological distress (Umberson and Williams 1999; Williams et al. 1992a; Williams et al. 1992b). The diagnostic interview schedule (DIS) tests for current and lifetime incidence of clinical depression, alcohol abuse, phobias, panic disorder, and schizophrenia (Williams 1992a). Using the DIS in a study like this one may significantly reduce gender bias created from only testing for depression, since the DIS tests for illnesses that occur often in men and women.

Conclusion

In conclusion, this research has contributed to the larger body of research on psychological well-being and the transition to marriage by showing that men and women who are depressed prior to marrying report larger psychological gains from marriage than those who are not depressed. In addition, the emotional support a spouse provides, measured through the

happiness and the level of disagreement in a marriage, contribute significantly to the psychological well-being benefits of marriage. These findings bring into question the assumption that marriage is always a good choice for all individuals. What appear to be strong average benefits of marriage are actually highly dependent on a wide range of individual, interpersonal, and structural characteristics.

NOTES

¹ Koropecj-Cox (1996) identified a score of 22 as the 80th percentile cutoff in her analyses using the NSFH2.

² Education is measured on a scale of 1-6. 1=less than high school 2=high school graduate 3=Associate degree or other certification program 4=four-year college graduate 5=Masters degree 6=Doctorate/Professional degree.

³ Mastekaasa (1992) found that individuals with more positive reports of mental health are more likely to marry. In a survey of young adults, Horwitz and White (1991) did not find evidence that depressed men or women were less likely to marry, but that alcohol abuse did delay marriage in men and women. Horwitz et al. (1996) broke analyses down by gender and found that depressed women are most likely among adults to delay entry into marriage. Forthofer et al. (1996) report that among young adults (age <19 years), psychiatric disorders are positively correlated with *early* marriages, especially for women.

⁴ The NSFH2 includes an indirect test for alcoholism by asking individuals how many days a month they consume five or more drinks. Because this question is only asked in second wave of the NSFH, we cannot compare responses before and after a marital transition.

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TABLE 1: Means and standard deviations of all variables by gender

	Men	Women
T2 Depression	12.9 (14.1)	17.9 (17.8)
T1 Depression	.222	.329
(1=Depressed)	(.42)	(.47)
Marital Transition	.330	.245
(1= Transition to Marriage)	(.47)	(.43)
Marital Happiness (standardized)	.014 (.53)	-.008 (.52)
Marital Disagreement (centered)	.017 (.58)	-.003 (.48)
Age	31.1 (9.5)	33.8 (9.7)
Education	2.54 (1.2)	2.35 (1.0)
Part-time Employment	.108	.112
(1=employed part-time)	(.31)	(.31)
Full-time Employment	.730	.596
(1=employed full-time)	(.44)	(.49)
Children	.138	.562
(1=kids under 18 at T1)	(.35)	(.50)
Divorced/Separated	.336	.530
(1=divorced/separated)	(.47)	(.50)
Widowed	.019	.062
(1=widowed at T1)	(.14)	(.24)
Times married prior to T1	.455 (.70)	.752 (.81)
Non-white	.276	.368
(1=non-white)	(.45)	(.48)
N	1112	1954

TABLE 2: Results of OLS regression predicting Time 2 depression among women

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Independent Variables							
T1 Depressed	9.594***	10.86***	10.87***	10.94***	10.87***	10.94***	10.94***
[0 = Not Depressed]	(.820)	(.934)	(.932)	(.929)	(.932)	(.928)	(.929)
Transition into Marriage	-3.564***	-1.871	-1.841	-1.522	-1.843	-1.602	-1.550
[0 = Continually Unmarried]	(.932)	(1.11)	(1.11)	(1.11)	(1.11)	(1.11)	(1.11)
Age	-.1277*	-.1242*	-.1247*	-.1118*	-.1248*	-.1124*	-.1130*
	(.052)	(.052)	(.051)	(.051)	(.051)	(.051)	(.051)
Education	-1.478***	-1.485***	-1.740***	-1.386***	-1.470***	-1.390***	-1.389***
	(.386)	(.386)	(.385)	(.384)	(.385)	(.384)	(.384)
Part-time Employment	-3.994**	-4.146**	-4.087**	-4.294**	-4.088**	-4.260**	-4.256**
[0 = Not Employed]	(1.36)	(1.35)	(1.35)	(1.35)	(1.35)	(1.35)	(1.35)
Full-time Employment	-3.240***	-3.292***	-3.266***	-3.192**	-3.265***	-3.186**	-3.185**
[0 = Not Employed]	(.926)	(.924)	(.922)	(.920)	(.922)	(.920)	(.920)
Children	.7726	.8458	.7182	.8502	.7133	.8975	.8079
[0 = No Children under 18]	(.868)	(.866)	(.865)	(.8617)	(.866)	(.862)	(.863)
Non-white	3.127***	3.045***	3.068***	2.807**	3.073***	2.755**	2.840**
	(.834)	(.833)	(.831)	(.831)	(.832)	(.832)	(.832)
Widowed	-1.124	-1.072	-.9700	-1.177	-.9529	-1.191	-1.140
	(2.05)	(2.04)	(2.04)	(2.03)	(2.04)	(2.03)	(2.03)
Divorced/Separated	-1.480	-1.416	-1.285	-1.424	-1.266	-1.453	-1.389
	(1.39)	(1.39)	(1.39)	(1.39)	(1.39)	(1.39)	(1.39)
Times married prior to T1	2.216**	2.178**	2.042*	2.146**	2.034*	2.166**	2.110**
	(.807)	(.806)	(.805)	(.801)	(.806)	(.801)	(.802)
Interactions							
T1 Respondent Depression	---	-5.259**	-5.623**	-6.307**	-5.652**	-6.476**	-6.321**
X Marital Transition		(1.88)	(1.11)	(1.89)	(1.89)	(1.90)	(1.89)
Marital Happiness X Marital	---	---	-2.306**	---	-2.181*		-.7345
Transition			(.725)		(.909)		(.817)
Marital Disagreement X	---	---	---	4.130***	---	3.412***	3.758***
Marital Transition				(.788)		(.978)	(.890)
Marital Happiness X	---	---	---	---	-.3423	---	---
Marital Transition X T1					(1.50)		
Respondent Depression							
Marital Disagreement X	---	---	---	---	---	2.038	---
Marital Transition X T1						(1.64)	
Respondent Depression							
R ²	.131	.135	.139	.147	.139	.147	.147
N	1952	1952	1952	1948	1952	1948	1948
Constant	23.28	22.79	22.84	22.19	22.84	22.21	22.25

NOTES: * p< 0.05 **p< 0.01 ***p< 0.001 for two-tailed tests

TABLE 3: Results of OLS regression predicting Time 2 depression among men

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Independent Variables							
T1Depression	9.242***	11.01***	10.98***	11.06***	10.98***	11.07***	11.02***
[0 = Not Depressed]	(.980)	(1.16)	(1.15)	(1.15)	(1.15)	(1.15)	(1.15)
Marital Transition ^a	-3.364***	-2.118*	-1.917	-2.214*	-1.902	-2.236*	-2.053*
[0= Continually Unmarried]	(.883)	(.984)	(.980)	(.978)	(.981)	(.978)	(.980)
Age	-.1042	-.0998	-.0967	-.0838	-.0965	-.0839	-.0858
	(.055)	(.055)	(.055)	(.055)	(.055)	(.055)	(.055)
Education	-.7668*	-.7755*	-.7843*	-.7077	-.7962*	-.7020	-.7309*
	(.364)	(.363)	(.361)	(.362)	(.362)	(.362)	(.361)
Part-time Employment	-1.098	-.8813	-.9101	-.8675	-.8979	-.8151	-.8907
[0 = Not Employed]	(1.58)	(1.579)	(1.57)	(1.57)	(1.57)	(1.57)	(1.57)
Full-time Employment	-1.068	-.8394	-1.059	-.8744	-1.055	-.8256	-1.016
[0 = Not Employed]	(1.12)	(1.12)	(1.11)	(1.12)	(1.05)	(1.12)	(1.12)
Children	3.831**	3.692**	3.383**	3.655**	3.380**	3.706**	3.45**
[0 = No Children under 18]	(1.24)	(1.24)	(1.23)	(1.23)	(1.23)	(1.23)	(1.23)
Non-white	1.942*	2.031*	1.999*	1.936*	1.971*	1.929*	1.939*
	(.933)	(.930)	(.925)	(.925)	(.927)	(.925)	(.923)
Widowed	-1.866	-1.096	-.9738	-1.167	-.9234	-1.239	-1.066
	(3.39)	(3.39)	(3.37)	(3.37)	(3.37)	(3.37)	(3.36)
Divorced/Separated	-.6064	-.7587	-.6810	-.9438	-.6631	-.9506	-.8437
	(1.82)	(1.81)	(1.80)	(1.80)	(1.80)	(1.80)	(1.80)
Times married prior to T1	1.232	1.226	1.22	1.362	1.193	1.345	1.321
	(1.21)	(1.20)	(1.20)	(1.20)	(1.20)	(1.20)	(1.20)
Interactions							
T1 Respondent Depression	---	-6.049**	-6.385**	-6.215**	-6.361**	-6.053**	-6.402**
X Marital Transition		(2.13)	(2.12)	(2.12)	(2.12)	(2.13)	(2.12)
Marital Happiness X Marital	---	---	-2.667***	---	-2.946**	---	-1.824*
Transition			(.752)		(.886)		(.817)
Marital Disagreement X	---	---	---	2.605***	---	2.926***	1.945**
Marital Transition				(.686)		(.758)	(.746)
Marital Happiness X	---	---	---	---	.9946	---	---
Marital Transition X T1					(1.67)		
Respondent Depression							
Marital Disagreement X	---	---	---	---	---	-1.766	---
Marital Transition X T1						(1.767)	
Respondent Depression							
R ²	.126	.132	.142	.143	.142	.144	.147
N	1112	1112	1112	1112	1112	1112	1112
Constant	16.61	15.91	16.03	15.28	16.03	15.24	15.52

NOTES: * p< 0.05 **p< 0.01 ***p< 0.001 for two-tailed tests

^a Compared to continually unmarried

Figure 1: Predicted average T2 depression of women, by a transition to marriage and marital happiness

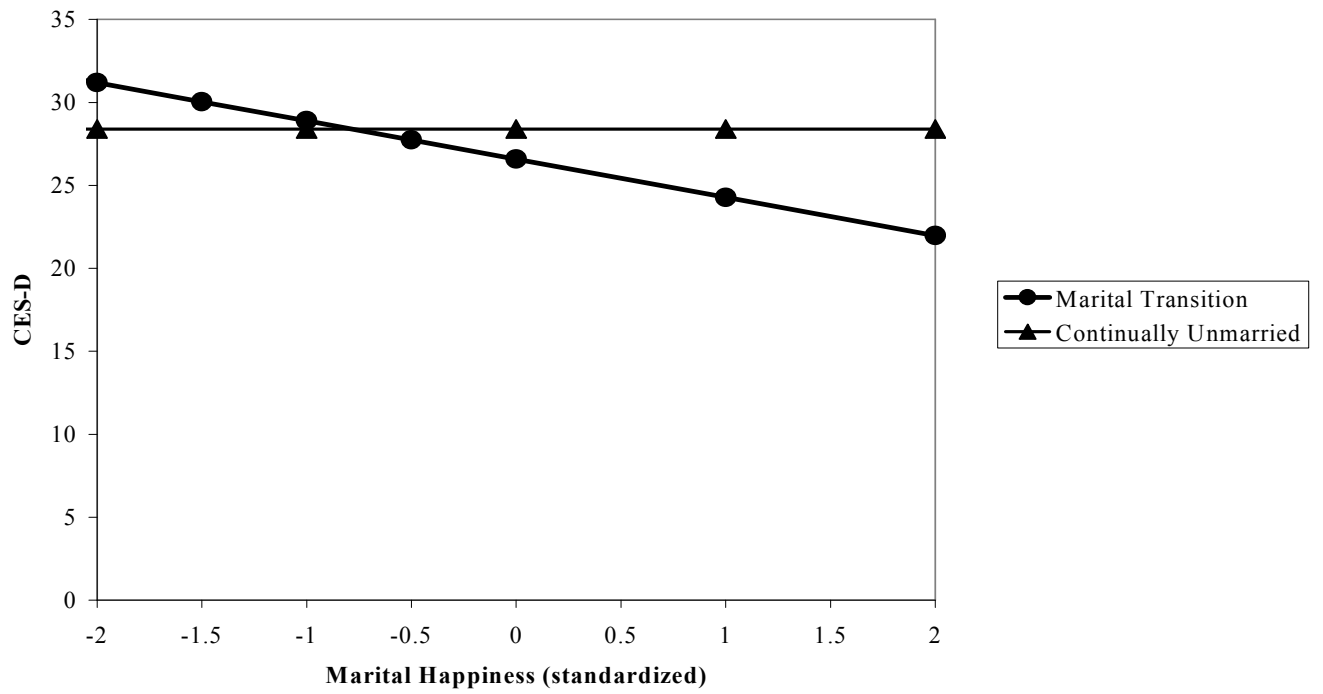


Figure 2: Predicted average T2 depression of women, by a transition to marriage and marital disagreement

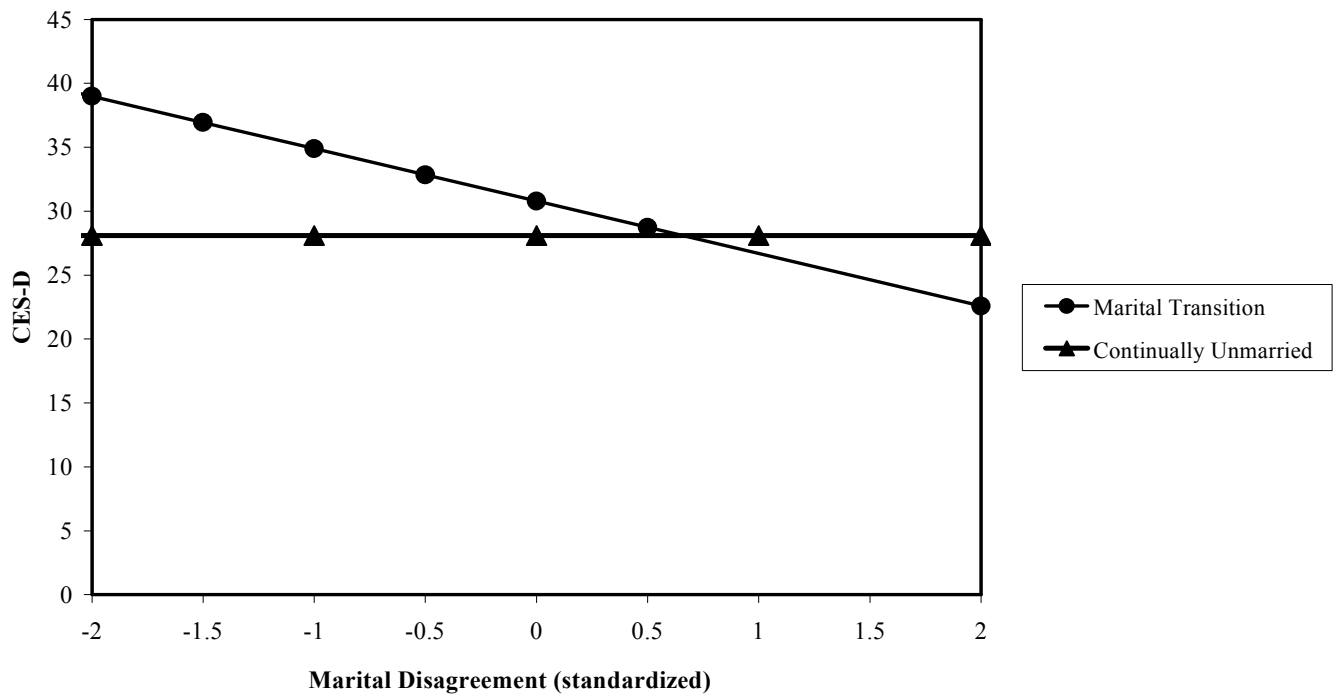


Figure 3: Predicted average T2 depression of men, by a transition to marriage and marital happiness

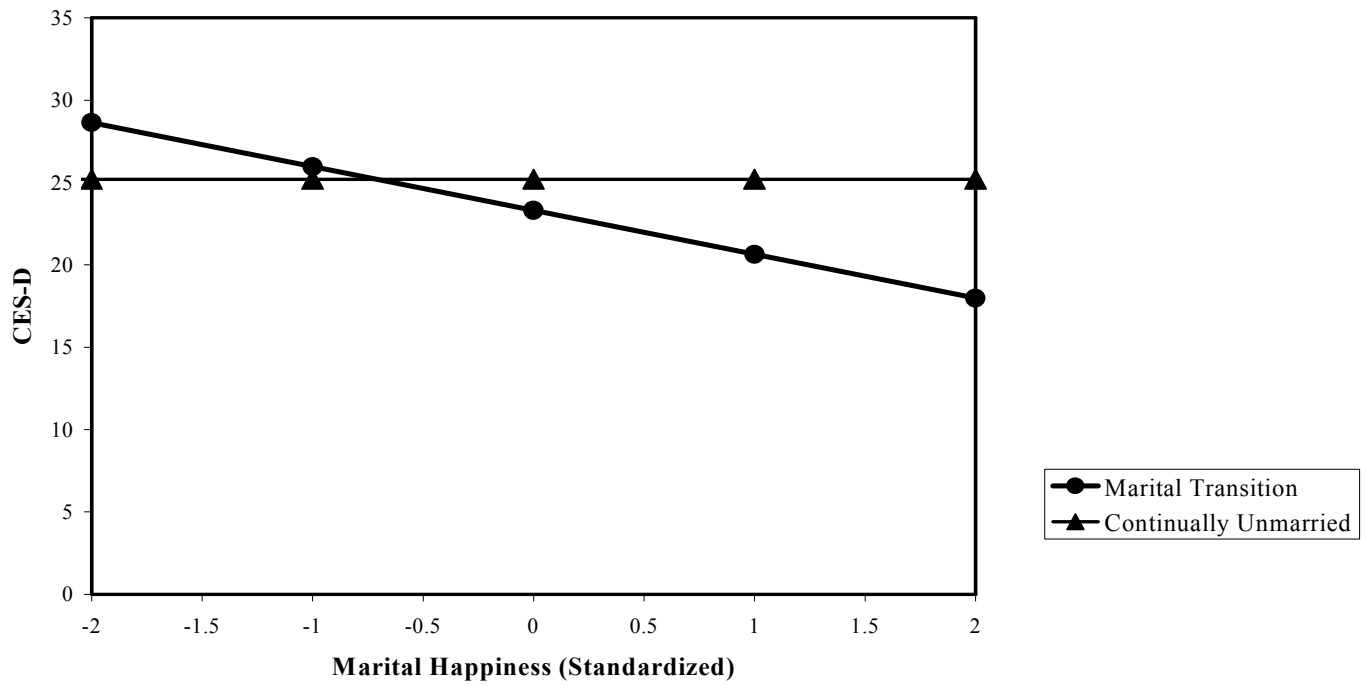


Figure 4: Predicted average T2 depression of men, by a transition to marriage and marital disagreement

