Int J Public Health (2016) 61:91–100
DOI 10.1007/s00038-015-0695-6

ORIGINAL ARTICLE

Marital status and work-related health limitation: a longitudinal study of young adult and middle-aged Americans

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Received: 18 January 2015 / Revised: 30 April 2015 / Accepted: 14 May 2015 / Published online: 26 May 2015

Abstract
Objectives The literature establishes clearly the health benefit of marriage. Much less clear from published data is whether work-related health (dis)advantages accruing to marital transitions persist over time or are limited to the short term. Informed by the marital resources and marital crisis perspectives, this study sought links between marital status measured via three approaches and work-related health limitation, exploring these relationships across genders.
Methods The study employed data from eight recent waves (1996–2010) of the National Longitudinal Survey of Youth. It applied generalized estimating equations to estimate the impacts, on work-related health limitation, of current marital status; of marital transition 2 years in the past; and of marital transition 8 years in the past.
Results Our gender-specific results indicated that lower likelihood of work-related health limitation was associated with a married status, a stable married status, and an entry into marriage.
Conclusions Results are consistent overall with the marital resources perspective. The use of three different approaches to evaluate the relationship of marital status to work-related health limitation may explain the gender-specific results.

Keywords Marital status · Marital transition · Work-related health limitation · Longitudinal study

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Introduction

Marriage's health benefits are well documented (Waite and Gallagher 2000). Research has shown that married individuals tend to have better mental and physical health than unmarried counterparts, linked to reduced early mortality among the married (Gardner and Oswald 2004; Liu and Reczek 2012). Some researchers have argued that differential health linked to marital status stems from individuals' former marital status(es) (Carr and Springer 2010), which can match or differ from current marital status. Transitioning out of married status obviously differs from transitioning into it. The former may signal, for example, increasing stress or shrinking financial resources. Some studies have labeled marital status change a stressor in itself, one with potential to harm, especially when undesired and beyond one's control (Pearlin 1989; Virtanen et al. 2008). The chance of harm increases should the stressor become chronic in nature (Kessler et al. 1999; Pavlova and Silbereisen 2012; Virtanen et al. 2008). Linking current marital status and marital transitions to work-related health limitation was the overarching goal of the present study.

While staying married is beneficial, changes in marital status may either generate resources or introduce crisis. The marital resources model hypothesizes that entrance into marriage results in good health in light of marriage's assumed provision of emotional, economic, and social

supports for spouses, supports vital to mental and physical health (Williams and Umberson 2004). Spouses pool assets and incomes and share expenses, helping to ensure that both enjoy the financial resources involved in good health (Musick and Bumpass 2012; Ross et al. 1990). Marriage may, furthermore, broaden spouses' social networks, allowing for greater numbers of the social relationships that can lead to employment and other benefits (Ross 1995; Williams and Umberson 2004). Having a spouse often helps regulate health behaviors (although exceptions clearly exist), fostering healthier living and better health (Umberson 1987). Furthermore, in manifesting attachment and commitment to conventionality, marriage also functions as a resource by giving meaning to life (Ross 1995; Waite and Gallagher 2000). The life stage during which marriage occurs also bears implications for health (Williams and Umberson 2004). During young adulthood and middle age, being married remains the preferred status; those who do not marry then are likely to be stigmatized (McNamee and Raley 2011). Empirical evidence based on longitudinal data suggests resources generated through marriage are a major reason married status is linked to good health, although a social selection mechanism does play a simultaneous role in that link (Carr and Springer 2010; Strohschein et al. 2005). In social selection, good health actually leads to marriage (and remarriage) and lesser health leads to the breakup of marriage (Blekesaune 2008; Pienta et al. 2000).

Extant theoretical and empirical support for marriage's health benefit has not prevented the widespread breakup of marriages. In the United States, one-third of first marriages end via separation or divorce, that is, voluntarily (Bramlett and Mosher 2001). The marital crisis perspective assumes that the dissolution of a marriage is a stressful life crisis. It posits that transition out of marriage comprises a stressor that saps emotional health, leading to functional impairment and a decline in physical health (Sibrava et al. 2013). Using a life course perspective in a three-wave longitudinal study to evaluate the relationship of marital transition to self-rated health, Williams and Umberson (2004) found separated/divorced respondents rated their health as relatively poor.

The breakup of a marriage means the (potential) loss of various resources. Upon exiting a marriage, a long period of financial insecurity may trouble the spouses. On top of that, their jointly built social network is disrupted such that social support may plummet at the same time emotional support from the marriage does (Ross 1995). Should financial fallout from the marital breakup persist, the breakup can become chronically stressful (Strohschein et al. 2005).

When marital status changes, the time elapsed between cessation of former status and beginning of current status helps define how many resources and how much stress an individual has to deal with (Strohschein et al. 2005). Typically, over a short period only does a marital breakup signal acute stress capable of generating extreme emotional distress threatening mental and physical health (Lorenz et al. 2006; Williams and Umberson 2004). However, a breakup can also become, gradually, a settling-into chronic stress and unfavorable structural environment for the long term, as in the case of the financial strain of single parenthood (Wickrama et al. 2006). Both the short-term and long-term potential health consequences of marital status changes merit exploration.

Marital status and marital transition furthermore have implications for gender and health. Previous studies have suggested that marriage generates more health benefits for men versus women (Gardner and Oswald 2004; Johnson et al. 2000; Williams and Umberson 2004); although other studies observed no marriage-related gender-based differential (Blekesaune 2008; Strohschein et al. 2005) in health and well-being. Studies in the literature point to this complexity, as follows: Data have suggested that in the wake of marriage breakup, women take more comfort (i.e., experience greater alleviation of breakup-induced distress) from parenthood than men do (Blekesaune 2008). The economic and emotional support as well as the regulation of health behaviors often involved in marriage may differ by gender, meaning marriage's health benefit may be greater for one gender than the other. Entering a marital union often improves a woman's economic security and often improves the quantity of men's received emotional and psychological support (Strohschein et al. 2005). Women are more likely than men to take on varied duties serving the household, for instance, monitoring family health behaviors; male spouses' health may benefit both from such monitoring and from having relatively few household responsibilities (Williams and Umberson 2004). Johnson and his colleagues examined data from the National Longitudinal Mortality Study and found that participating in the labor force offered a health benefit (Johnson et al. 2000). Men who marry typically remain in the labor force, while many women (especially White women) who marry do not—although various studies' inclusion of various control factors may explain, in part, the inconsistencies apparent in the literature.

The present study

Marriage's benefit to mental and physical health alike (Tyson et al. 2013) is, again, well-outlined in the literature. One important indicator of physical health is health limitation resulting in functional impairment or disability (Hughes and Waite 2009; Warner and Brown 2011). When such health limitation is relevant to the ability to work and

be employed, marriage's health benefit extends to current income and future financial stability (Teachman 2010). Work-related health limitation is not a rare phenomenon. Schoenborn (2004) used data from nationally representative samples and found that 5.5–14.9 % of Americans aged 18–44 and 45–64 reported their work activity was limited by their health.

Using the variable work-related health limitation to indicate health, the present study used three distinct approaches or models to evaluate the marriage–health relationship. The first of our three approaches was the evaluation, over time, of the relationship of current marital status to current self-reported work-related health limitation. Our second approach involved the evaluation of health's vulnerability to change of marital status occurring within the preceding 2 years. Our third approach comprised the observation of any effects on work-related health limitation made by change in marital status occurring within the preceding 8 years. In seeking to explain current work-related health limitation, both the second and third approaches measured changes predating a respondent's current marital status.

We hypothesized that marriage improves health: specifically, that an individual currently married is less likely to report having a work-related health limitation than an individual currently not married (whether single/never married, separated, divorced, or widowed). Informed by the marital resources and marital crisis perspectives, we used the second and third approaches to link marital transition to work-related health limitation. Both perspectives agree that being and staying married lowers risk of a work-related health limitation. The marital resources perspective, however, posits that transitioning into married status—whether recently or long ago—implies addition of resources and reduction of risk of a work-related health limitation. In contrast, the marital crisis perspective focuses on health's vulnerability to marital breakup. In the present study, we tested both postulations and also examined gender as a factor in the link between marital status and work-related health limitation.

While marital status figures importantly in explaining health, marriage's advantage in terms of work-related health limitation must be sorted out in the presence of social structural and health risk factors. The strong health indicator work-related health limitation tends to describe individuals having markers of socioeconomic status (SES)—income, education, occupational prestige—that are lower (Freedman et al. 2004; Thorpe et al. 2013). Researchers see SES as the fundamental cause of health (Link and Phelan 1995). Individuals whose SES (often measured by family income, employment, and similar variables) is higher tend to have material resources, knowledge, and power allowing them to access health care and pursue lifestyles fostering good health (Backlund et al. 1999). Children's presence in a household helps quantify social relationships associated with health (House 1987). As a lifestyle proxy, body mass index or BMI has been linked to poor health, including increased risk of functional impairment (Jenkins 2004; Prosper et al. 2009; Wei and Wu 2014).

Methods

Data and sample

Our study combined data collected during 1996–2010 by NLSY, the National Longitudinal Survey of Youth, analyzing it to explain self-reported work-related health limitation. The Ohio State University started NLSY in 1979, conducting the survey annually until 1994, biennially from 1996 to the present. NLSY's national sample comprised civilian, noninstitutionalized people born during 1957–1964. In 1979, 12,686 persons aged 14–22 were interviewed. In 1996, 8231 NLSY respondents answered questions about work-related health limitation (if any); in 2010, 7347 did.

For each respondent, we created two longitudinal records linking data from the eight 1996–2010 NLSY interviews and two 2002 and 2010 interviews. These records thus contained information describing the respondent throughout 1996–2010; to measure marital transition, data describing the individual in 1994 were also incorporated. One record comprised up to eight person-waves, for outcome and explanatory variables measured every 2 years. The other comprised up to two person-waves, for outcome and explanatory variables measured every 8 years. The eight-person-wave model used a final sample of 5518 respondents; the two-person-wave model, 4415 respondents. Our models explaining work-related health limitation featured time-varying and time-invariant variables.

Measures

The dichotomous, time-varying outcome variable work-related health limitation was measured by two questions posed at all eight interviews, 1996–2010. Respondents were asked whether the kind of paid job they held (or could hold) was (or would be) limited by their health and whether the amount of work they did (or could do) was (or would be) limited by their health. An affirmative answer to either indicated a health limitation was present.

Reflecting the three approaches we adopted to link marital status to work-related health limitation, we used three distinct time-varying measures of respondents' marital status in 1996–2010. Current marital status was

assigned five categories: single/never married, married, separated, divorced, and widowed. Each was a dichotomous measure and indicated current marital status; married was the reference.

We measured 2-year marital transition via change in marital status occurring in any of the following biennial periods: 1994–1996, 1996–1998, 1998–2000, 2000–2002, 2002–2004, 2004–2006, 2006–2008, and 2008–2010. Separation and divorce are similarly voluntary forms of marital dissolution, so we combined them in one category of marital change, separated/divorced (Teachman 2010). During preliminary data analysis, we observed few cases of transition involving widowhood and few involving single/never married to separated/divorced transition; we omitted these cases after problems with singularity were encountered. Changes in status were assigned to one of the six categories: married to married, married to separated/divorced, single/never married to single/never married, single/never married to married, separated/divorced to separated/divorced, and separated/divorced to married. These were ultimately recoded as five dummy variables (with married to married the reference), which we also used to measure 8-year marital transition, or change in marital status over the periods 1994–2002 and 2002–2010.

For each wave of data studied (eight total, from even-numbered years ranging 1996–2010, inclusive), we measured the time-varying factors education level, family poverty, weeks unemployed, children in household, and BMI. Education level was measured via 21 categories and constituted a continuous variable giving the highest grade level completed. Family poverty (in year preceding interview) was dichotomous and based on total family net income; 1 indicated in poverty, while 0 indicated not in poverty. Weeks unemployed (in year preceding interview) was a continuous variable giving the number of weeks, per respondent self-reports, out of work. A dichotomous variable, children in household, noted the presence (1) or absence (0) of resident child/children younger than 19; this measure was based on NLSY's count of biological, step-, and/or adopted children in respondents' households. BMI—which we calculated using data on weight (collected by NLSY at each interview wave) and height (collected in 2008 only; given adult respondents, height would be largely unchanged over the data collection period)—was a continuous measure.

Our study included 1979 measures of the time-invariant variables gender, race, and age; 1979 marked the start of NLSY data collection. Each respondent was classified as male or female and as non-Hispanic White, non-Hispanic Black, or Hispanic. Age in 1979 was continuous and ranged from 14 to 22 years. We created dummy wave variables for the interview years 1998, 2000, 2002, 2004, 2006, 2008, and 2010, to act as time indicators for the work-related health limitation outcome; 1996 provided the reference.

Data analysis strategies

We employed generalized estimating equations (GEE) from STATA to explain work-related health limitation in our sample of Americans aged 31–53. With GEE it is possible to estimate autoregressive correlations and autocorrelations among repeat observations developed as longitudinal records of unequal length. With GEE we could simultaneously consider within-individual repeated measurements over time and between-individual variables (Hardin and Hilbe 2003; Rabe-Hesketh and Skrondal 2008). We developed three models to illustrate how each of three approaches we took to marital status would (with other factors) affect work-related health limitation. We also evaluated each model for males and for females separately, using Student's t test to identify gender-based differences in coefficients.

Results

The present prospective longitudinal research examined, over a 16-year period, relationships between marital status and work-related health limitation. In evaluating the relationships, we used three distinct approaches associated with three distinct models. Descriptive statistics (for time-invariant and time-varying variables) appear in Table 1, for (a) our current marital status approach along with our 2-year marital transition approach; and for (b) our 8-year marital transition approach. The longitudinal records created by linking each respondent's available data (from all data waves) generated 25,498 person-waves for our 2-year-transition model and 6752 person-waves for our 8-year-transition model. In about 10 % of these person-waves (across the two samples), a work-related health limitation was reported. In over 72 % of person-waves (again, for both samples), the respondent reported being married; in a majority of person-waves, the respondent noted occurrence of a married to married transition. The time-invariant variables indicated that most respondents were White and female, and that average respondent age in 1979 was 18 years.

Table 2 illustrates the relationship between current marital status and work-related health limitation, for males separately, for females separately, and for all respondents. Employing our first approach, with females separately and then with all respondents, we found single/never married respondents as well as separated respondents to be significantly more likely than currently married respondents to report a work-related health limitation. We observed no

Table 1 Descriptive statistics for all time-varying variables and all time-invariant variables measured during 1996–2010 in sample comprising men and women in the USA

Time-varying variables	Sample for 2-year marital transition			Sample for 8-year marital transition		
	Percentage	Mean	SD	Percentage	Mean	SD
Work-related health limitation (reference: no)	9.21 %			10.56 %		
Type of job limited by health	8.71 %			9.97 %		
Amount of work limited by health	7.58 %			8.63 %		
Marital status						
Married	72.44 %					
Single/never married	8.71 %					
Separated	4.65 %					
Divorced	13.10 %					
Widowed	1.10 %					
	2-year marital transition (94–96; 96–98; 98–00; 00–02; 02–04; 04–06; 06–08; 08–10)[a]			*8-year marital transition (94–02; 02–10)*[a]		
Married to married	69.78 %			63.73 %		
Married to separated/divorced	2.58 %			7.21 %		
Single/never married to single/never married	8.71 %			7.92 %		
Single/never married to married	0.73 %			3.91 %		
Separated/divorced to separated/divorced	15.14 %			10.62 %		
Separated/divorced to married	1.86 %			5.09 %		
Transitions including widowhood and transition from single to separated/divorced	1.31 %			1.56 %		
Family poverty (reference: not in poverty)	12.54 %			11.49 %		
Weeks unemployed		1.51	6.97		1.72	7.57
BMI (actual value)		28.26	6.01		28.6	6.09
Child in household (reference: no child under 19 years)	88.51 %			82.52 %		
Highest grade level completed		13.31	2.50		13.6	2.57
N (person-waves)	25,498			6752		

Time-invariant variables	Percentage	Mean	SD	Percentage	Mean	SD
Male (reference: female)	43.68 %			43.60 %		
Race (reference: White)						
Black	29.05 %			26.91 %		
Hispanic	20.06 %			20.32 %		
Age in 1979		17.55	2.26		17.5	2.27
N (cases)	5518			4415		

All time-invariant variables were measured in 1979

For the sample used for the 2-year marital transition model, time-varying variables were measured in 1996, 1998, 2000, 2002, 2004, 2006, 2008, and 2010. For the sample used for the 8-year marital transition model, time-varying variables were measured in 2002 and 2010

[a] Percentages of marital transition categories may not sum to 100 % because of rounding

significant difference of this kind between divorced or widowed respondents versus currently married respondents. In terms of marriage's relationship to work-related health limitation, a health benefit from marriage accrued only to females in this study, not males. Lesser likelihood of work-related health limitation was associated with male gender, Hispanic ethnicity, younger age, and children's presence in the household; greater likelihood was associated with lower education level, poverty, and higher BMI. All waves functioning as time indicators in this model were found to be statistically significant. In contrast, we found no significant role played by gender in the relationship between current marital status and work-related health limitation (because we found no significant differences

Table 2 Relationships between current marital status and work-related health limitation for all respondents, men separately, and women separately, from data measured during 1996–2010 in the USA

Variables	All		Men		Women	
	OR	95 % CI	OR	95 % CI	OR	95 % CI
Age in 1979	0.97**	0.95–0.99	0.95**	0.91–0.98	0.97*	0.95–0.99
Male (reference: female)	0.56**	0.48–0.65				
Race (reference: White)						
Black	0.89	0.75–1.04	1.07	0.80–1.44	0.81*	0.66–0.99
Hispanic	0.56**	0.46–0.68	0.82	0.60–1.12	0.44**	0.34–0.57
Family poverty (reference: not in poverty)	1.83**	1.63–2.06	1.91**	1.51–2.42	1.75**	1.53–1.99
Weeks unemployed	1.00	0.99–1.00	1.00	0.99–1.01	1.00	0.99–1.00
BMI	1.03**	1.02–1.04	1.03**	1.01–1.04	1.03**	1.02–1.04
Child in household (reference: absence)	0.75**	0.66–0.84	0.74**	0.58–0.93	0.75**	0.66–0.86
Highest grade level completed	0.82**	0.80–0.84	0.81**	0.78–0.85	0.82**	0.79–0.85
Current marital status (reference: married)						
Single/never married	1.23*	1.07–1.50	1.24	0.96–1.82	1.25*	1.05–1.56
Separated	1.18*	1.02–1.41	1.10	0.67–1.65	1.25*	1.07–1.51
Divorced	1.06	0.96–1.23	1.16	0.88–1.47	1.04	0.95–1.26
Widowed	1.04	0.76–1.45	0.39	0.05–1.15	1.19	0.90–1.74
Wave (reference: wave 1)						
Wave 2	0.77**	0.63–0.94	0.89	0.64–1.23	0.69**	0.54–0.89
Wave 3	1.33**	1.12–1.59	1.17	0.84–1.61	1.39**	1.13–1.71
Wave 4	1.68**	1.41–2.00	1.58**	1.15–2.17	1.72**	1.40–2.11
Wave 5	1.81**	1.53–2.15	1.47*	1.10–1.98	1.95**	1.59–2.40
Wave 6	1.91**	1.61–2.27	1.76**	1.31–2.38	1.96**	1.59–2.41
Wave 7	2.19**	1.84–2.61	2.18**	1.60–2.98	2.19**	1.78–2.70
Wave 8	2.29**	1.91–2.74	2.11**	1.55–2.87	2.34**	1.88–2.90
N (person-waves)	25,498		10,963		14,535	
Wald's Chi Square	3937**		1752**		2190	

** $p < 0.01$; * $p < 0.05$

between the two genders in their marital status variables' coefficients).

Taking our second approach to marital status, we evaluated the relationship between 2-year marital transition and work-related health limitation. Classified as married to married, the reference group exhibited stability in status across the 2-year interview interval (see Table 3). Compared to the reference, two other groups exhibiting stability—single/never married to single/never married and separated/divorced to separated/divorced—were more likely to report a work-related health limitation. The remaining forms of transition—married to separated/divorced, single/never married to married, and separated/divorced to married—were associated with the outcome variable in largely the same way the reference was. All our other independent variables proved to be significantly related to work-related health limitation, except for non-Hispanic Black and weeks unemployed. Employing our second approach within some gender-specific analyses, we obtained for the female subsample alone significant coefficients for unchanged single/never married status and unchanged separated/divorced status. Gender did not, however, play a statistically significant moderating role in relationships between marital transitions and work-related health limitation.

Finally, using the sample in its entirety along with our third approach, which evaluated links between 8-year marital transitions and work-related health limitation, we observed the single/never married to single/never married transition to exert a distinct effect on work-related health limitation as compared to the married to married transition (see Table 4). For the male subsample alone, under this approach, unchanged single/never married status was associated with significant increase in likelihood of work-related health limitation; while for the female subsample only, the single/never married to married transition was

Table 3 Use of 2-year marital transitions to explain work-related health limitation for all respondents, men separately, and women separately, from data measured during 1996–2010 in the USA

Variables	All		Men		Women	
	OR	95 % CI	OR	95 % CI	OR	95 % CI
Age in 1979	0.97**	0.95–0.99	0.96*	0.92–0.99	0.97**	0.95–0.99
Male (reference: female)	0.56**	0.49–0.65				
Race (reference: White)						
Black	0.88	0.74–1.04	1.04	0.79–1.38	0.78*	0.64–0.96
Hispanic	0.56**	0.46–0.67	0.76	0.56–1.04	0.45**	0.35–0.57
Family poverty (reference: not in poverty)	1.84**	1.63–2.07	1.91**	1.52–2.40	1.69**	1.49–1.92
Weeks unemployed	1.00	0.99–1.00	1.00	0.99–1.01	1.00*	0.99–1.00
BMI	1.03**	1.02–1.04	1.02*	1.00–1.04	1.03**	1.02–1.04
Child in household (reference: absence)	0.76**	0.67–0.85	0.74**	0.59–0.92	0.76**	0.67–0.87
Highest grade level completed	0.82**	0.80–0.84	0.81**	0.78–0.85	0.82**	0.79–0.84
Marital transition (ref: married to married)						
Single/never married to single/never married	1.24*	1.03–1.48	1.30	0.94–1.81	1.29*	1.05–1.58
Married to separated/divorced	1.04	0.86–1.25	0.73	0.46–1.16	1.10	0.91–1.34
Single to married	0.86	0.57–1.30	0.72	0.38–1.37	1.06	0.66–1.68
Separated/divorced to married	1.17	0.94–1.46	1.07	0.73–1.56	1.24	0.97–1.59
Separated/divorced to separated/divorced	1.15*	1.02–1.31	1.24	0.96–1.59	1.21*	1.06–1.39
Wave (reference: wave 1)						
Wave 2	0.77*	0.63–0.94	0.93	0.70–1.23	0.79*	0.64–0.97
Wave 3	1.33**	1.12–1.59	1.17	0.88–1.55	1.44**	1.19–1.73
Wave 4	1.69**	1.42–2.02	1.48*	1.10–1.98	1.84**	1.52–2.22
Wave 5	1.81**	1.53–2.15	1.45**	1.10–1.91	2.05**	1.70–2.47
Wave 6	1.93**	1.63–2.30	1.77**	1.35–2.33	2.06**	1.71–2.49
Wave 7	2.19**	1.83–2.62	2.21**	1.67–2.92	2.30**	1.90–2.79
Wave 8	2.27**	1.89–2.72	2.12**	1.60–2.81	2.41**	1.97–2.94
N	25,211		10,921		14,290	
Wald's Chi square	3914**		1746**		2170	

** $p < 0.01$; * $p < 0.05$

associated with significant decrease in that likelihood. Moreover, in the 8-year marital transition model, gender was found to moderate the single to single transition and work-related health limitation relationship to a statistically significant degree ($t = 3.35$, $p < 0.01$). Within the male subsample only, unchanged single/never married status indicated significantly greater likelihood of work-related health limitation, as compared to unchanged married status. In models testing our third approach, remaining independent variables except age measured in 1979 and non-Hispanic Black appeared significantly associated with work-related health limitation.

Discussion

Using eight waves of data collected in 1996–2010 by the National Longitudinal Study of Youth, the present study employed three approaches to marital status along with two theoretical perspectives on marital transition to explain work-related health limitation reported by a group of respondents tracked from young adulthood into middle age. Three major findings and their interpretations deserve elaboration.

First, our results in general confirmed that marriage is associated with less work-related health limitation, although in some gender-specific ways. Results of our evaluation of the static role of marital status—in other words, current marital status—in work-related health limitation confirm that among females, at least, a health benefit accrued to those currently married versus those single/never married or separated/divorced (see Table 1). Currently married females showed no health advantage over divorced or widowed females, however. Results also indicated that males' likelihood of reporting work-related health limitation was not significantly affected by current

marital status. Consistent with the literature, our study confirmed that, healthwise, females are better off when currently married than separated/divorced or single/never married (Hughes and Waite 2009). It also demonstrated that, at least in the short term (our 2-year models), women of stable married status are less likely to report a work-related health limitation than women having unchanged single/never married status or unchanged separated/divorced status (Musick and Bumpass 2012). In our longer term models, in turn, men having unchanged married status enjoyed a work-related health advantage over men having unchanged single/never married status. Earlier gender-specific findings about marriage's health benefit (Blekesaune 2008; Gardner and Oswald 2004; Johnson et al. 2000; Strohschein et al. 2005; Williams and Umberson 2004) may have hinged on the type of measure—short term or long term—used to describe the stability of a marital status. Our findings also differ from much previous research proposing that never married status is more beneficial to health than separated or divorced status is (Pienta et al. 2000; Schoenborn 2004). At least for men, a long-term, unchanged single/never married status was associated, in our study, with work-related health limitation, while long-term unchanged separated/divorced status was not.

Second, in evaluating short- and long-term marital transitions' relationships to work-related health limitation, we found support for the marital resources perspective (Carr and Springer 2010; Strohschein et al. 2005). For both men and women in our study, we observed a substantial health benefit (in terms of work-related health limitation) associated with 2- and 8-year transition between separated/divorced and married and between single/never married and married; the degree of this benefit resembled that attributable to unchanged married status. Furthermore, for our women respondents, the likelihood of work-related health limitation was significantly lower for those having long-term single/never married to married transition, compared to those with long-term unchanged married status. Our finding of significantly less work-related health limitation among respondents reporting 2-year transition from separated/divorced to married, versus those reporting unchanged separated/divorced status, supports prior findings of a health benefit in remarriage versus ongoing divorced status (Blekesaune 2008; Hughes and Waite 2009; Lorenz et al. 2006).

Third, empirical evidence from our study is inconsistent with the marital crisis perspective, which predicts that transition from married to separated/divorced is associated with worse health. In our study, 2- and 8-year transitions

Table 4 Use of 8-year marital transitions to explain work-related health limitation for all respondents, men separately, and women separately, from data measured during 1996–2010 in the USA

Variables	All		Men		Women	
	OR	95 % CI	OR	95 % CI	OR	95 % CI
Age in 1979	0.98	0.96–1.01	0.98	0.94–1.03	0.98	0.95–1.01
Male (reference: female)	0.65**	0.54–0.79				
Race (reference: White)						
Black	0.80	0.64–1.01	1.06	0.71–1.57	0.69*	0.52–0.92
Hispanic	0.49**	0.38–0.63	0.72	0.47–1.10	0.39**	0.28–0.54
Family poverty (reference: not in poverty)	3.42**	2.76–4.25	3.82**	2.52–5.80	3.43**	2.65–4.43
Weeks unemployed	0.99**	0.98–1.00	0.98*	0.96–1.00	0.99*	0.97–1.00
BMI	1.03**	1.02–1.04	1.01	0.98–1.04	1.04**	1.02–1.05
Child in household (reference: absence)	0.71**	0.59–0.87	0.89	0.60–1.32	0.63**	0.50–0.80
Highest grade level completed	0.83**	0.80–0.86	0.81**	0.76–0.86	0.84**	0.81–0.88
Marital transition (ref: married to married)						
Single/never married to single/never married	1.34*	1.03–1.75	**2.15****	1.34–3.46	**1.11**	0.81–1.52
Married to separated/divorced	0.99	0.76–1.28	0.86	0.48–1.56	1.00	0.74–1.35
Single to married	0.78	0.52–1.17	1.09	0.64–1.86	0.52*	0.28–0.98
Separated/divorced to married	1.30	0.97–1.74	1.58	0.98–2.54	1.17	0.81–1.70
Separated/divorced to separated/divorced	1.29*	1.04–1.61	1.46	0.90–2.36	1.23	0.96–1.58
Wave 2 (reference: wave 1)	1.24**	1.06–1.44	1.45**	1.11–1.90	1.13	0.93–1.37
N (person-waves)	6666		2934		3732	
Wald's Chi square	2072**		915**		1140**	

Boldfaced coefficients indicate significant gender-based differences

** $p < 0.01$; * $p < 0.05$

from married to separated/divorced were associated with odds of work-related health limitation that were very comparable to those odds among respondents classified as married to married. Yet our results also showed a health advantage in having been formerly married. Research employing the marital crisis perspective attributes both emotional distress and deteriorated health to acute stress from a failed marriage (Williams and Umberson 2004). Unencumbered by a failed marriage, never married women may opt for single life, adapting over time and maintaining better health than separated and divorced women, according to the perspective (Cwikel et al. 2006). Our finding signifies, in contrast, that even for separated and divorced respondents, their marriages had brought a lasting health advantage. In contemporary culture, staying single may be more acceptable than ever before, but marriage nevertheless remains the preferred and normative event (Carr and Springer 2010; McNamee and Raley 2011). And, at least some of the resources gained through marriage may continue benefiting the separated/divorced. Moreover, when marital dissolution ends a stressful, conflict-filled relationship, the parties' overall stress load may be reduced. Our empirical finding, then, argues for a lingering health benefit of marriage even after it ends: we observed the formerly married to continue obtaining (in smaller doses, perhaps) the economic, social, and emotional supports typifying marriage. It seems not to support the marital crisis perspective, moreover, because ending a marriage evades unsolved or unsolvable conflicts and associated stress (Hawkins and Booth 2005; Williams and Umberson 2004).

Its meaningful results and implications notwithstanding, this study had three limitations. First, the secondary data we used did not include in all waves every variable needed for the best model specification possible. Had we had several more indicators of health in addition to work-related health limitation, marital status's relationship to health would clearly have been enriched. One of the advantages of using NLSY, however, was accessing eight waves of recent data (1996–2010) allowing us to link both 2- and 8-year (i.e., short and long term) marital transitions to work-related health limitation. Second, in measuring 2- and 8-year marital transitions, we could have neglected certain changes occurring within, especially, 8-year transitions. Future research might try to account for various change trajectories and their potential links to work-related health limitation or other health outcomes. Third, we lacked knowledge of whether "married" in the data meant a first or a subsequent marriage, and the literature tends to identify first marriage as more beneficial to health than subsequent marriages (Carr and Springer 2010). Moreover, we could not take into account quality of marriage, which could well have powerful implications for work-related health (Umberson et al. 2006).

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