Protection or Selection for Marital Transition and Self-Rated Health?: Evidence from China

Extended Abstract

Li-Chung Hu

Introduction

A large body of research has suggest that there are beneficial effects of marriage on health (Ross, Mirowsky & Goldsteen 1990; Schoenborn, 2004). In general, married people have been found to live longer and have fewer physical and mental health problems (Lillard & Panis 1996; Williams & Umberson, 2004; Wilson & Oswald, 2005) compared to those who are never married or who were divorced or widowed. Several theories have been proposed to explain the link between marriage and health, including the marital protection and the marital selection theory.

Marital protection theory posits that marriage improves individuals' health via greater social support and financial resources (House et al.1988;Lillard & Panis 1996). Married people are also less likely to be substance abusers (Duncan, Wilkerson, & England, 2006) and more likely to maintain healthy life style and behaviors (Umberson, 1987). Alternatively, marital selection emphasizes that the effects of marriage on health are primarily due to selection effect: healthier people are more likely to self-select into marriage and stay in married than are less healthy individuals, making the causal correlation between marriage and health is spurious. Despite extensive research on this topic, existing evidence is almost exclusively from developed countries and there is little evidence to tell us whether this link differs in less developed countries - where social norms, marriage markets and family dynamics may differ substantially from those in developed countries.

China provides an interesting context for examining these two theories for several reasons. First, the marriage market in China is more competitive for men because of a strong son preference and the implementation of one-policy in China in the last couple of decades, resulting in an abnormally high male-female ratio. Consequently, many men will be lifelong bachelors and those with better socioeconomic standing are more likely to find a spouse (Das Gupta, Ebenstein, & Sharygin, 2010). If good health is considered as a desirable attribute of spouse, then the selection effects should be strong for men in this setting.

Second, marital unions are relatively stable in China. Although the divorce rate has been rapidly increasing recently, it is still substantially lower than in most developed countries. Stable marital unions may have both beneficial and detrimental effects on health: on the one hand, stable marital union may provide stronger social support, trust and resources, which may contribute to better health, but on the other hand, conservative attitudes toward divorce may prevent individuals from escaping from

low-quality marriage, resulting in poorer health. Thus we can assume that the link between marriage and health may differ in China compared to developed countries

Prior research about the marriage-health link in China has focused on the link between marriage and mortality. Zhu and Gu (2010) found that among the oldest-old Chinese (ages 80+), married people live longer. Va et al (2011) had similar findings among residents of urban Shanghai. However, there is limited evidence about the association of marital status on other health outcomes in China and it is unclear whether this apparent health advantage of married people is due to protective or selective effects.

In this paper, I draw on unique longitudinal dataset from 9 provinces in China to assess the link between marriage and health. I address following questions: What is the link between health and marriage in China? Is this link due to protection or selection effects? How does the marriage-health link vary by gender? To my knowledge, this is the first study explicitly examine the link between marital transition and self-rate health and whether this link is attribute to causality or selection in China and can bring new evidence to the debate over marital protection and marital selection.

Data

This study utilizes data from the China Health and Nutritional Survey (CHNS), a multistate probability sample survey of the Chinese population. This survey includes every member living in the surveyed households. The survey collected baseline data in 1989 in 8 provinces of China and followed up at 1991, 1993, 1997, 2000, 2004, 2006 and 2009. I limit my analysis to respondents age 20 to 64 at the time of survey because the legal marriage age for women in China is 20. In addition, only the surveys carried out in 1991 and 2006 collected information on self-rated health, so I further limit my analysis to data from the 1991 and 2006 surveys.

Outcome Variables

Self-rated health is measured by the following questions “Right now, how would you describe your health compared to that of other people your age?” and respondents rated their own health from 1 (poor) to 4 (excellent).

Main Explanatory Variables

Marital Status consists of five categories: never married, married, divorced, separated and widowed in the original questionnaires. Since marital status is relatively stable in China, and therefore the proportion of divorced and separated are low, I combined divorced, separated and widowed as one category “divorced”.

Based on the 3 categories, I further construct six categories of marital state: (1)

continuously never married (3,334 observations), (2) transition into first marriage between consecutive surveys (1,070 observations), (3) continuously married (29,860 observations), (4) transition from marriage to divorced (425 observations), (5) remarriage (101 observations), and (6) continuously divorced (829 observations). Continuously married is the reference group in all models.

Other Socio-demographic Control Variables

Gender, age, age squared, education, employment status, wages, birth cohort and place of current residence are also included in model as covariates. There are 6 categories of highest level of completed education, including none to college and above. Employment status is coded as 1 if the individual is employed and 0 otherwise. Annual wages are transformed to log wage. Birth cohorts and current residence (rural is coded as "1" and urban as "0") are also included in model.

Analytical approach

I first model the data as pooled-cross sectional design, treating each observation for each wave as a different case by using OLS regression with robust standard errors. Second, a fixed-effects model with robust standard error is applied to account for selection bias.

Preliminary results

Preliminary estimations of the association between marital transition and self-rated health are shown in Table 1. Never married and those transitioning into first marriage between consecutive surveys are associated with poorer self-rated health compared to their continuously married counterparts, net of demographic and socioeconomic conditions. These results may suggest that being continuously married is associated with better individual health outcomes. This association changes, however, after accounting for selection bias as shown in Model 2, which, indicates that the benefits of continuously married are the results of selection in this context. Furthermore, this pattern is clearer for men than for women. As we can see in Model 3, single men and men in transition from never married to married reported poorer health than their continuously married counterparts and this association become positive after accounting for selection bias, suggesting that healthier men are more likely to selection into marriage and stayed in married.

These preliminary results suggest that a marital selection effect largely explains the link between marriage and health in China for men, since men face more competitive marriage markets than women. In the next steps of this analysis, I will examine

whether this pattern can be found in other health outcomes and health behaviors, including for BMI, smoking and drinking behavior.

In addition, the models also suggest that never married people are healthier than those transitioning into marriage and continuously married. Possibly, never married people are already in a stable relationship before they get married, and enjoy the similar benefits provided by formal marital unions. If this explanation is correct, then it also suggests that the benefits of marriage reduce over time. In order to provide a better understand of marriage-health link in this context, whether and how the benefits of marriage changes over time will be further investigated.

Reference

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Table 1: OLS and Fixed-Effects Estimations of Marital Transition and Self-rated Health Among Individuals Aged 20 to 64

	All Sample		Males		Females	
	(1)	(2)	(3)	(4)	(5)	(6)
Female	-0.084***					
	(0.008)					
Marital transition (*continuously married as reference*)						
Continuously never married	-0.035*	0.204***	-0.055**	0.224***	0.007	0.206*
	(0.020)	(0.041)	(0.026)	(0.047)	(0.033)	(0.108)
Transition into first marriage	-0.041*	0.070**	-0.070**	0.073**	0.011	0.090
	(0.023)	(0.030)	(0.028)	(0.036)	(0.043)	(0.055)
Transition from married to divorced [a]	-0.012	0.035	-0.043	0.113	-0.001	0.004
	(0.034)	(0.041)	(0.061)	(0.071)	(0.041)	(0.049)
Remarriage	0.094	0.141*	0.073	0.132	0.116	0.175*
	(0.062)	(0.079)	(0.091)	(0.124)	(0.084)	(0.094)
Continuously divorced	-0.107***	-0.032	-0.058	0.142*	-0.126***	-0.091
	(0.028)	(0.050)	(0.051)	(0.081)	(0.033)	(0.062)
Highest level of education (less than primary degree as reference)						
Primary degree	0.013		0.071***		-0.006	
	(0.014)		(0.027)		(0.016)	
Lower middle degree	0.035**		0.108***		-0.002	
	(0.014)		(0.026)		(0.017)	
Upper middle degree	0.063***		0.137***		0.022	
	(0.016)		(0.029)		(0.021)	
Technical or vocational degree	0.078***		0.105***		0.097***	
	(0.022)		(0.035)		(0.030)	
College and above	0.122***		0.197***		0.083**	
	(0.024)		(0.035)		(0.038)	
Age	-0.006*	0.013***	-0.010**	0.014*	-0.003	0.014**
	(0.003)	(0.005)	(0.005)	(0.007)	(0.005)	(0.007)
Age squared	-0.016***	-0.041***	-0.007	-0.038***	-0.023***	-0.045***
	(0.004)	(0.006)	(0.005)	(0.008)	(0.005)	(0.008)
Employed (Yes=1)	-0.004	0.002	0.046**	-0.001	-0.039**	-0.002
	(0.012)	(0.016)	(0.021)	(0.026)	(0.015)	(0.020)
Annual wage (logged)	0.011***	0.005***	0.011***	0.006**	0.012***	0.003
	(0.001)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Current residence (Urban as reference)						

Rural	0.101***				0.088***	
	(0.009)				(0.013)	
Birth cohorts	-0.006***				-0.008***	
	(0.001)				(0.001)	
Observation	31,582	31,582	15,103	15,103	16,479	16,479
	0.074	0.039	0.067	0.031	0.073	0.047
Model	OLS [b]	FE [c]	OLS	FE	OLS	FE

Robust standard errors are in parenthesis; ***,**,* denotes significant level at 1%, 5%, and 10% respectively

[a] Divorced includes three categories, divorced, separated and widowed

[b] OLS represents ordinary least square regression; [c] FE represents individual fixed-effects model