Rethinking marriage and health: What role does interracial marriage play?

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ABSTRACT

This study explores the role interracial marriage plays in the relationship of marriage and health and addresses the issue of heterogeneity within the married population. I use the National Health Interview Surveys from 1978 to 2010 to compare the self-rated health of the interracially married with the other marital status groups. The results show strikingly distinctive racial patterns. For Whites, marrying a Black spouse is associated with worse self-reported health than the endogamously married and the widowed, and the health of these interracially married Whites is indistinguishable from that of the divorced/separated and the never-married. For Blacks, marriage with a White spouse confers exceptional health benefits compared to the endogamously married as well as the unmarried. The findings of this research make notable theoretical and empirical contributions to the literature of marriage and health, and have important implications for marriage equality.

Research on the relationship of marriage and health has extensively documented marital status differences in health and longevity. Married people, on average, are healthier and live longer than the unmarried (Lillard & Panis, 1996; Lillard & Waite, 1995; Liu & Umberson, 2008). However, the current literature on health advantage of marriage focuses on comparing the married and the unmarried, and implicitly treats married people as a homogeneous group. In fact, each marriage, to a varying degree, is a union of two people with different social backgrounds such as age, racial background, socio-economic status, and even nationality. Such a neglect of diversities of the married population is problematic.

Studies have shown that different combinations of social attributes within marriage are consequential to married life (Amato et al., 2003; Clarkwest, 2007; Heaton, 2002). Therefore, treating the married population as a homogeneous group might run the risk of ignoring the potential effects which social discrepancies within marriage might have on the health of married people. To bridge the research gap, this article serves as one of the first attempts to address this heterogeneity issue in the health implications of marital status. I examine the association between racial heterogamy and self-assessed health, with a focus on non-Hispanic Blacks and non-Hispanic Whites (henceforth, Blacks and Whites). I choose racial heterogamy as an example not only because interracial marriage is associated with discrimination and social inequality in contemporary U.S., but because it has become an increasingly prevalent union type in society (Bratter & Zuberi, 2008). The objectives of this paper are twofold. On the one hand, I seek to extend the literature of marriage and health by investigating the health consequences of interracial marriage. On the other hand, I hope to shed light on the much understudied health inequalities which interracial couples have been experiencing.

This study uses the National Health Interview Survey, 1978 to 2010, from the Integrated Health Interview Series (IHIS) consolidated by the Minnesota Population Center at Univeristy of Minnesota (Minnesota Population Center; State Health Access Data Assistance Center, 2012),

and compare the self-rated health of people in Black-White marriage to the endogamously married and to each group of unmarried populations–the divorced/separated, the widowed and the never-married–separately for Blacks and Whites. In the following sections, I first discuss the theoretical and empirical backgrounds that underpin my arguments and state my research hypotheses. I then explain my research design and present the results, followed by discussing the research findings and their potential implications.

THEORETICAL AND EMPIRICAL BACKGROUNDS

This paper aims to investigate the relationship of interracial marriage and self-rated health with a focus on Blacks and Whites. Substantial research has provided empirical evidence to two theoretical models that explain the association between marital status and health: *marital resource model* vs. *marital strain model*. I develop my arguments from these two theoretical frameworks. With the focus on racial heterogamy, it is important to give a brief account of the historical and legal contexts of marriages across racial lines in the U.S., particularly those between Blacks and Whites, to provide contextualized arguments.

Interracial Marriage as a Case in Point

As noted in the literature, endogamy has been the prevailing norm in mate selection in the U.S. Thus, marriage across racial boundaries has been a deviation from the dominant norm, and stigmatized, particularly for unions between Blacks and Whites (Bratter & King, 2008; Kalmijn, 1998). Despite its increasing number, interracial marriage has remained as a minority union form in American Marriage (Qian & Lichter, Social Boundaries and Marital Assimilation: Interpreting Trends in Racial and Ethnic Intermarriage, 2007). A recently released U.S. 2010 census report has pointed out that although interracial marriage has gained prominent growth, only 6.9% of all married couples in 2010 consist of marriage between different races (Lofquist et al., 2012). Historical studies have documented strong opposition against racial intermarriage in society (e.g. Romano, 2003). Even today, discrimination against racial heterogamy still exists in the U.S

(Ellzey, 2009). In addition to social disapproval, unions across color lines had been criminalized in the U.S. for the past three hundred years, and were not legalized at the federal level until the *Loving vs. Virginia* case in 1967 (Judice, 2008). Therefore, it is not difficult to perceive that the general social atmosphere of hostility against unions across racial lines may present a stressful context that is deleterious to health. The legal barriers to and persistent discrimination against interracial marriage put major strain on interracial couples and research has shown that experiences of discrimination can be sources of chronic stress, which result in poor psychological and physical health (Link & Phelan, 2006; Mays et al., 2007).

In addition to the adverse social atmosphere against interracial marriages, particularly those between Blacks and Whites, I work specifically from the two theoretical frameworks that explain the association of marital status and health–*marital resource model* vs. *marital stress model*–to formulate my arguments about interracial marriage and health in greater detail.

Marital Resources, Interracial Marriage and Health

The marital resource model suggests that married people fare better in health than the unmarried because they gain greater economic resources, psychological well-being and control of health-related behavior from marriage. On the one hand, marriage has been shown to provide material benefits to married people through specialization in the division of labor, economies of scale, and the pooling of wealth. These material benefits from marriage enable individuals to gain access to health-promoting resources such as nutritious food and health insurance, or gain economic assistance in times of hardship (Liu & Reczek, 2012; Liu & Umberson, 2008; Williams & Umberson, 2004). On the other hand, marriage provides social support from spouses and extended kin networks and a sense of social integration that lead to greater psychological well-being. Furthermore, marriage also contributes to better health through spousal monitoring of health-related behaviors by promoting and keeping healthy life styles (Liu & Reczek, 2012; Liu & Umberson, 2008).

However, this notion of marriage protection may not be entirely applicable in the case of interracial marriage. Although interracial couples, on average, possess higher socioeconomic status (Gullickson, 2006; Qian, 2005) that may afford them with health-promoting resources, due to the "transgressive" nature of exogamy, the interracially married are less likely to receive support from their friends and families compared to those married within their own racial groups. Research suggests that interracial couples usually face disapproval of family members and friends (Hohmann-Marriott & Amato, 2008; Killian, 2001). A recent study on interracial romantic relationships among adolescents also reported that teenagers involved in interracial romance are less likely to reveal the relationships to their families, to make it public and less prone to meet their partners' parents, suggesting interracial couples' concerns for resistance and disapproval from their significant others (Wang, Kao, & Joyner, 2006). In addition, such resistance and disapproval from friends and family members may also render interracial couples more socially isolated. Qualitative research shows that interracial couples experience withdrawal of their family members and perceive isolation from their coworkers at workplaces, and thus greatly limit their participation in leisure activities (Hibbler & Shinew, 2002; Killian, 2001).

Because of their relative lack of social support and isolation from significant social relationships, the interracially married are disadvantaged in the psychological and material resources they may obtain from marriage. Cohesive social relationships have been demonstrated to be beneficial to physical health, mental health and longevity (House et al., 1988; Umberson & Montez, 2010). Accordingly, such disadvantage in marital resources could very likely take a toll on interracial couples' health. Nevertheless, when compared to the unmarried, interracial couples still enjoy certain marital protection from marriage. As suggested by the marital resource model, the interracially married, despite their relative lack of social support extended from marriage, may still enjoy spousal support from each other, and the regulation of health-related behavior. In addition, they may still gain some economic benefits from marriage through economies of scale,

specialized division of labor and the pooling of wealth. As a result, these mutual support, social control and economic gain from marriage may still confer some health advantage upon the interracially married. That being said, one could expect that the interracially married still enjoy better health compared to the divorced/separated, the widowed and the never-married.

Marital Stress, Interracial Marriage and Health

The other theory that informs my argument is the marital stress model. This model suggests that health disparities observed between married people and the divorced/separated/widowed mainly result from the detrimental effects caused by marital dissolution. In other words, the stress of marital dissolution contributes to marital status differences in health, not the protective resources extended from marraige (Liu & Umberson, 2008). Studies have continually documented the harmful effect of marital dissolution on health (Lillard & Waite, 1995; Wade & Pevalin, 2004; Williams & Umberson, 2004). For example, Williams and Umberson (2004) find that the strains of marital dissolution are an important contributing factor to worse self-assessed physical health. Even when a couple remains in a legal marriage as in separation, the strains caused by low marital quality still have long-term negative health consequences (Hawkins & Booth, 2005; Hibbard & Hope, 1993; Umberson et al., 2006).

Similar strains could also be expected among the interracially married. Empirical research has reported that romantic relationships across racial boundaries tend to be less stable, and are thus more vulnerable to marital dissolution (Bratter & King, 2008; Fu & Wolfinger, Broken Boundaries or Broken Marriages? Racial Intermarriage and Divorce in the United States, 2011; Wang, Kao, & Joyner, 2006; Zhang & Hook, 2009). For example, Bratter and her colleague (2008) discover that overall, interracial couples have higher rates of divorce, particularly for the marriage cohort of the later 1980s. Even when interracial couples manage to stay together, they are prone to lower relationship quality compared to their endogamous counterparts (Hohmann-Marriott & Amato, 2008; Kroeger & Williams, 2011). As interracial couples are more likely to

be exposed to greater marital instability and lower marital quality than the endogamously married, they could be more susceptible to greater psychological strains, which translate into poor physical health. Thus, I expect that according to marital stress model, the interracially married may report worse health than those married within their own races. Nevertheless, considering that divorce, separation and widowhood are highly stressful events, I hypothesize that the interracially married may still have better health than the divorced/separated and the widowed.

Some Empirical Evidence

The two models–*marital resource model* and *marital stress model*–provide theoretical underpinnings for this study. Based on the previous discussion, one could reasonably expect that from a theoretical standpoint, the interracially married may differ in their health status from that of the endogamously married and that of the unmarried. Unfortunately, there has only been scant empirical evidence that addresses the relationship of racial heterogamy and individuals' health outcomes. The only systematic examination of health consequences of interracial marriage to our knowledge is the one done by Bratter & Eschbach (2006). Using the pooled National Health Interview Survey samples of married and cohabiting populations from 1997 to 2001, they discover greater odds of psychological distress among several of the interracial marriage groups. Their results show that interracial marriage is associated with increases in severe distress for Native American men, White women, and Hispanic men and women who are married to non-White spouses compared to their endogamous counterparts. Also, intermarried people with African American or Native American Spouses, and intermarried women with Hispanic husbands have higher rates of distress.

Indirect evidence from other studies also point to negative health implications of interracial unions. Extending from the notion of Black exceptionalism, Kroeger and Williams (2011) examine the consequences of interracial relationships with Blacks compared to those with other

racial/ethnic groups, and discover a significant relationship between unions with Blacks and depression. Their findings reveal that non-Black individuals with black partners report significantly more depressive symptoms than their counterparts with non-Black partners regardless of individuals' own race and whether the non-Black partner is of the same versus a different race. Their research not only presents empirical evidence of potential health consequences of interracial unions, but highlights the particular detrimental effect of interracial relationships with Blacks, implying a greater social stigma against such unions, and providing a strong rationale for the current study's focus on Black-White marriage. Elwert and Christakis's study (2006) on racial disparities in the "widowhood effect" on longevity reports that Black men intermarried with white women suffer a significantly higher widowhood effect upon the death of their spouses compared to endogamously married Blacks, and White men married to Black women, offering partial vindication of the connection of interracial marriage and health.

RESEARCH HYPOTHESES

I develop my research hypotheses based on the theoretical and empirical foundations previously discussed. Specifically, I aim to test the following. For the interracially married versus the endogamously married, I hypothesize that:

H1: People in Black-White marriage have worse self-rated health than the endogamously married.

Additionally, for the interracially married versus the unmarried, I posit that:

H2a: People in Black-White marriage have better self-rated health than the divorced/separated.

H2b: People in Black-White marriage have better self-rated health than the widowed.

H2c: People in Black-White marriage have better self-rated health than the never-married.

To reiterate my research objectives, I attempt to address the issue of heterogeneity within the married population, using interracial marriage as an example, and hope to extend the scholarly

literature of marriage and health. Next, I describe the data used, variables for analysis and my analytic approach.

METHODS

Data and Sample

For this research, I attempt to compare the self-rated health status of the interracially married to that of the endogamously married, the divorced/separated, the widowed, and the never-married separately for Blacks and Whites. The data used are from the National Health Interview Survey (NHIS), 1978 to 2010, from Integrated Health Interview Series (IHIS) consolidated by the Minnesota Population Center (Minnesota Population Center; State Health Access Data Assistance Center, 2012). The NHIS is a large-scale household interview survey of a statistically representative sample of the noninstitutionalized population in the U.S., conducted by the National Center for Health Statistics (NCHS), which has been collecting cross-sectional data annually on a wide-range of health-related topics since 1957 (National Center for Health Statistics, 2010). The advantages of our utilizing this dataset are primarily twofold. First of all, the large representative samples of the NHIS enable us to identify over 6,000 cases in Black-White marriage at the time of their surveys, allowing for further multivariable analysis. Moreover, the dataset also contains rich information on respondents' socio-demographic and economic attributes, and thus facilitates comparisons of self-rated health among various social groups.

As previously mentioned, I restrict the sample to Blacks and Whites. The sample includes both married and unmarried populations. I exclude cohabiting couples because information on cohabitation was not available in the surveys until 1997. Married couples are identified according to the respondent's relationship with the household/reference person. More detailed processes of locating and determining interracially married couples will be stated in the later section. The final analytic sample size is 1,608,897.

Measures

Marital Status. The NHIS provides information on respondents' relationship with the household/reference person, which facilitates our identifying married couples. I first locate the householders/reference persons, and their spouses, and match them with their complete household IDs. Further comparison of their self-reported racial status determines if they are in interracial marriages. My operationalization of marital status renders a five-category variable: the endogamously married, the interracially married, the divorced/separated, the widowed and the never-married. I compare the self-reported health of the interracially married to each of the other four categories.

Self-rated Health is the outcome of interest. It has been known as a strong predictor of mortality, and effectively taps an individual's known and even undiscovered health conditions (Idler & Benyamini, 1997). The self-rated health status is measured on a five-point scale, ranging from 1, "excellent" to 5, "poor". For ease of interpretation, I reverse the coding of respondents' self-ratings of health so that higher values indicate better health.

A series of socio-demographic and economic covariates known to predict health status are introduced as controls in the models (for an overview, see Rogers et al., 2000). *Gender* is dummy-coded as 1 for women, and 0 for men. *Education level* is recoded into four groups: "less than high school", "high school graduate", "some college", and "college graduate and above", with the lowest level as the reference category. *Employment status* is regrouped into three categories, and then dummy-coded: "employed", "unemployed" and "not in the labor force", with unemployment as the reference category. Respondents' *poverty status* is a household-level measure and is employed to capture the household's financial conditions. This indicator is a well-suited proxy measure for individuals' family financial status because it is determined by comparing respondents' reported family income to the U.S. Census Bureau's annual poverty thresholds, which are based on income adjusted for family size and the number of children under

18. Poverty status is recoded as a dummy variable with 1, indicating family income at or below the poverty threshold, and 0 otherwise. Lastly, in light of geographic differences in public attitudes toward interracial marriage, and health, I control for *regions* with three dummy variables: Northeast, North Central/Midwest and West. South is the reference category.

The majority of the variables for analysis contain missing data. To minimize its impact, I employ multiple imputation techniques to correct for missing values. I include all the variables used in later multivariable analysis in the multiple imputation procedures, and create five imputed data sets for later use (Allison, Missing Data, 2001). The imputed values are kept unrounded for either the continuous or the dichotomous variables, following the suggestions of Allison (2005). A summary of the descriptive statistics of the variables for analysis are presented in table 1.

[Table 1 about here]

Analytic strategies

I use ordinary least squares (OLS) regression models to estimate differential self-rated health among various marital status groups. All the OLS regression analyses presented are conducted separately for Blacks and Whites. Since my central interest is the relationship between interracial marriage and health, I compare the perceived health status of those who are interracially married with that of the other four marital status groups (endogamous, widowed, divorced/separated and never-married). This approach results in four sets of models separately for Blacks and Whites. The models are formally specified as the following:

$$Y_i = \alpha + \sum \beta_j M_{ij} + \sum \gamma_k X_{ik} + \varepsilon_i \quad (1)$$

where Y_i is the estimated self-rated health, and α is the intercept. M_{ij} represents a series of dummy variables indicating different marital status groups, and β_j is the corresponding regression coefficient. X_{ik} denotes an array of control variables and γ_k is the corresponding regression coefficient. Finally, ε_i is the residual term.

For each set of analysis using a different marital status group as the reference category, I first estimate the health differentials between the interracially married and the designated reference group, controlling for gender, age and region of residence. In the second model, I add in socioeconomic conditions, including education, employment status and poverty status, for further control. The results are presented in the following section. I first present the bivariate association between self-rated health and marital status by racial groups, and proceed to discuss the results of OLS regression models to examine the hypothesized relationship of interracial marriage and self-rated health in greater detail. All the bivariate and OLS regression analyses are adjusted for the complex survey design of NHIS.

FINDINGS

Table 2 presents the mean self-rated health by marital status groups separately for Blacks and Whites. The bivariate associations indicate that the average perceptions of health reported differ significantly between various marital status groups for both racial groups. At the first of look, the reported associations seem at odds with our theoretical predictions and prevailing understanding of the relationship between marriage and health as for both Blacks and Whites, the never-married register the highest average self-rated health among all marital status groups, and for Blacks, the interracially married report higher self-rated health than the endogamously married. However, such seemingly unexpected relationships are, in fact, no surprise as these bivariate associations are confounded by many important factors significantly predicting individual health status, the most important of which, age. Therefore, these results are not surprising considering that the never married and the interracially married tend to be younger.

[Table 2 about here]

The analyses in table 2 identify the significant bivariate associations between marital status and health. To further explicate the relationships, and take into account the confounding factors that are also, significant predictors of health, I now turn to the modeling results in tables 3 and 4.

I model the relationships of marital status to self-reported health by racial groups. Table 3 presents the results for White people and table 4 for Blacks. As my primary analytic interest is in the role interracial marriage play in the association of marital status and health, I use all the other marital status groups as the reference categories and compare them with the interracially married. The following analyses follow the order of the models presented in the table.

Marital status, interracial marriage and health among Whites

Overall, the analysis of Whites show significant health disadvantage for the interracially married compared to the endogamously married and certain groups of the unmarried. Model 1 compares other marital status groups with the endogamously married. Consistent with previous research, the unmarried, including the divorced/separated, widowed and never married, all fare significantly worse in general health than the endogamously married. The estimated difference ranges from -.210 for the divorced/separated to -.062 for the widowed. The interracially married, the primary interest of this paper, as predicted, also show significantly worse health than the endogamously married. Controlling gender, age and region of residence, model 1 shows that among married Whites, the average self-assessed health of the interracially married is worse than those married within their own race by .203. Model 2 further controls for economic covariates including education, employment status and poverty status. The addition of economic covariates explains a considerable portion of the health disadvantage of the divorced/separated and the never married, but only a small fraction of the worse health of the interracially married White compared to the endogamously married. The average health of the widowed now fare significantly better than the endogamously married after controlling for economic conditions, suggesting that economic disadvantage is the primary reason that puts the widowed in worse health conditions than the endogamously married among Whites. Overall, the results from models 1 and 2 in table 3 support hypothesis 1.

Models 3 and 4 use the divorced/separated as the reference. All the other marital status groups in model 3 show better estimated health than the divorced/separated except the interracially married. The interracially married White register no difference in overall health conditions in comparison to the divorced/separated, faring neither better nor worse. Model 4 further controls for economic conditions, which explain some of the difference from the endogamously married, and yet widen the gap from the widowed and the never married. Controlling economic conditions changes the sign of the regression coefficient for the interracially married, but the difference between the interracially married and the divorced/separated remains insignificant. The results in models 3 and 4 do not support hypothesis 2a, and show that when compared to the divorced/separated, the interracially married White report, at best, only similar health conditions, adjusted for relevant control variables.

Model 5, with the widowed White as the reference group, shows that the divorced/separated and the never married show lower estimated overall health than the widowed, while among the married, only Whites married to other White spouses enjoy better health than the widowed. The interracially married, surprisingly, fare worse than the widowed in health. Adding economic conditions in model 6 intensifies the health disadvantage of the other two unmarried groups and the interracially married in comparison with the widowed. Controlling for economic covariates also change the sign of the regression coefficient for the endogamously married White from positive to negative, consistent with the results from models 1 and 2. Hypothesis 2b is not supported.

The last set of models compares the never married with the other marital status groups. Among the unmarried White, only the divorced/separated report worse average health than the never married, while the widowed fare better. For married people, only the endogamously married show better estimated health than the never married. The interracially married do not differ significantly from the never married in their overall health conditions. Further controlling

for economic conditions explains some of the association between being married and the never married. The health disadvantage of the divorced/separated in comparison with the never married worsens and the widowed fare even better than the never married. Adjusting for economic conditions renders the interracially married White worse overall health than the never married. The results from these two models do not support hypothesis 2c.

[Table 3 about here]

Marital status, interracial marriage and health among Blacks

Black people show distinct patterns from Whites in the relationships of marital status to health, and the results are overall more consistent with our theoretical expectations. Following the same order as in table 3, the first set of models compare the interracially married and the unmarried with the endogamously married among Blacks. Congruent with the previous studies, model 1 shows that all three unmarried groups report worse overall health compared to the endogamously married. Nevertheless, the interracially married Black surprisingly show better health than their endogamous counterparts. Adjusting for socioeconomic conditions explains part of the gap between the divorced/separated and the endogamously married, and the entire health disadvantage for the never married Black. Meanwhile, adding socioeconomic conditions in the model, as in model 2, also considerably reduces the health advantage enjoyed by the interracially married Black over the endogamously married, suggesting that a significant part of the better health of interracially married Blacks derive from their better economic standings. The results from models 1 and 2 do not support hypothesis 1.

Models 3 shows that the widowed Black fare better in overall health conditions than their divorced/separated counterparts while the never married fare worse. Both of the married groups register better health than the divorced/separated. Adjusting for socioeconomic controls in model 4 widens the gap between the widowed and the divorced/separated, and changes the sign of the never married from being negative to being positive. Adding economic standings also notably

explains the health advantage of the endogamously and the interracially married Black, indicating a strong influence of their relative economic advantage. These results support hypothesis 2a.

When compared to the widowed Black, as in model 5, the two married groups show significantly higher average health, as predicted, while the divorced/separated and the never-married Black both report worse self assessments of health compared to their widowed counterparts. Further adjustment for economic standings significantly explains the health benefits enjoyed by the two groups of married Blacks in comparison their widowed counterparts. For Blacks married within their own race, model 6 shows that they actually have worse health than the widowed after adjusting for socioeconomic differentials, while the interracially married is indistinguishable from the widowed in their overall health status. For the other two unmarried groups, adjusting for socioeconomic conditions enlarges their health disadvantage compared to the widowed. The results from models 5 and 6 support hypothesis 2b.

The last set of models compares the interracially married and the rest of the marital groups with the never-married. All the other marital status groups, including the interracially married, the primary interest of this paper, report higher estimated self-reported health than those who are never married. Controlling for socioeconomic conditions, as shown in model 8, increases the gap between the widowed and the never-married, and changes the sign of the coefficient for the divorced/separated, rendering them inferior to their never-married counterparts in self-assessed health. The estimated higher self-rated health of the endogamously married is reduced to insignificance with the adjustment of socioeconomic conditions. Finally, adjusting for socioeconomic conditions reduces the gap between the interracially married Black and the never-married. Nevertheless, Black people married to a white spouse still enjoy better health than the never married. Once again, these results provide empirical support for hypothesis 2c.

[Table 4 about here]

To sum up, the empirical results presented in this paper show rather distinctive patterns by race regarding the overall health status of the interracially married in relation to the other marital status groups. For White people, marrying a Black spouse renders them worse health than the endogamously married, and even the widowed, and at best, undifferentiated self assessments of health compared to their divorced/separated and never-married counterparts. For Blacks, being married to a White spouse seems to bring exceptional health benefits. The interracially married Black not only report better health than the unmarried but their endogamously married counterparts.

DISCUSSION

This paper focuses on a rapidly increasing union type in the recent decades–interracial marriage–to address an important and yet often neglected issue in the literature of marriage and health: the heterogeneity of married population. The existing literature has established a consistent general trend of the relationships between marital status and health: married people enjoy better physical, psychological health and longer life expectancy. As firmly entrenched as a social fact, the notion of health benefits from marriage inherently treats married people as a homogeneous group in contrast to the unmarried, and overlooks the consequences to married life the diverse combination within marriage may have based on various social attributes such as age, race and socioeconomic status (Amato et al., 2003; Clarkwest, 2007; Heaton, 2002).

On the one hand, the marital resource model suggests that married people enjoy better health and in turn, longevity because marriage confers health-promoting resources with economic, social and psychological benefits that are otherwise unavailable to the unmarried. On the other, the marital stress model attributes the health differentials between the married and the unmarried to the heightened stress and its related health detriments brought about by marital discord and marital dissolution (Liu & Umberson, 2008; Williams & Umberson, 2004). Despite their higher average socioeconomic status, mutual support and increased economic resources from marriage,

interracial couples tend to suffer from relatively greater social isolation from immediate social circles (Hohmann-Marriott & Amato, 2008; Killian, 2001). In addition, research also shows lower marital quality and greater vulnerability to marital disruptions. These theories and empirical findings largely guide my research hypothesis that the interracially married are healthier than the unmarried, but report worse health than the endogamously married.

The statistical results show rather distinctive racial patterns in the health of the health of the interracially married in relation to the other marital status groups, and are largely consistent with my argument that marital benefits in health are not universal among the married population. For White people, as predicted, marrying a Black spouse is associated with worse self-rated health compared to their endogamously married counterparts. Such a health disadvantage persists even after the model adjusts for a series of covariates known to predict health. Unexpected to the theoretical predictions, when compared to the unmarried, the interracially married White do not fare any better than. When compared to the widowed, White people married to Blacks report worse health and controlling for socioeconomic differentials even widens the gap. When compared to the divorced/separated and never-married, the health of interracially married Whites is, at best, indistinguishable from the two unmarried groups. These striking findings suggest send a novel and disturbing message: marrying to Blacks may confer little or, at least, not as much benefits to White people's health. For Blacks, being married to a White spouse is associated with exceptional health benefits. The interracially married Blacks not only report better self-rated health than the unmarried, as predicted in the research hypotheses, but also the endogamously married. Most of these health advantages remain after adjusting for a series of controls.

I provide the following potential explanations for the unexpected health disadvantage of interracially married Whites compared to the unmarried counterparts. First of all, scholars of marriage and health have begun to attend to the heterogeneity within the unmarried population in the context of rapid family change (Carr & Srpinger, 2010). As cohabitation becomes

increasingly prevalent, a significant portion of unmarried population, despite their legal marital status, are actually in an intimate cohabiting relationship. A growing body of research shows that cohabitation confers marriage-like benefits to people's health (Liu & Reczek, 2012). The NHIS data did not include information on cohabitation until 1997. As this research pools data from 1978 to 2010, I was not able to distinguish the cohabitors from the other unmarried groups in the data before 1997. Future research should definitely take cohabitation into consideration when study related issues. Also, some research indicates that intermarriages are more likely to be remarriage (Fu, 2010). As remarriages tend to confer less health benefits than first marriages (Carr & Srpinger, 2010), it is also reasonable to expect that remarriage might produce stress unique to such an "incomplete institution" (Cherlin, 1978) that might put people in worse health even when compared to the unmarried. Thus, marriage orders might be a potential explanation for interracially married Whites' worse health. Lack of information on marital history in NHIS prevents me from exploring such possibilities. Lastly, on the one hand, some research shows that marital dissolution exerts short-term effects on individuals' health, and such effects dissipate after the first few years. On the other, interracial marriage, due to its relative unstable nature and average lower quality, might create a stressful context on a daily basis that might serve as an important source of chronic stress. Such chronic stress could be even more harmful to the interracially married in comparison to the unmarried. No information on marital quality or marital stability is available in NHIS and therefore, I cannot test the potential intervening role of these two mechanisms. Future research should explore marital quality and marital instability as important mediating mechanisms.

The observed racial differences in the health of the interracially married in relation to the other marital status groups are consistent with previous research. Elwert and Christakis's (2006) study on race and the widowhood effect on mortality finds that White men married to Black women suffer significant lower mortality after the death of their spouses than White and Black

men married to White women and . They argue that on the one hand, differences in marital culture and marital contexts between Blacks and Whites render Blacks receive less marital benefits in health than Whites. Thus, White men married to a Black spouse may also benefit less from marriage and thsu, have less to lose after spousal death. On the other hand, intermarriage between Blacks and Whites are relatively more acceptable among the Black community, and wives are usually the ones who manage social relationships. Consequently, White men married to Blacks might still enjoy certain social support extended from marriage even after the death of the spouse. By the same token, the Blacks in the current sample might enjoy greater health advantages from their marriage to Whites and be less socially isolated due to Blacks' greater acceptance for interracial marriage than their interracially married White counterparts. The findings on health disadvantages for Whites intermarried to Blacks are also congruent with the notion of "Black Exceptionalism" as argued in Kroeger & Williams (2011).

LIMITATION

Several limitations are presented in this research. First, although the models presented in this paper control for a series of sociodemographic and economic covariates, I cannot rule out the possibility of selection based on unobserved heterogeneity due to cross-sectional nature of the data used. Also, the NHIS data do not include any measure on marital quality, a potentially important mechanism through which marriage differentially influence individuals' health between the endogamously and the interracially married. The repeated cross-sectional data utilized in this research also prevents me from controlling for previous health conditions as well as exploring the role individuals' previous marital histories might play and tracking marital status transitions, all of which are essential for clarifying the causal relationships between interracial marriage and health.

CONCLUSION

This study explores the role of interracial marriage in the relationship of marriage and health. The research findings support the argument of heterogeneity within married population. Marriage does not seem to confer universal benefits to married people. For white people, marrying a Black spouse is associated with worse health than the endogamously married, while for Blacks, marriage with a white spouse seem to confer exceptional health benefits. Two important implications can be derived from the current research. One the one hand, the findings presented in this study make a notable theoretical contribution to the literature of marriage and health in calling for heed to population heterogeneity, and provide empirical support using nationally representative samples. On the other, in light of the persistent discrimination against interracial marriages, particularly those between Blacks and Whites, this research, to a certain degree, provides support for continued efforts in promoting marriage equality. Despite the increasingly ameliorating social atmosphere toward interracial marriage, discrimination still exists. If the findings in this research are any indication, movements for marriage equality for interracial marriage are still legitimate and necessary as for same-sex marriage.

Table 1. Weighted Descriptive Statistics of Analysis Variables (N=1,608,897)

	Percentage/Mean
Gender	
Male	47.53%
Female	52.47%
Race	
White	87.11%
Black	12.89%
Region	
North East	20.64%
North Central/Midwest	26.87%
South	35.81%
West	16.68%
Marital Status	
Endogamous	59.45%
Black-White	.39%
Widowed	7.60%
Divorced/Separated	11.28%
Single	21.28%
Educational Attainment	
Less than High school	16.16%
High School Graduate	36.26%
Some College	25.28%
College Graduate or above	22.30%
Employment Status	
Employed	64.01%
Unemployed	3.21%
Not in the Labor Force	32.78%
Poverty Status	
In Poverty	12.41%
Not in Poverty	87.59%
Age	45.60 (.104)
Self-Rated Health	3.79 (.002)

Note: Numbers in parentheses are standard deviations.

Table 2. Average Self-Rated Health by Race and Marital Status

	White	Black
Marital Status		
Endogamous	3.85 (.003)	3.54 (.008)
Black-White	3.82 (.020)	3.90 (.020)
Widowed	3.23 (.005)	2.82 (.010)
Divorced/Separated	3.65 (.005)	3.33 (.008)
Single	4.07 (.003)	3.75 (.006)
ANOVA F-test (D.F.=4)	412962***	107004***
Total	1,355,930	252,967

Note: *** p<.001; numbers in parentheses are standard deviations.

Table 3. Weighted Estimates of OLS Regression of Self-Rated Health for Whites (N=1,355,930)

	Ref=Endogamous		**Ref=Divorced/Separated**		**Ref=Widowed**		**Ref=Never Married**	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	4.81*** (.007)	4.76*** (.008)	4.60*** (.008)	4.59*** (.009)	4.75*** (.010)	4.88*** (.010)	4.64*** (.007)	4.71*** (.008)
Female	-.058*** (.002)	-.002 (.002)	-.058*** (.002)	-.002 (.002)	-.058*** (.002)	-.002 (.002)	-.058*** (.002)	-.002 (.002)
Age	-.021*** (.0001)	-.015*** (.0001)	-.021*** (.0001)	-.015*** (.0001)	-.021*** (.0001)	-.015*** (.0001)	-.021*** (.0001)	-.015*** (.0001)
Region (ref=South)								
North East	.151*** (.009)	.113*** (.006)	.151*** (.009)	.113*** (.006)	.151*** (.009)	.113*** (.006)	.151*** (.009)	.113*** (.006)
North Central/Midwest	.080*** (.008)	.060*** (.006)	.080*** (.008)	.060*** (.006)	.080*** (.008)	.060*** (.006)	.080*** (.008)	.060*** (.006)
West	.165*** (.008)	.098*** (.006)	.165*** (.008)	.098*** (.006)	.165*** (.008)	.098*** (.006)	.165*** (.008)	.098*** (.006)
Marital Status								
Endogamous	--	--	.210*** (.004)	.175*** (.004)	.062*** (.005)	-.115*** (.005)	.173*** (.003)	.058*** (.003)
Black-White	-.203*** (.020)	-.199*** (.018)	.008 (.020)	-.024 (.019)	-.140*** (.020)	-.316*** (.019)	-.030 (.020)	-.142*** (.019)
Divorced/Separated	-.210*** (.004)	-.175*** (.004)	--	--	-.148*** (.006)	-.290*** (.006)	-.037*** (.005)	-.116*** (.004)
Widowed	-.062*** (.005)	.115*** (.005)	.148*** (.006)	.290*** (.006)	--	--	.111*** (.006)	.174*** (.006)
Never Married	-.173*** (.003)	-.058*** (.003)	.037*** (.005)	.116*** (.004)	-.111*** (.006)	-.174*** (.006)	--	--
Education (ref=College graduate or above)								
Less than High School		-.710*** (.006)		-.710*** (.006)		-.710*** (.006)		-.710*** (.006)
High School Graduate		-.387*** (.003)		-.387*** (.003)		-.387*** (.003)		-.387*** (.003)
Some College		-.230*** (.003)		-.230*** (.003)		-.230*** (.003)		-.230*** (.003)
Employment Status (ref=Unemployed)								
Employed		.186*** (.006)		.186*** (.006)		.186*** (.006)		.186*** (.006)
Not in the Labor Force		-.153*** (.007)		-.153*** (.007)		-.153*** (.007)		-.153*** (.007)
Whether in Poverty		-.332*** (.007)		-.332*** (.007)		-.332*** (.007)		-.332*** (.007)
R-squared	.1219	.2037	.1219	.2037	.1219	.2037	.1219	.2037

Note: * p<.05 ** p<.01 *** p<.001; numbers in parentheses are the standard errors of the regression coefficients.

Table 4. Weighted Estimates of OLS Regression of Self-Rated Health for Blacks (N=252,967)

	Ref=Endogamous		**Ref=Divorced/Separated**		**Ref=Widowed**		**Ref=Never-Married**	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Intercept	4.75*** (.013)	4.76*** (.017)	4.60*** (.013)	4.66*** (.017)	4.66*** (.017)	4.89*** (.021)	4.56*** (.010)	4.75*** (.015)
Female	-.120*** (.004)	-.098*** (.004)	-.120*** (.004)	-.098*** (.004)	-.120*** (.004)	-.098*** (.004)	-.120*** (.004)	-.098*** (.004)
Age	-.026*** (.0002)	-.020*** (.0002)	-.026*** (.0002)	-.020*** (.0002)	-.026*** (.0002)	-.020*** (.0002)	-.026*** (.0002)	-.020*** (.0002)
Region (ref=South)								
North East	.126*** (.014)	.103*** (.012)	.126*** (.014)	.103*** (.012)	.126*** (.014)	.103*** (.012)	.126*** (.014)	.103*** (.012)
North Central/Midwest	-.005 (.012)	-.004 (.009)	-.005 (.012)	-.004 (.009)	-.005 (.012)	-.004 (.009)	-.005 (.012)	-.004 (.009)
West	.128*** (.014)	.060*** (.012)	.128*** (.014)	.060*** (.012)	.128*** (.014)	.060*** (.012)	.128*** (.014)	.060*** (.012)
Marital Status								
Endogamous	--	--	.158*** (.008)	.093*** (.007)	.091*** (.011)	-.139*** (.011)	.190*** (.008)	.004 (.007)
Black-White	.171*** (.021)	.102*** (.012)	.328*** (.021)	.196*** (.020)	.262*** (.023)	-.036 (.022)	.360*** (.021)	.106*** (.020)
Divorced/Separated	-.158*** (.008)	-.093*** (.007)	--	--	-.067*** (.012)	-.232*** (.011)	.032*** (.007)	-.090*** (.007)
Widowed	-.091*** (.011)	-.139*** (.011)	.067*** (.012)	.232*** (.011)	--	--	.099*** (.013)	.142*** (.012)
Never Married	-.190*** (.008)	-.004 (.007)	-.032*** (.008)	.090*** (.007)	-.099*** (.013)	-.142*** (.012)	--	--
Education (ref=College graduate or above)								
Less than High School		-.527*** (.010)		-.527*** (.010)		-.527*** (.010)		-.527*** (.010)
High School Graduate		-.329*** (.008)		-.329*** (.008)		-.329*** (.008)		-.329*** (.008)
Some College		-.194*** (.008)		-.194*** (.008)		-.194*** (.008)		-.194*** (.008)
Employment Status (ref=Unemployed)								
Employed		.151*** (.011)		.151*** (.011)		.151*** (.011)		.151*** (.011)
Not in the Labor Force		-.309*** (.012)		-.309*** (.012)		-.309*** (.012)		-.309*** (.012)
Whether in Poverty		-.240*** (.008)		-.240*** (.008)		-.240*** (.008)		-.240*** (.008)
R-squared	.1423	.2215	.1423	.2215	.1423	.2215	.1423	.2215

Note: * p<.05 ** p<.01 *** p<.001; numbers in parentheses are the standard errors of the regression coefficients.

REFERENCE

Allison, P. D. (2001). *Missing Data.* Thousands Oak, CA: Sage Publications.

Allison, P. D. (2005). Imputation of Categorical Variables with PROC MI. *SAS User Group International, 30th Meeting (SUGI 30).* Philadelphia, PA.

Amato, P. R., Johnson, D. R., Booth, A., & Rogers, S. J. (2003). Continuity and Change in Marital Quality between 1980 and 2000. *Journal of Marriage and Family, 65*(1), 1-22.

Bratter, J. L., & Eschbach, K. (2006). What about the Couples? Interracial Marriage and Psychological Distress. *Social Science Research, 35*(4), 1025-1047.

Bratter, J. L., & King, R. B. (2008). But Will it Last? Marital Instability among Interracial and Same-Race Couples. *Family Relations, 57*(2), 160-171.

Bratter, J. L., & Zuberi, T. (2008). As Racial Boundaries 'Fade': Racial Stratification and Interracial Marriage. In E. B. Silva, & T. Zuberi (Eds.), *White Logic, White Methods: Racism and Methodology* (pp. 251-267). Lanham: Rown & Littlefield Publishers.

Carr, D., & Srpinger, K. W. (2010). Advances in Families and Health Research in the 21st Century. *Journal of Marriage and Family, 72*(3), 743-761.

Cherlin, A. (1978). Remarriage as an Incomplete Institution. *American Journal of Sociology, 84*(3), 634-650.

Clarkwest, A. (2007). Spousal Dissimilarity, Race and Marital Dissolution. *Journal of Marriage and Family, 69*(3), 639-653.

Ellzey, D. (2009). JP Refuses to Marry Couple. *Daily Star*. Retrieved from http://www.hammondstar.com/articles/2009/10/15/top_stories/8847.txt

Elwert, F., & Christakis, N. A. (2006). Widowhood and Race. *American Sociological Review, 71*(1), 16-41.

Fu, V. K. (2010). Remarriage, Delayed Marriage, and Black/White Intermarriage, 1968-1995. *Population Research and Policy Review, 29*, 687-713.

Fu, V. K., & Wolfinger, N. H. (2011). Broken Boundaries or Broken Marriages? Racial Intermarriage and Divorce in the United States. *Social Science Quarterly, 92*(4), 1096-1117.

Gullickson, A. (2006). Education and Black-White Interracial Marriage. *Demography, 43*(4), 673-689.

Hawkins, D. N., & Booth, A. (2005). Unhappily Ever After: Effects of Long-Term, Low-Quality Marriages on Well-Being. *Social Forces, 84*(1), 451-471.

Heaton, T. B. (2002). Factors Contributing to Increasing Marital Stability in the United States. *Journal of Family Issues, 23*(3), 392-409.

Hibbard, J. H., & Hope, C. R. (1993). The Quality of Social Roles s Predictors of Morbidity and Mortality. *Social Science and Medicine, 36*(3), 217-225.

Hibbler, D. K., & Shinew, K. J. (2002). Interracial Couples' Experience of Leisure: A Social Network Approach. *Journal of Leisure Research, 34*(2), 135-156.

Hohmann-Marriott, B., & Amato, P. R. (2008). Relationship Quality in Interethnic Marriages and Cohabitations. *Social Forces, 87*(2), 825-855.

House, J. S., Landis, K. R., & Umberson, D. J. (1988). Social Relationships and Health. *Science, 241*(4865), 540-545.

Idler, E. L., & Benyamini, Y. (1997). Self-Rated Health and Mortality: A Review of Twenty-Seven Community Studies. *Journal of Health and Social Behavior, 38*(1), 21-37.

Judice, C. Y. (2008). *Interracial Marriages between Black Women and White Men.* New York: Cambria Press.

Kalmijn, M. (1998). Intermarriage and Homogamy: Causes, Patterns, Trends. *Annual Review of Sociology, 24*, 395-421.

Killian, K. D. (2001). Reconstructing Racial Histories and Identities: The Narratives of Interracial Couples. *Journal of Marital and Family Therapy, 27*(1), 27-42.

Kroeger, R., & Williams, K. (2011). Consequences of Exceptionalism? Interracial Unions with Blacks, Depressive Symptoms and Relationship Satisfaction. *The Sociological Quarterly, 52*(3), 400-420.

Lillard, L. A., & Panis, C. W. (1996). Marital Status and Mortality: The Role of Health. *Demography, 33*(3), 313-327.

Lillard, L. A., & Waite, L. (1995). 'Til Death Do Us Part: Marital Disruption and Mortality. *American Journal of Sociology, 100*(5), 1131-1156.

Link, B. G., & Phelan, J. C. (2006). Stigma and Its Public Health Implications. *Lancet, 367*, 528-529.

Liu, H., & Reczek, C. (2012). Cohabitation and U.S. Adult Mortality: An Examnination by Gender and Race. *Journal of Marriage and Family, 74*(4), 794-811.

Liu, H., & Umberson, D. J. (2008). Times They Are a Changin': Marital Status and Health Differentials from 1972 to 2003. *Journal of Health and Social Behavior, 49*(3), 239-253.

Lofquist, D., Lugaila, T., O'Connell, M., & Feliz, S. (2012). Households and Families: 2010. Washington, DC: U.S. Census Bureau. Retrieved from http://www.census.gov/prod/cen2010/briefs/c2010br-14.pdf

Mays, V. M., Cochran, S. D., & Barnes, N. W. (2007). Race, Race-Based Discrimination, and Health Outcomes among African Americans. *Annual Review of Psychology, 58*, 201-225.

Minnesota Population Center; State Health Access Data Assistance Center. (2012). *Integrated Health Interview Series: Version 5.0*. Minneapolis: University of Minnesota.

National Center for Health Statistics. (2010). National Health Interview Survey. *NHIS Brochure*. Hyattsville, MD. Retrieved from http://www.cdc.gov/nchs/data/nhis/brochure2010January.pdf

Qian, Z. (2005). Breaking the Last Toboo: Interracial Marriage in America. *Contexts, 4*(4), 33-37.

Qian, Z., & Lichter, D. T. (2007). Social Boundaries and Marital Assimilation: Interpreting Trends in Racial and Ethnic Intermarriage. *American Sociological Review, 72*(1), 68-94.

Rogers, R. G., Hummer, R. A., & Nam, C. B. (2000). *Living and Dying in the USA: Behavioral, Health and Social Differentials of Adult Mortality.* New York: Academic Press.

Romano, R. C. (2003). *Race Mixing: Black-White Marriage in Postwar America.* Cambridge, MA: Harvard University Press.

Umberson, D., & Montez, J. K. (2010). Social Relationships and Health: A Flashpoint for Health Policy. *Journal of Health and Social Behavior, 51*(1), S54-S66.

Umberson, D., Williams, K., Powers, D. A., Liu, H., & Needham, B. (2006). You Make Me Sick: Marital Quality and Health over the Life Course. *47*(1), 1-16.

Wade, T. J., & Pevalin, D. J. (2004). Marital Transitions and Mental Health. *Journal of Health and Social Behavior, 45*(2), 155-170.

Wang, H., Kao, G., & Joyner, K. (2006). Stability of Interracial and Intraracial Relationshipa among Adolescents. *Social Science Research, 35*, 435-453.

Williams, K., & Umberson, D. (2004). Marital Status, Marital Transitions and Health: A Gendered Life Course Perspective. *Journal of Health and Social Behavior, 45*(1), 81-98.

Zhang, Y., & Hook, J. V. (2009). Marital Dissolution among Interracial Couples. *Journal of Marriage and Family, 71*(1), 95-107.