Dual-earner Couples: The Impact of Relative Income on the Prevalence of Heart Disease

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As the prevalence of dual-earner couples continues to rise, it is not clear that marriage will continue to benefit the health of women through primarily economic means. Observations from medical sociology and social epidemiology frequently assert that marriage benefits women's health predominantly through increases in socioeconomic status, and marriage benefits men's health primarily through increases in social support (Gove, Walter 73;Ross, Catherine, Mirowsky, John, and Goldsteen, Karen 90) (Zick, Cathleen D. and Smith, Ken R. 91;Waite, Linda and Gallagher, Maggie 00) (Goldman, Noreen, Korenman, Sanders, and Weinstein, Rachel 95). However, approximately 23% of women in dual-earner couples now earn as much or more than their husbands (Bureau of Labor Statistics, 1997). Consequently, a considerable subset of women no longer receive a significant increase in socioeconomic status upon marriage.

Previous studies examining the impact of relative earnings within a couple on individual health have found that increases in women's income are associated with improvements in women's health, but decreases in men's health. (McDonough, Peggy, Williams, David R., House, James S., and Duncan, Greg J. 99;Brennan, Robert, Barnett, Rosalind Chait, and Gareis, Karen 01;Kessler, Ronald C. and McRae, James 82;Rosenfield, Sarah 92). Kessler and McRae (1982) find that wives' employment improves womens' mental health, though is associated with increases of psychological distress among husbands. Rosenfield finds that increases in women's income is related to worse mental health among husbands, only when such income increases decrease husband's relative income and increase their amount of household labor. Similarly, a study of mortality finds that increases in wives' income raises the risk of dying for husbands. In contrast to previous research, a more recent study finds that decreases in satisfaction and happiness with the marriage is related to relative income only for high-earning men (Brennan et al, 2001).

The primary objective of this paper is to investigate whether the association between marriage, gender, and health varies according to the relative and absolute income of each partner. Using cross-sectional national survey data, I examine the extent to which relative income *mediates* the effect of gender and marriage on cardiovascular disease, and whether the effects of marriage, gender, and relative income on cardiovascular disease *differs* by absolute income of each spouse.

Heart disease continues to be the leading cause of death among both men and women in the United States. The presence of heart disease is strongly linked to health behaviors, such as eating and exercise patterns, as well as well as psychological states (Everson, Susan, Goldberg, D. E., Kaplan, George, Cohen, Richard, Pukkala, E., Tuomilehto, J., and Salonen, J. 96;Kawachi, Ichiro, Colditz, Graham, Ascherio, Alberto, Rimm, Eric, Giovannucci, Edward, Stampfer, Meir, and Willet, Walter 96). If husbands with higher earning wives find such arrangements stressful, as reported in previous studies (Kessler and McRae 1982, Rosenfield 2001), lower earning husbands may report a higher prevalence of heart disease. In addition, it is also likely that higher earner women may find the position of breadwinner as stressful, consequently increasing their risk of heart disease.

Data and Methods

Analyses are based on the National Health Interview Survey (NHIS), a random, nationally representative, cross-sectional survey of the United States population. The NHIS is conducted annually and collects data from about 43,000 households, and includes 106,000 persons. In addition, the NHIS includes an in-depth interviews with a sample adult from each household. The NHIS is ideally suited to the study of gender, income, marriage, and health as it contains detailed information about household and personal income, as well as a comprehensive listing of health conditions and behaviors.

The analytic sample includes all currently employed persons, with a sample adult file (n= 33,326). Unemployed persons are more likely to report worse health. Consequently, analyses may underestimate the effect of earnings on health.

Dependent Variable

Cardiovascular disease is based on a series of questions in which the respondent was asked if they were ever diagnosed with a series of conditions, and their age at first diagnosis. For the purpose of this analysis, I include individuals reporting diagnoses of hypertension, coronary heart disease, stroke, or other heart diseases/conditions.

Independent Variables

Income. Individual income is measured in both relative and absolute terms. Absolute income is measured by the family respondent's reported personal income for each member of the household. Relative income is measured by the percent of the total family income contributed by each spouse.

Marital Status. Respondents are coded as either being currently married or not currently married (reference group). Thus, those not currently married includes the never married, divorced or separated and widowed. While widowhood, divorce/separation, and never marrying have distinct effects of health, research demonstrates that persons in all of these statuses have worse health than those currently married (Goldman et al. 1995; Hemstrom 1996; Smith and Zick 1994; Waldron, Weiss, and Hughes 1997; Zick and Smith 1991). Thus, married persons are expected to report better health than unmarried persons.

Finally, I also include the demographic characteristics. *Sex* is a dummy variable where 1 indicates female and 0 indicates male. Because health varies significantly with *age*, I also control for age of the respondent.

The use of cross-sectional data raises the issue of causality. First, because marital status and health are measured simultaneously, I am not able to establish a casual relationship between marriage, income, and health. While it is possible that poor health prevents the formation and maintenance of marriages, most research does indicate that marriage has a protective effect on health (Goldman et al. 1995; Lillard and Waite 1995; Waite and Gallagher 2000). Similarly, there may be selection effects in the relationship between socioeconomic status and health, where poor health may produce lower socioeconomic status. However, the purpose of this paper is not to establish causal relationships between income and health, but to understand the extent to which the rise of dual-earner couples and high-earning women has altered the relationship between gender, marriage and health. Thus, it is possible that results overestimate the effect of socioeconomic status on self-rated health.

Analytic Plan

First, I provide a descriptive analysis of the respondents. Second, I estimate logistic regression models for the married persons sample to examine the effects of relative income, absolute individual income, and sex on the odds of reporting cardiovascular disease. Finally, I estimate logistic regression models for the entire sample to examine the effect of marriage, income, and health.

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