The Impact of Marital Conflict on Health and Health Care Utilization in Older Couples

JONATHAN G. SANDBERG¹, RICHARD B. MILLER¹, & JAMES M. HARPER¹
Brigham Young University, USA
MIHAELA ROBILA
Queens College, USA
ADAM DAVEY
Temple University, USA

Abstract
This study tested the hypothesis that marital distress has a significant effect on health care utilization for older couples. Results from 536 intact couples in long term marriages showed men in dissatisfying marriages are more likely to utilize health care services; women in satisfying marriages are more likely to use health care services. There were no significant partner effects of marital quality on health problems or health care utilization. The association between husbands’ marital quality and wives’ health care utilization approached significance. Implications for future research and clinical practice, including gender differences, are discussed.

Keywords
- health care utilization
- marital quality

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ADDRESS. Correspondence should be directed to:
JONATHAN G. SANDBERG, PhD, 266 TLRB, BYU, Provo, UT 84042, USA.
[email: jonathan_sandberg@byu.edu]
Health care utilization

The use of health care services is costly. In 2005 the total national health care spending in the United States approached $2.0 trillion (Caitlin, Cowan, Heffler, Washington, & the National Health Expenditure Accounts Team, 2006), and an estimated 89.3 million visits were made to physician offices in the United States (Cherry, Woodwell, & Rechsteiner, 2007). Historically, older adults are the highest utilizers (Aminzadeh & Dalziel, 2002). In addition to higher doctor visitation rates, they are more likely to seek emergency services, stay longer in the emergency department, and experience health problems after discharge (Yang, Norton, & Stearns, 2003).

Linking marital functioning and health

There is substantial evidence that troubled marital relationships are related to physical health problems (Kiecolt-Glaser & Newton, 2001). Research has found that marital distress is a significant predictor, for example, of cardiovascular disorders (Smith & Glazer, 2005), chronic fatigue (Goodwin, 1997), ulcers (Levenstein, Kaplan, & Smith, 1995), atherosclerosis (Gallo et al., 2003), hypertension (Wickrama et al., 2001), and the flare-up of rheumatoid arthritis symptoms (Zautra et al., 1998). In addition, studies have found a positive association between marital distress and measures of self-reported health (Ren, 1997; Ryff, Singer, Wing, & Love, 2001; Wickrama, Lorenz, Conger, & Elder, 1997). People in poor quality marriages are more likely to have psychological problems and engage in high-risk health behaviors (Kiecolt-Glaser & Newton, 2001; Wickrama et al., 1997). Clearly, there is abundant research that links poor marriages and health problems.

Linking marital functioning and health care utilization

Given the association between health problems and health care utilization, it seems logical that marital distress would be related to health care utilization. In the only study that has explicitly explored the relationship between marital quality and health care utilization, Prigerson, Maciejewski and Rosenheck (1999) examined data from a longitudinal, national probability sample of 1000 women. They found that women with high marital quality had fewer subsequent health problems and made fewer visits to doctors.

Our study builds on existing research by addressing three gaps in the literature. First, although there is substantial research linking marital processes and physical health, little of this research has extended to later life couples. Although older adults are at an increased risk for health problems (Kiecolt-Glaser, Glaser, Gravenstein, Malarkey, & Sheridan, 1996), there is evidence that older couples experience substantially less relationship conflict than younger couples (Levenson, Carstensen, & Gottman, 1993). Hence, it is unclear if marital distress is a significant predictor of health problems in later life. The only study to explore this issue found that marital conflict was related to poorer immunological and endocrine functioning among older adults in a laboratory setting (Kiecolt-Glaser et al., 1997).

Second, there is a need for research that explicitly tests the relationship between marital distress, health problems, and health care utilization. Additional research is needed that links health care utilization to marital processes among men and women. Third, there is a need to study spouses’ perception of their marital quality on partners’ health and health care utilization. These cross-spouse relationships, called partner effects, suggest that marital distress not only influences one’s own physical health and health care utilization (actor effects), it also influences the spouse’s health and health care utilization (partner effects). Although two studies have examined partner effects of marital quality on spouse’s depression (Sandberg & Harper, 2000; Tower & Kasl, 1996), no research has examined partner effects of physical health.

This study addresses these three gaps in the literature by testing the hypothesis that marital distress has a significant effect on physical health and health care utilization among a sample of older couples. The use of dyadic data will enable the examination of actor and partner effects of marital quality on health and health care utilization.

Methods

Procedures

Questionnaires were mailed to 9328 addresses that had been purchased from the Donnelley Corporation, a major marketing firm, that guaranteed each of these addresses represented a married couple with at least one partner between the ages of 55 and 75 randomly selected from a sample of couples from each state in the United States.
Each couple was sent a packet that contained two questionnaires; instructions requested that they complete the questionnaires individually without consulting each other. Two stamped return envelopes were included in the packet with instructions that each person return her/his questionnaire separately. At four weeks, a follow-up postcard was mailed to those who had not yet responded encouraging them to do so (Dillman, 2000).

Sample
Of the 9328 mailed questionnaires, 591 were returned because of bad addresses. One thousand, six hundred and eleven questionnaires were completed and returned by at least one spouse. Adjusting for bad addresses, the overall response rate was 18 percent. Because of the requirement of complete data from both spouses in a dyad, an additional 997 responses were excluded because only one partner responded or because of missing data. This left 536 couples (536 husbands and 536 wives) that had complete data for the measures in this study.

We compared couples included in this study to: (1) those that were not included because their spouses did not complete the questionnaire, (2) non-respondents, and (3) 2000 US Census information (US Census Bureau, 2000) in order to test for selection bias in the sample. Using ANOVA and Chi-square tests, we compared the characteristics of these three groups with the characteristics of the participants in the study and found that both the couple sample and the one partner only respondents exhibited some selection bias in regards to race but not in terms of age, length of marriage, number of children, income, employment, and religious preference as they did not significantly differ from the other three groups on these variables.

The average age of the husbands in this sample was 64.98 (SD = 4.38) years, with a range of 49 to 79. The mean age of the wives was 62.56 (SD = 3.08) years, with a range of 46 to 76. The average length of marriage for these couples was 36 years, ranging from two to 56 years. Eighty-three percent of the sample had been married at least 25 years. Over three-fourths of the husbands (76.5%) and the wives (75.5%) were in their first marriages. An additional 17.6 percent of the husbands and 19.0 percent of the wives were in their second marriages, and about 6 percent of both spouses had been married at least three times. The couples had an average of three children, with a range of zero to nine. The vast majority (97.5%) of the respondents described themselves as Caucasian. The average level of education for both men and women was comparable to education levels nationally for men and women this age. Mean income levels were also similar to national US Census statistics for men and women over 60. Religious preference included 78.6 percent Christian, 10.9 percent other, and 10.5 percent no religious preference. These percentages were very similar to US statistics from the 2001 American Religious Identification Survey (Kosmin, Mayer, & Keysar, 2001).

Measures
Marital quality latent variable The latent variable of marital quality was measured by three indicators, the Global Distress Scale (GDS) and Problem Solving Communication Scale (PSCS) taken from the Marital Satisfaction Inventory-Revised (MSI-R) and the Personal Assessment of Intimacy in Relationships Scale (PAIR). The MSI-R is a multidimensional self-report instrument used to measure marital interaction (Snyder, 1979). The GDS is a 22 item true–false measure of the respondent’s overall dissatisfaction with their marital relationship. The PSCS is an 11 item true–false measure of the couple’s general ability to resolve differences. Respondents marked either ‘true’ or ‘false’ for each item.

Numerous studies have supported the reliability and validity of the MSI and the interpretive value of its subscales (Snyder & Regts, 1990). Specifically, Cronbach’s and test–retest reliability coefficients for the GDS were .92 and .78, and the coefficients for the PSCS were .89 and .82. The potential range on the GDS and PSCS is 0–22 and 0–11 respectively, with higher scores indicating more distress.

The third indicator was the PAIR (Schaefer & Olson, 1981). The PAIR is a 36 item inventory that measures the perceived and desired degree of intimacy. Specifically, it assesses five different areas of intimacy: emotional, social, sexual, intellectual, and recreational, which were totaled to give an overall intimacy score. There are five response options for each item ranging from ‘strongly disagree’ to ‘strongly agree’. Internal alpha reliability and test–retest coefficients for the total intimacy scale were .88 and .92. Concurrent validity of the PAIR has been established by comparing scores to the Locke Wallace Marital Adjustment Test. Correlations between these scales ranged from .64 to .78 (Schaefer & Olson, 1981). The range of possible scores is 0–480, with higher scores indicating greater intimacy.
Structural Equation Modeling allows multiple measures for a latent variable, and these measures can be scored in different directions. The regression load for the total intimacy score on the marital quality latent variable was constrained by the researchers while the other two measures, Global Distress and Problem Solving Communication were allowed to vary. This meant that we expected that the factor loading for total intimacy on the latent variable of marital quality would be positive, whereas the factor loadings for both Global Distress and Problem Solving Communication would be high, but negative. The factor loadings were in the expected direction: total intimacy (husbands .87, wives .92); Global Distress (husbands –.78, wives –.74); and Problem Solving Communication (husbands –.84, wives –.79). Thus, higher scores with the latent variable, marital quality, represents higher marital quality.

**Health problems latent variable** The latent variable, health, was measured by two indicators, health problems and overall satisfaction with physical health. The number of health problems was assessed by asking participants to indicate which problems, among a list of 24 common problems in later life, they had experienced within the last year. The problems included heart condition, circulation problems, high blood pressure, anemia, diabetes, emphysema/bronchitis, cataracts, ulcers, broken bones, gall bladder problems, hernia, liver disease, kidney disease, urinary problems, Parkinson’s disease, stroke, cancer, osteoporosis, skin problems, frequent colds, alcoholism, emotional illness, depression, and anxiety. On the questionnaire, participants were simply asked to answer ‘yes I have this health problem’ or ‘no I do not’ to each of the 24 health problems. Because no participant listed more than seven health conditions, the range of scores was 0 to 7. This measure was created specifically for this project so no formal validity or reliability studies have been done. The four week test–retest reliability for this item was 1.00 indicating that participants perceive the same health problems consistently over a period of a month. The second indicator, satisfaction with health, was measured by asking the respondents the following question on a seven-point Likert scale, ‘How satisfied are you with your overall health?’ (1 = extremely dissatisfied, 7 = extremely satisfied).

In Structural Equation Modeling the indicator of the summed scale for health problems was constrained to load positively on the latent variable, meaning that the one-item satisfaction with health variable would load negatively on the latent variable. The factor loadings were in the expected direction with .92 (husbands) and .91 (wives) for summed health problems and –.91 (husbands) and –.90 (wives) for satisfaction with health. Thus, the higher the latent scores for health problems, the poorer health the person was reporting.

**Health care utilization latent variable** Health care utilization was a latent variable that had three indicators, self-reported medication use, doctor visits, and hospitalizations. Medication use was measured by a question asking, ‘How often do you take prescription medication?’ Response options ranged from (0) less often than once a day, to (4) four or more times a day. Participants were asked an open question about doctor visits: ‘How many times have you seen a doctor over the last three months?’ Similarly, hospitalization was measured by a question asking the number of hospital visits in the last three months.

Although the use of self-reported health care utilization variables is common in survey research (Dunlop, Manheim, Song, & Chang, 2002), previous research has found that participants consistently underreport utilization compared to medical records (Roberts, Bergstrahl, Schmidt, & Jacobsen, 1996; Wallihan, Stump, & Callahan, 1999). Because the greatest difference is in the number of visits, rather than whether or not the services were actually used, it has been recommended that self-reported measures assess any use of the services (Dunlop et al., 2002). Consequently, the variables were recoded as dichotomous variables to represent either the use (coded 1) or nonuse (coded 0) of medication, doctors’ visits, and hospitalization. The variable, doctors’ visits, was constrained, and it was expected that these three measures would load positively on the latent variable as was the case with doctors’ visits .88 for husbands, .74 for wives; medication .58 for husbands, .57 for wives, and hospitalizations .39 for husbands, .41 for wives. All of these variables loaded in the same direction so the latent variable can be thought of as ranging from low meaning low utilization to high meaning high utilization.

**Analytic strategy** The study was designed to test a proposed model for marital conflict, health and health care utilization in later life. Very little of the data (less than 2%) related to the variables in this study were missing, but a maximum
likelihood estimation procedure was used to deal with missing data. Similar to models used by other researchers analyzing dyadic data (Beach, Katz, Sooyeon, & Brody, 2003; Whisman, Uebelacker, & Weinstock, 2004), our model included variables from both husbands and wives and examined the effect of one’s own variables on self (actor effects) and the effect of husbands’ variables on wives’ and vice versa (partner effects). It was hypothesized that both husbands’ and wives’ marital quality would be negatively related to health problems. It was also hypothesized that marital quality would have a direct positive effect on health care utilization, meaning that couples with high marital quality would be more likely to use medical resources because their spouses gave them encouragement to do so.

Results

Preliminary analysis

Overall, husbands (M = 2.22, SD = 3.92) and wives (M = 2.78, SD = 4.58) in this study reported relatively low levels of marital distress, with ranges from 0–22 for both. Their mean scores on the problem solving scale were 4.84 (SD = 4.12, range 0–18) and 5.40 (SD = 4.57, range 0–19) for men and women, respectively. Mean scores on the marital intimacy scale were 338.76 (SD = 76.72) for husbands and 336.16 (SD = 81.53) for wives. Men’s marital intimacy scores ranged from 84 to 476, and women’s scores ranged from 44 to 480. Husbands (M = 5.26, SD = 1.36) and wives (M = 5.24, SD = 1.44) reported being relatively satisfied with their health with ranges for both of 1–7, with 76 percent of the wives and 75 percent of the husbands being at least somewhat satisfied with their health. In addition, husbands (M = 1.79, SD = 1.49) and wives (M = 1.60, SD = 1.54) reported relatively few health problems. Eighty-one percent of the males reported at least one health problem, while 50.5 percent reported at least two. Wives reported fewer health problems, with 75 percent reporting at least one health problem and 43.7 percent reporting at least two. In terms of health care utilization, 9.9 percent of the men had been hospitalized during the past three months, 67.4 percent had visited a doctor during the same period of time, and 67.4 percent were regularly taking medications. Respective utilization percentages for women were 7.1 percent, 68.9 percent, and 73.4 percent.

Model fit

Before examining the path coefficients of the model, it was important to first examine the goodness-of-fit of the model (Kline, 2005). The original model had inadequate goodness-of-fit; consequently, it was modified to allow error terms for each measure to correlate with each other. The revised model fit the data well, based on standard statistical goodness-of-fit measures. The Chi-square statistic was 161.14, with 81 degrees of freedom. The CFI was .996, the RMSEA was .043, and the Parsimony Ratio, which measures the conciseness of the model in representing the data, was .60. All of these scores met or exceeded the recommended standards for adequate goodness-of-fit (Byrne, 2001).

Actor effects

Husbands’ marital quality was significantly related to health, with a standardized path coefficient of −.21 (unstandardized = −.05). The path between husband health problems and husband health care utilization was also significant, with a coefficient of .91 (unstandardized = .072). In addition, the direct path between husbands’ marital quality and health care utilization was significant, with a standardized path coefficient of .25 (unstandardized = .005) (see Fig. 1).

These results suggest that marital quality affects health care utilization in two ways. First, marital quality has an indirect effect on health care utilization through the mediating variable of health problems. Men in happy marriages are less likely to have health problems, which is associated with less use of health care. Second, when controlling for health, men in happy marriages are more likely to use health care services.

In contrast to the husbands’ results, wives’ marital quality was not significantly related to their health problems (see Fig. 1). The standardized path coefficient was −.13 (unstandardized = −.03, p > .05). Consequently, although the path between health and
health care utilization was highly significant, with a path coefficient of .71, the nonsignificant path between marital quality and health problems negates the indirect effect between marital quality and health care utilization through the mediating variable of health. However, the direct path between marital quality and health care utilization was significant, with a standardized path coefficient of .20 (unstandardized = .02). Thus, when controlling for health status, women in happy marriages are more likely to use more health care services.

Partner effects
Results indicated that there were no significant partner effects of marital quality on health problems or health care utilization. For husbands, wives’ level of marital quality did not have a significant effect on husbands’ health problems (unstandardized = .01, standardized = .05, p > .05) or husbands’ health care utilization (unstandardized = .01, standardized = –.10, p > .05). For wives, husbands’ level of marital quality was not significantly associated with wives’ health problems (unstandardized = .01, standardized = .01, p > .05). Although statistically non-significant, the association between husbands’ marital quality and wives’ health care utilization approached significance (unstandardized = –.02, standardized = –.17, p > .05).

Discussion
We conclude from the findings that, after controlling for health problems, happily married Caucasian husbands and wives are more likely to use health care services whereas in distressed marriages, both spouses are less likely to seek medical care. These findings are consistent with the results of studies (Robles & Kiecolt-Glaser, 2003; Wickrama et al., 1997) that showed one of the ways both men and women benefit from marriage is through their spouse’s encouragement to seek medical help.

The finding that husband’s health is negatively predicted by his perception of the quality of his marriage is consistent with the findings (Kiecolt-Glaser & Newton, 2001) that distressed marital processes are related to increased physical health problems. In this study one of the observed measures of the latent variable, health problems, was the reporting of different types of health problems, including cardiovascular, arthritis, diabetes, and other problems. It was not surprising that findings from this study were consistent with studies that have shown marital distress is associated with cardiovascular disease (Smith & Glazer, 2005), with atherosclerosis (Gallo et al., 2003), and with flare-ups of arthritis symptoms (Zautra et al., 1998). We must be careful, however, about concluding that the relationship between husband’s health and the quality of his marriage is sequential. It is entirely possible that having a poor marriage may drive health, which could only be determined by a longitudinal study.

The findings from this study do not inform us about the specific mechanisms in healthy marriages that encourage health care utilization. It may be possible that both the frequency and quality of health monitoring in high quality marriages is different from what occurs in distressed marriages. Monitoring in happy marriages may be seen as caring and helpful whereas in troubled marriages, it may be seen as nagging and criticism (Sandberg et al., 2006).

The results of this study also confirm findings from other studies (Ellixhauser, Yu, Steiner, & Beirman, 2000; Unutzer et al., 1997) that health problems are positively related to health care utilization. Considering distressed husbands’ direct and indirect paths to health care utilization, the findings show that poorer health can lead to increased health care utilization. Why is it also that higher scores of marital quality were related to increased use of medical services for the men in this study?

What appears to be contradictory may be explained by the health utilization measures in this study. The indicators for health care utilization were yes/no answers to questions regarding prescription medication use, doctor visits, or hospitalization over a three month period. It could be that the results of the study would differ if the actual count or frequency of visits and hospitalizations or the number of prescription medications were considered. The direction of the relationship between marital satisfaction and health care usage is also supported by Prigerson et al. (1999) who found that women with high marital quality made fewer visits to doctors than did women in distressed marriages. Perhaps this is because there is some evidence (Cohen, Doyle, Skoner, Rabin, & Gawlney, 1997) that emotional support can help men recover from illness faster.

Unlike the finding for husbands, there was no significant relationship between wives’ perceptions of their marital quality and their report of health problems and satisfaction with health. This is contradictory to findings from other studies (Kiecolt-Glaser, 1999) that women in distressed marriages have more
health problems. While there is a trend in that direction in our results, they were not statistically significant. There are several possible explanations. Because our community sample scored relatively high on marital satisfaction as a group and the women in the sample were also quite healthy on average and reported better health than their husbands, the results of the study may differ if there were a greater range of scores on marital satisfaction and health.

Since the sample for this study included both husbands and wives married to each other, it was possible to test for partner effects in the model. Because few studies include both husbands and wives from the same marriage, it is difficult to know what the findings of no significant partner effects means. It may mean that the more important relationships in the model were related to actor effects, and so the actor effects subsume any partner effects. If the actor paths were removed from the model, it may be that paths related to partner effects might become significant. Future research is needed to clarify these associations.

The findings of this study raise additional questions for future research. What is the interaction between individual variables that influence health care utilization and marriage variables? What are the specific marital processes that are related to poor health? Likewise, what are the specific marital processes related to husbands and wives seeking medical care? How do the relationships between these variables change as marriages move from happy to distressed?

The primary limitation of this study was that 97.5 percent of the individuals were Caucasian. While we can generalize these findings to the older Caucasian population of the USA, we cannot draw conclusions about marital quality, health, and health care utilization in other racial groups. There were also limitations in the measures of health in that they were general self-report measures. Although health problems included the major illness and diseases among the aging in the USA, there was no attempt to weight these. In addition, the utilization measures were gross indicators of whether participants had visited the doctor, taken prescription medications, or been hospitalized in the last three months. As a result, there was no distinction between someone who might have used seven prescription medications and been to the doctor 10 times and someone who used one medication and visited the doctor once. Lastly, one cannot truly conclude that causal relationships exist with cross-sectional data.

The findings of this study have both prevention and treatment implications. Aging husbands in distressed marriage may derive health benefits from marital education and intervention. This could be one of many practices that would decrease the risks for health problems in later life. When older adults present to their physicians with a host of medical complaints and problems, physicians might do well to determine if they are in a distressed marriage, and if so recommend marital therapy as an adjunct treatment in addition to standard medical regimens.

**Note**

1. Represents shared first authorship.

**References**


Author biographies

JONATHAN G. SANDBERG, PhD, is Associate Professor of Marriage and Family Therapy in the School of Family Life at Brigham Young University.

JAMES M. HARPER, PhD, is Professor of Marriage and Family Therapy in the School of Family Life at Brigham Young University.

RICHARD B. MILLER, PhD, is the Director of the School of Family Life at Brigham Young University.

MIHAELA ROBILA, PhD, is Associate Professor—Family Studies at Queens College, City University of New York.

ADAM DAVEY, PhD, is Associate Professor in the College of Health Professions, Temple University.