Impact of Spouse Vision Impairment on Partner Health and Well-Being: A Longitudinal Analysis of Couples

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Objectives. The purpose of this study was to assess the impact of older spouses’ vision impairment on the health and well-being of their partners and to test for gender differences.

Methods. Participants were 418 older couples from the Alameda County Study. Vision impairment was assessed in 1994 with a 9-point scale assessing difficulty seeing in everyday situations; outcomes were assessed in 1999. Longitudinal analyses included multivariate statistical models adjusting for paired data and partners’ own vision impairment, age, gender, chronic conditions, and financial problems. We include results on outcomes for partners’ own vision impairment for comparative purposes. We assessed gender differences with interaction tests.

Results. Spouse vision impairment negatively impacted partner depression, physical functioning, well-being, social involvement, and marital quality; these effects were not greatly different in magnitude from those associated with partners’ own vision impairment. Three of four outcomes with significant gender differences evidenced stronger impacts of husbands’ vision impairment on wives’ well-being and marital quality than the reverse.

Discussion. Spouses do not live in isolation; characteristics of one impact the other. Both treatment and rehabilitation programs should include spouses and other family members of visually impaired patients. Why wives appear more sensitive to their husbands’ vision impairment is unclear and warrants further study.

Vision impairment is a significant health problem. The National Center for Health Statistics reported that 8.9% of American men aged 45 to 64 and 15.0% aged 65 and older in 1999 had trouble seeing even when wearing glasses or contact lenses (Pleis & Coles, 2003); comparable figures for women were higher at 12.1% and 16.3%, respectively. These figures increase sharply at older ages—prevalence rates for those aged 75 and older are more than 50% greater than for those aged 65 to 74 (Pleis & Coles, 2003). Vision impairment prevalence does vary by type of assessment used; it is lower when testing with Snellen charts and higher when coupling questionnaire scales assessing difficulty seeing in various settings with response sets allowing a wider range of responses than simply yes or no (Eekhof, De Bock, Schaaeveld, & Springer, 2000; Jacobs, Hammerman-Rozenberg, Maaravi, Cohen, & Stessman, 2005; Wallhagen, Strawbridge, Shema, Kurata, & Kaplan, 2001). All of these studies reported a higher prevalence of vision impairment among older women than men.

The prevalence of vision impairment would be even higher were it not that many changes are amenable to correction with glasses, contact lenses, or laser or cataract surgery. Major causes of vision impairment that do interfere with normal functioning include uncorrected cataracts, glaucoma, diabetic retinopathy, and macular degeneration (Congdon et al., 2004; Foster & Resnikoff, 2005; Kalina, 1999). Such impairments limit participation in activities and can disrupt interpersonal relationships (Crews & Campbell, 2004; Heine, Erber, Osborn, & Browning, 2002; Lamoureux, Hassel, & Keeffe, 2004). Researchers have also found vision impairment to negatively affect activities of daily living (ADLs), instrumental ADLs, physical functioning, cognitive functioning, and social interaction (Dunlop, Manheim, Sohn, Liu, & Chang, 2002; Reuben, Mui, Damesyn, Moore, & Greendale, 1999; Reyes-Ortiz et al., 2005; U.S. Department of Health and Human Services, 2000; Wallhagen et al., 2001; West et al., 1997).

Given that vision impairment has negative consequences for older persons, might it also affect close relationships? Spouses share conditions and traits such as mood states, depressive symptomatology, physical activity, and physical health (Horowitz, Goodman, & Reinhardt, 2004; Satariano, Haight, & Tager, 1996; Townsend, Miller, & Guo, 2001; Wilson, 2001). Reasons for such similarities include partner selection, common environmental exposures, similar histories, and sharing of risk factors such as diet and smoking (Bookwala & Schulz, 1996). Much of the existing research, however, has focused on concordant outcomes and not addressed the extent to which a particular spouse condition or trait affects the health and well-being of his or her partner.

There are several conceptual frameworks appropriate for addressing why spouse vision impairment might impact partner health and well-being.

Communication Theory

The simplest framework involves changes in communication patterns between spouses as a result of vision impairment. The literature on the negative impact of hearing impairment on
communication in close relationships includes the fact that spouse hearing impairment affects partner health and well-being, with wives being more negatively impacted by hearing loss in their husbands than vice versa (Hétu, Jones, & Getty, 1993; Morgan-Jones, 2001; Wallhagen, Strawbridge, Shema, & Kaplan, 2004). Unlike with hearing impairment, persons with vision loss can interact verbally and thus remain connected to social conversations. At the same time, communication involves understanding and responding to the social context as well to words. Heine and Browning (2002) noted that persons with significant visual loss may be unable to perceive nonverbal cues such as gestures, facial expressions, and body language. These nonverbal cues often show the emotional content of communication and may result in misinterpretations and inappropriate responses when not identified. In their review of existing studies of older adults, Heine and Browning attributed findings that vision impairment resulted in poor psychosocial functioning to problems with communication. If true, then spouse vision impairment should negatively impact partner outcomes associated with communication, such as well-being. Greeff (2000) found that women were less satisfied than men with the type and level of communication in their marriage. Actitelli (2002) noted that studies have consistently demonstrated that variables emphasizing connections between partners are more important to the well-being and relationship satisfaction of wives than of husbands. These and other studies suggest that communication may be more important for women in marriage than for men (Garstecki & Erler, 1999); if this is so, one would expect that the extent to which vision impairment makes communication more difficult would have a more negative impact on wives than husbands.

Affect Contagion

Affect or emotional contagion refers to a process by which one’s mood spreads to others who are in close contact (Bookwala & Schulz, 1996). It goes beyond the simpler concept of concordance in outcomes previously discussed by adding an element of change—spouse mood changes should be followed in time by similar changes in partner outcomes. The most common outcome studied has been depression, with relationships between spouses and partners remaining relatively strong even in the presence of many potential confounders (Dufouil & Alpérovitz, 2000; Goodman & Shippy, 2002; Townsend et al., 2001). Studying affect contagion requires longitudinal analyses with follow-up periods that are reasonably close together to actually track changes in partner outcomes subsequent to changes in spouse outcomes. Otherwise both spouse and partner could be responding identically to the same stressor, such as the death of a close family member. For general well-being and marital satisfaction, a review of the literature concluded that the impact of chronic illness could be as strong or stronger for the nondisabled partner than the spouse with the illness, which would be clear evidence of affect contagion (Melton, Hersen, Van Sickle, & Van Hasselt, 1995). Accordingly, if a spouse has negative mood outcomes associated with vision impairment, one would expect his or her partner to be at least similarly impacted on that same mood.

Stress Process

Researchers have applied Leonard Pearlin’s stress process model mainly to studies of caregiving involving dementia, but the model could be applicable here even though the vast majority of partners of visually impaired spouses in our data set did not describe themselves as caregivers (Pearlin, 1989; Pearlin, Mullan, Semple, & Skaff, 1990).

Pearlin’s model includes two major sources of stress. Primary stressors derive directly from an illness or condition as well as the type and extent of care provided, including the extent of any disability, supportive care provided by the partner, and partner perceptions. For our analyses, the primary stressor for the partner was the vision impairment of the spouse as well as any sequelae. Secondary stressors in Pearlin’s model refer to problems developing subsequent to the primary stressors in other aspects of daily life for the partner, such as changes in activity patterns, family and other social relationships, and changing perceptions of the relationship itself. One would expect all of these stressors to affect the partner on a wide variety of outcomes, including physical health and disability in addition to well-being. Gender differences could fit such a model if the primary and/or secondary stressors produce different levels of stress in wives than in husbands.

Purpose and Rationale

The vision impairment literature discusses impacts on partners and other family members, and one study found a relationship between depression of a visually impaired spouse and depression of his or her partner (Goodman & Shippy, 2002). However, we have been unable to locate any longitudinal comparative study of couples that included both visually impaired and nonimpaired participants and directly assessed both dyadic members to study the extent to which vision impairment of one member of a dyad affected the health and well-being of the other member after his or her own vision impairment had been taken into account. Our study fills this gap.

The purpose of our study was to analyze the impact of vision impairment experienced by a spouse on the health and well-being of his or her partner. To assess relative impacts, we compared strengths of observed relationships with those associated with the partner’s own vision impairment. Because gender differences are common findings in gerontological research, and some researchers have suggested that marriage and social involvement have a differential impact on men and women (Greeff, 2000; Moen, 1996), we tested outcomes for gender differences. We discuss findings in relationship to the three conceptual frameworks discussed previously, implications for clinical practice, and future research.

Data were from a longitudinal study of health and well-being with a sufficiently large sample of couples for inclusion of potential confounding variables, adjustments for paired data, and statistical significance testing of observed gender differences. Specific research questions were the following: (a) To what extent does vision impairment of an older spouse impact his or her partner’s health and well-being? (b) How do any observed relationships for spouse vision impairment on partner outcomes compare in strength with those associated with the same outcomes for the partner’s own vision impairment? (c) Are there any gender differences in these relationships? and (d) How well do observed relationships fit the three proposed conceptual frameworks?
METHODS

Sample

Designed to assess how different ways of living affect health and longevity, the Alameda County Study has followed a cohort of 6,928 adult residents selected in 1965 by means of a random sample of county households (Berkman & Breslow, 1983). Located on the east side of San Francisco Bay, Alameda County’s population in 1965 was representative of other American urban and industrialized areas in terms of age, ethnicity, occupation, and economic diversity. Study organizers conducted follow-up surveys in 1974, 1983, 1994, 1995, and 1999. Survey response rates have been consistently high (78%–95%). We used the 1994 and 1999 surveys for the analyses reported here. The California State Committee for the Protection of Human Subjects and the institutional review board for the Public Health Institute approved data collection procedures.

Because the Alameda County Study encouraged all adults living in households selected for the survey to enroll, it includes a number of husband and wife pairs. The 1999 follow-up totaled 2,123 participants. Of these, 852 (426 couples) were still married to each other and living together. We omitted 8 couples because one or both members were missing data on vision impairment or adjustment variables, making the final sample size 418 couples. Mean age of the husbands and wives in 1999 was 70.2 and 67.6 years, respectively, with a range of 51 to 94. Mean length of marriage was 44.7 years; 88.5% of the husbands and 89.0% of the wives were in their first marriage.

Attrition and representation are important issues in any longitudinal study but deserve special attention in cohorts involving dyads because the loss to follow-up of one member of the dyad usually causes both to be removed from subsequent analyses. Divorce and separation are much less common in the lives of older couples than they are in younger couples today; over the life of the Alameda County Study, only 9.2% of the couples originally enrolled divorced or separated. There was a modest loss in minority representation from 16% in 1965 to 13% in 1999, as well as modest losses in those with fewer years of education and lower incomes. However, reasonable numbers of such participants remain, as do numbers of those with poor health and disability.

We were unable to find U.S. Census figures on characteristics of older couples, but we were able to compare our data set with a 1996 analysis of 317 married couples randomly selected for the Established Populations for Epidemiologic Studies of the Elderly, the Yale Health and Aging Project (Tower & Kasl, 1996). Study characteristics were similar to those for couples remaining in the Alameda County Study: 84.9% of the husbands and 85.1% of the wives were in their first marriage, mean length of marriage was 43.3 years, and 84.2% of participants were White. Mean ages were 75.4 for husbands and 72.6 for wives, figures that correspond closely to our means of 75.8 and 73.4, respectively, if one includes only those aged 65 and older. Such comparison data support the generalizability of our findings to older American couples.

1994 Independent Variables

Vision impairment was self-assessed by asking participants how much difficulty they had seeing even with glasses in three everyday situations: seeing well enough to read street signs at night, recognizing a friend across the street, and reading a newspaper. Response sets and scores for each problem were none (0), a little (1), some (2), and a great deal (3). We summed scores into a scale with a range from 0 to 9; higher scores indicated greater vision impairment. Reliability for the scale was .78 (standardized Cronbach’s alpha), and correlations for each of the three items with the remaining two in the scale were acceptable (.58 for seeing at night, .56 for difficulty reading the newspaper, and .70 for recognizing a friend).

To compare vision impairment of Alameda County Study participants with national data, study organizers asked participants the following question from the National Health Interview Survey: “Do you have trouble seeing even when wearing glasses or contact lenses?” The time period was over the past 12 months, and response options were simply yes or no.

1994 Adjustment Variables

Chronic conditions were measured with a count of reporting in the past 12 months the prevalence of 11 different conditions: arthritis, asthma, bronchitis, cancer, diabetes, emphysema, heart disease, high blood pressure, osteoporosis, peripheral artery disease, and stroke. Financial hardship was used to measure socioeconomic status and was defined as any of the following: not having had enough money in the past 12 months to buy clothing, fill a prescription, see a doctor, pay rent or mortgage, or (in the past 30 days) buy food. This measure had advantages over reported income because only 1% of Alameda County Study participants omitted it (compared to 8% for income), and it is a more valid measure of financial burden for older persons because it reflects a balance between income and expenditures.

1999 Outcome Measures

To assess the impact of vision impairment on the health and well-being of older couples, we chose a range of outcomes that included physical functioning, mental health, social involvement, well-being, and marital quality. Because 5 of the 11 measures had only either two or three response options and the 6 others had decidedly non-normal distributions, we dichotomized all measures for use in logistic regression models. This procedure also facilitated understanding of the resulting odds ratios because they were coded so as to reflect only negative versus positive outcomes.

Physical functioning included two forms of disability: ADL and mobility disability. The five ADL items were walking across a small room, dressing, bathing, brushing hair or teeth, and eating (Katz, 1983). Mobility disability included two items: walking a quarter of a mile and walking up one flight of steps (Guralnik et al., 1993; Rosow & Breslau, 1966). We scored participants reporting some difficulty, a lot of difficulty, or being unable to do any item as disabled for the appropriate ADL or mobility category. An additional measure for physical functioning was physical frailty, which was measured as any response of often or very often experiencing sudden loss of balance, weakness in legs, weakness in arms, or dizziness or fainting when quickly standing up. We used these physical frailty items elsewhere in an analysis of individual risk factors for frailty (Strawbridge, Shema, Balfour, Higby, & Kaplan, 1998).

Mental health was measured using the 12 items comprising the diagnostic criteria for a major depressive episode outlined in the Diagnostic and Statistical Manual of Mental Disorders,
Responses of pretty or very happy. Negative affect was measured using the 8-item Bradburn Affect Balance scale (Bradburn, 1969); we coded as having negative affect those whose negative affect scores were higher than their positive affect scores. We used three questions to assess marital quality. The first asked participants how happy their marriage was. We coded as having an unhappy marriage those who responded less than very happy or happy (i.e., somewhat happy, somewhat unhappy, unhappy, or very unhappy). Participants were also asked whether they received as much understanding from their spouses as they needed; we coded responses as no versus yes but not completely or yes completely. Finally, participants were asked whether they ever regretted their marriage; we dichotomized responses as often, sometimes, or a few times versus never.

Baseline Sample Characteristics

Table 1 shows age and other participant characteristics at baseline in 1994. Mean age was 65.4 for husbands and 62.8 for wives; range was 46 to 89. At follow-up in 1999, all of these participants were, of course, 5 years older. The sample was reasonably well educated, with more than 85% reporting 12 years of education or more. Recent financial problems were reported by 10% of the husbands and 12% of the wives. More than 55% reported at least one chronic condition. For vision impairment, 8.6% of the husbands and 9.8% of the wives answered positively to the dichotomous question “Do you have trouble seeing even when wearing glasses or contact lenses?” These last figures were slightly below comparable prevalences of vision impairment as reported in the introductory paragraphs of this article for national data. However, when we assessed vision impairment using the three scaled items along with a response set including various levels of difficulty, more than 50% of the women and more than 40% of the men reported at least some impairment even when wearing glasses.

Analysis Strategy

We used logistic regression to estimate relationships between 1994 vision impairment and 1999 outcomes. To assess the impact of spouse vision impairment on partners, we regressed each partner outcome on his or her spouse’s 1994 vision impairment score as well as the partner’s own 1994 vision impairment score, age, gender, chronic conditions, and financial hardship. Because of the inclusion of both partner and spouse vision impairment scores in each model, we could assess and compare outcome relationships for both partner and spouse vision impairment scores while simultaneously adjusting for the other.

Analyses of couples require special statistical procedures because the normal assumption of independence is not met. Couples share more attributes than would a sample of unrelated husbands and wives. To take such correlated data into account, we used Liang and Zeger’s generalized estimating equation method with logistic regression (Liang & Zeger, 1986; Zeger & Liang, 1992). The generalized estimating equation method uses the correlations within each couple pair to adjust the regression coefficients and standard errors from what would have been obtained if the observations had been independent (see Hanley, Negassa, Edwardes, & Forrester, 2003, for a thorough discussion). Differences are relatively minor if the clusters are small and numerous (as they are in couples.
results only for those outcomes; we found no significant
power associated with the use of such product or interaction
terms in statistical models, we followed Greenland’s (1989)
recommendation to set the significance criterion higher than
.05 and so used a .10 (two-tailed) significance level to assess
the statistical significance of our gender differences. All other
statistical tests used .05 (two-tailed) significance levels. To
allow both the strength and precision of the relationships to be
better assessed, we present results as odds ratios with their
associated 95% confidence intervals.

We assessed differences in outcomes between husbands and
wives by adding Gender × Spouse Vision Impairment product
terms to each model (Greenland, 1998). Because of the reduced
power associated with the use of such product or interaction
terms in statistical models, we followed Greenland’s (1989)
recommendation to set the significance criterion higher than
.05 and so used a .10 (two-tailed) significance level to assess
statistical significance of our gender differences. All other
statistical tests used .05 (two-tailed) significance levels. To
allow both the strength and precision of the relationships to be
better assessed, we present results as odds ratios with their
associated 95% confidence intervals.

Missing data for individual outcomes were few: none were
missing on depression, and the range for other variables was 1
to 27 couples. We omitted those with missing data on specific
outcomes only for those outcomes; we found no significant
differences between those omitted and those included.

**RESULTS**

Table 2 shows the results of the regression analyses. The
odds ratios indicate the increased relative odds of each indicated partner outcome associated with a 1-point increase
in either the partner’s own vision impairment score or that of
his or her spouse. We adjusted all outcomes for partner age,
gender, number of chronic conditions, and financial problems.

Model 1 in Table 2 indicates the impact of the partner’s own
vision impairment on his or her outcomes adjusted for the
spouse’s vision impairment. The adjustment removed from
the outcomes any effect of the spouse’s vision impairment on the
partner. Partner’s own vision impairment from 1994 was asso-
ciated with all but three of the 1999 negative outcome variables.

The remaining models in Table 2 indicate the impact of
spouse vision impairment on partner outcomes adjusted for
the partner’s own vision impairment. This adjustment again
allowed for a more precise determination of the impact of the
spouse’s vision impairment on the partner. Model 2 indicates
partner outcomes regardless of gender. For all but three of the
outcomes (mobility disability, negative effect, never go out, and not much understanding from spouse).

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<td>Physical functioning</td>
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<tr>
<td>ADL disability</td>
<td>1.14</td>
<td>1.16</td>
<td>1.09</td>
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<td>Mobility disability</td>
<td>1.19</td>
<td>1.04–1.30</td>
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<td>Physical frailty</td>
<td>1.17</td>
<td>1.04–1.30</td>
<td>1.15</td>
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<td>Mental health (depressed)</td>
<td>1.17</td>
<td>1.03–1.32</td>
<td>1.13</td>
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<td>Social involvement</td>
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<tr>
<td>Never go out for entertainment</td>
<td>1.12</td>
<td>1.00–1.26</td>
<td>0.96</td>
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<td>Often feel left out when in group</td>
<td>1.11</td>
<td>1.00–1.22</td>
<td>1.14</td>
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<td>Well-being</td>
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<tr>
<td>Unhappy</td>
<td>1.08</td>
<td>0.93–1.25</td>
<td>1.11</td>
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<td>Negative affect</td>
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<td>1.04–1.33</td>
<td>0.97</td>
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<td>Marital quality</td>
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<tr>
<td>Unhappy marriage</td>
<td>1.08</td>
<td>0.98–1.20</td>
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<tr>
<td>Regret marriage at times</td>
<td>1.15</td>
<td>1.05–1.26</td>
<td>1.09</td>
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<tr>
<td>Spouse does not give as much understanding as needed</td>
<td>1.12</td>
<td>0.97–1.28</td>
<td>1.15</td>
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Notes: Odds ratios (OR) and confidence intervals (95% CI) are based upon a 1-point increase in the indicated vision impairment score. All models include age, financial problems, and number of chronic conditions. All models include both spouse and partner vision impairment scores. Gender-adjusted models include an adjustment for gender. Gender interaction models include Gender × Vision Loss Interaction terms. Statistically significant values are in bold. ADL = activity of daily living.

*p value for Gender × Vision Loss Interaction test. Values of .10 or less indicate a statistically significant difference in outcomes between husbands and wives (mobility disability, negative affect, never go out, and not much understanding from spouse).
statistically significant. For one (mobility disability), the impact of wives’ vision impairment on husbands was greater than that of husbands’ vision impairment on wives. For the other three (never go out for entertainment, negative affect, and lack of understanding from spouse), the impacts of husbands’ vision impairment on wives were greater than the impacts of wives’ vision impairment on husbands.

DISCUSSION
The partner’s own baseline vision impairment was associated with a wide variety of negative outcomes assessed 5 years later. However, even when the partner’s own vision impairment was taken into account, there were additional negative impacts on partner health and well-being associated with the vision impairment of the partner’s spouse. These results indicate that both spouse and partner vision impairment have independent impacts on a variety of partner outcomes. With the exception of mobility disability and unhappiness, the odds ratios for the spouse vision impairment were similar to those for the partner’s own vision impairment, a finding arguing for the importance of spouse vision impairment for the health and well-being of older persons. Given the sharp increase in vision impairment with age, such effects are likely to be more pronounced as America’s population ages in the future. It is less easy to explain the reasons for these relationships and the differential gender effects noted in Models 3 and 4 of Table 2, even within the context of the three conceptual frameworks discussed in the introduction to this article.

We can interpret our findings as providing partial support for affect contagion theory. We know that an older person’s own vision impairment negatively impacts most of the same variables used for partner outcomes in Table 2, so it is possible that the partners are experiencing the same negative outcomes as are their spouses. Within this framework, spouse vision impairment would first affect spouse outcomes, and these, in turn, would lead to similar outcomes for the partner. Multiple follow-up assessments would be necessary to fully assess such a progression. However, there appears to be nothing in affect contagion theory to explain the gender differences also found in Table 2.

Our mental health, well-being, and marital satisfaction findings plus their gender differences are consistent with the conceptual approach involving couple communications, as well as findings that older women place a higher value on communication in marriage than do older men. Wives may be especially sensitive to this loss because the results for all three marital satisfaction variables show a statistically significant negative impact of their husbands’ vision impairment on their marriages, whereas none of the relationships were statistically significant for the husbands.

However, significant outcomes for partner disability and frailty in Table 2 are difficult to explain solely within a communication framework. Such outcomes better appear to fit Pearlin’s stress process model. Vision loss can result in activity limitations, such as difficulty walking, getting outside, getting into and out of a bed or chair, managing medications, and preparing meals, as well as restrictions in social activities (Crews & Campbell, 2004). These limitations often mean these individuals will require assistance from others to meet their daily needs. In this regard, the caregiving literature supports the significant impact and stress that providing assistance may have on caregivers and documents that this impact is often greater for women than for men (Argimon, Limon, Vila, & Cabezas, 2004; Ingersoll-Dayton & Raschick, 2004). Male caregivers may be more impacted by the need to assist with mobility problems experienced by their partners because, in general, they are less likely to provide direct care than are female caregivers (Pinquart & Sorensen, 2006).

It is possible to combine the communication and stress process models so as to be consistent with our findings. Growing communication problems, activity limitations, and negative perceptions of the situation resulting from spouse vision impairment could all be seen in terms of primary and secondary stressors. The gender differences could then be explained if it could be shown that spouse vision impairment is associated with greater stress and activity limitations for wives than for husbands. Unfortunately, we were unable to test such a hypothesis ourselves because our data set lacked a specific measure of stress.

Further research is necessary to better fit our findings within a particular conceptual framework. For a realistic test of affect contagion, it would be necessary to conduct multiple follow-ups closer in time than our single 5-year period in order to track the extent to which changes in spouse outcomes are associated with subsequent changes in partner outcomes. Researchers could further study communications aspects by examining direct interactions between dyad members, including specific assessment of communication changes subsequent to vision loss. Of potential value would be a longitudinal study that utilizes both qualitative and quantitative approaches to assess change across time. Investigators could study stress process in the same way, with specific measures added to assess stress directly. Major stressors, such as driving restrictions and their attendant limitations on mobility and independence, could be better identified. Combining quantitative and qualitative approaches would be especially helpful in delineating the causal pathways involved, such as the extent to which spouse vision impairment affects partners by impacting spouse disability or depression.

Regardless of the conceptual framework involved, our data raise some important clinical implications. Practitioners often deliver treatment and services as though individuals live in isolation. Clinicians thus need to consider the partner when treating visually impaired patients. One way to do this is to involve spouses and/or other family members both in treatment and when providing rehabilitation services (Siemsen, Bergstrom, & Hathaway, 2005). Given our findings on the impact of vision impairment on marital satisfaction for both spouse and partner, it could be helpful to pay some attention to how the vision impairment impacts existing relationships and what might be done to improve any problems that have arisen.

The type of support provided to the visually impaired may be important as well. Cimarolli and Boerner (2005) showed that instrumental help from family members (such as help with tasks and emotional support) is viewed positively, whereas otherwise supportive actions perceived as being over- or underprotective are viewed negatively. Good communication among partners would obviously be helpful, as would rehabilitation services that help partners identify which support is really helpful and which is not.
Finally, simple home modifications may be helpful (Stevens-Ratchford & Krause, 2004). Possibilities include procurement and use of assistive optical devices for reading as well as training in order and structure, such as keeping things used by the visually impaired person in the same place or putting items such as CDs in a set, understandable order.

Our results should be interpreted within the context of certain limitations. All participants had been married for a long time, and most were in their first marriage. We do not know whether the findings reported here would apply to those whose marriages are of shorter duration or who have been married more than once. Higher divorce and separation rates for subsequent generations as well as higher rates of living together without formal marriage arrangements may change the relationships we found. It is also likely that over the 5-year follow-up period, the vision characteristics of our participants would have changed. Most such changes would have likely attenuated our results, however, so our analyses may underestimate the relationships we found.

In summary, these data support the fact that spouses do not live in isolation; characteristics of one impact the other. Both treatment and rehabilitation programs should include spouses and other family members of visually impaired patients. Further study is necessary to place these findings within a specific conceptual framework, identify and test causal pathways, and better understand why wives seem more sensitive to their husbands’ vision impairment in terms of well-being and marital quality.

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REFERENCES


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