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When does Spousal Social Control Provoke Negative Reactions in the Context of Chronic Illness?: The Pivotal Role of Patients' Expectations

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Abstract

Spouses often monitor and seek to alter each other's health behavior, but such social control attempts can provoke behavioral resistance and emotional distress. Expectations regarding spouses' roles in their partners' health may influence reactions to spousal social control, with resistance and hostility less likely to occur among people who believe spouses should be involved in their partners' health. Evidence consistent with this idea emerged in a study of 191 patients with type 2 diabetes. Patients with greater expectations for spousal involvement (particularly females) generally reacted less negatively to spousal control. The findings help to clarify when people with a chronic illness are likely to resist and resent, rather than appreciate, spousal control.

Keywords

chronic illness; type 2 diabetes; disease management; married couples; social control

When does Spousal Social Control Provoke Negative Reactions in the Context of Chronic Illness?: The Pivotal Role of Patients' Expectations

The benefits of close personal relationships for health have been documented in many studies (Cohen, 2004). People with close relationships have been found to enjoy better physical health and to live longer than people who lack close relationships (Berkman, Glass, Brissette, & Seeman, 2000; Cohen, 2004). Although the mechanisms by which social relationships contribute to better health are not fully understood, research suggests that changes in health behaviors may play an important role. People in close relationships often monitor and seek to influence each other's health behavior, leading researchers to be interested in the regulatory, or social control, function of social ties (Durkheim, 1897/1951; Umberson, 1987).

Health-related social control refers to attempts by network members to prompt an individual to engage in health-enhancing behaviors (e.g., exercise) or to discontinue health-compromising behaviors (e.g., smoking) (Lewis & Rook, 1999). Social control strategies may involve forms of influence such as providing warnings about or seeking to restrict a partner's poor health behaviors. Thus, social control is expected to contribute to better health behaviors (Lewis & Butterfield, 2005). Yet health behavior change is sometimes unwanted or difficult, and being prompted by others to undertake health behavior change can provoke resistance, or refusal to change the targeted health behavior, and psychological distress (Rook, Thuras, & Lewis, 1990). Researchers accordingly have examined the effects of social control on psychological distress as well as health behavior, but they just have begun to examine factors that may moderate the effects of social control. Whether social control promotes improvements in health behaviors or triggers resistance and psychological distress may depend on people's normative beliefs, or expectations, about social network members' involvement in their health. Such expectations may be especially important in the context of a chronic condition, as research indicates that spouses often seek to play a role in their partners' illness management (Ell, 1996). Whether or not this involvement is welcome, however, remains poorly understood. Gender also may influence how involved people feel their spouses should be in their health and how they react when such involvement takes the form of social control. The current study, accordingly, sought to examine whether chronically ill individuals' expectations for spousal involvement in their disease management are associated with their reactions to spousal social control, and whether these associations differ for men versus women.

Social Control and Health Behaviors

Studies that have examined the influence of social control on health behaviors have produced mixed findings. An early study found that others' social control attempts were related to less smoking and greater exercise in older adults (Rook et al., 1990). In a study of smoking cessation, greater social control was related to less smoking in men but more smoking in women (Westmaas, Wild, & Ferrence, 2002). Umberson (1992) found that social control was associated with less smoking in both men and women and more physical activity and sleep in women, but it was not associated with other health behaviors, such as alcohol use.

Little research has examined the effects of social control on health behavior in the context of chronic illness, but this work, too, has yielded mixed evidence. Some studies of patients have found greater social control to be related to worse health behaviors, suggesting that social control may undermines patients' disease management efforts by provoking resistance or eroding self-efficacy. For example, social control was associated with worse, rather than better, health behaviors in a study of men with prostate cancer (Helgeson, Novak, Lepore, & Eton, 2004). Similarly, spousal social control experienced by patients undergoing cardiac rehabilitation was related to worse health behaviors (Franks, Stephens, Rook, Franklin, Keteyian, & Artinian, 2006). Yet in a study of HIV positive men, greater social control was associated with better self-care behaviors (Fekete, Geaghan, & Druley, 2009).

Evidence is not yet conclusive, therefore, regarding whether social network members' control attempts arouse resistance or compliance with the behavior changes urged. These inconsistent findings underscore the importance of efforts to identify the conditions under which social control attempts elicit beneficial versus detrimental behavioral reactions.

Social Control and Psychological Distress

Although social control attempts are intended to protect a target person's health by fostering improved health behaviors, they may have emotional costs as well. Hughes and Gove (1981)

first proposed that others' efforts to restrict harmful behaviors may reduce the occurrence of those behaviors but, at the same time, may arouse distress. They found that people who lived with others reported lower rates of alcohol and drug use, but also reported more psychological distress. Rook and colleagues (Rook et al., 1990; Rook, 1990) subsequently hypothesized that social control may have dual effects – improving health behavior while also arousing psychological distress. Social control may be experienced as intrusive, provoking feelings of irritation and resentment. Social control also may convey to recipients that they are not adequately managing their health behavior on their own, thereby arousing feelings of guilt or shame.

Findings from research relating social control to psychological distress have been inconsistent. Lewis and Rook (1999) found that social control from specific network members was associated with increased distress, and Helgeson and colleagues (2004) obtained a similar pattern among men with prostate cancer. Tucker (2002) similarly found that social control was related to greater feelings of negative affect, but only for those with low relationship satisfaction; for those with high relationship satisfaction, social control was not related to negative affect. Still other studies have found no relationship between social control and psychological distress (Rook et al., 1990) or have found evidence suggesting that some people (such as older adults) may appreciate, rather than resent, others' social control attempts (Rook & Ituarte, 1999).

Expectations for Spousal Involvement in Illness Management

A rarely examined factor that may influence responses to social control is normative beliefs, or expectations, about the appropriate role for a spouse in a partner's illness management. More specifically, patients' expectations for spousal involvement may affect how they react to their spouses' attempts to regulate their health. Social relationships are guided by normative beliefs about what network members should give and receive (Clark, Patarki, & Carver, 1996). As a result, when these norms are perceived as being violated, such as when a spouse engages in unwelcome attempts to become involved in the partner's illness management, feelings of resentment or disappointment may arise (Clark & Reis, 1988). Indeed, research has shown that unsolicited support arouses negative reactions in middle-aged and older adults (Smith & Goodnow, 1999). In women with osteoarthritis, unwanted advice also has been related to worse self-care behaviors (Martire, Stephens, Druley, & Wojno, 2002). Thus, the amount of assistance patients expect spouses to provide may influence how patients respond to the assistance they receive.

By analogy, patients' expectations regarding the role a spouse ought to play in their illness management are likely to influence how they respond to spousal efforts to regulate their behavior (Wrubel, Stumbo, & Johnson, 2010). Patients who expect their spouses to be involved in their illness management may be less likely to react with hostility and resistance to their spouses' social control attempts. In addition, patients who expect their spouses to be more involved in their illness may be more likely to experience guilt or shame in response to spousal control because social control connotes that the patients cannot manage their illness effectively, requiring their spouses to become involved. Patients may feel guilty about burdening their spouses to the extent that the spouses must monitor and seek to influence the patients' health behaviors. Research suggests that spouses do, in fact, experience burden from engaging in social control attempts directed toward influencing their partners' health behaviors (August, Rook, Stephens, & Franks, 2008).

Gender differences in expectations for spousal involvement and responses to spousal control—Expectations about the role a spouse should play in a partner's health may differ by gender (Berg & Upchurch, 2007). Women's communal role (nurturing and

caring) may be more consistent with greater involvement in others' health behaviors (Lewis, Butterfield, Darbes, & Johnston-Brooks, 2004; Umberson, 1992). Conversely, men's active involvement in others' health behaviors may be viewed as less consistent with male gender role expectations of agency (independence). Kessler, McLeod, and Wethington (1985) argue, and present some evidence, that women cast a "wider net of concern" than do men, being more aware of other's needs and more involved in providing care to others. This gender difference may reflect not only women's expectations for providing care, but also men's expectations for receiving care. Consistent with these gender roles, women may expect their husbands to be less involved in their illness management and men may expect their wives to be more involved in their illness management.

Men and women may differ not only in their expectations for spousal involvement but also in their responses to social control attempts by the spouse. Westmaas and colleagues (2002) studied people who were attempting to quit smoking and found a significant gender difference in the links between spousal control and smoking behavior. For men, more spousal control predicted greater reductions in smoking, but for women, more spousal control predicted smaller reductions in smoking. Similarly, Markey, Gomel, and Markey (2008) found in a study of young-adult couples that women's, but not men's, attempts to influence their partners' eating behaviors were positively associated with their partners' healthy dietary behaviors. Such research suggests that social control attempts by female partners may be more effective in improving men's health behaviors, whereas social control attempts by male partners may be less beneficial to women's health behaviors. Given that it may be normative for women, but not men, to provide social control (Umberson 1992), women may regard social control attempts by their husbands as inappropriate and unwelcome (Markey et al., 2008), and they may experience greater resentment as a result. Alternatively, because providing social control may be less normative for husbands, their wives may appreciate their husband's involvement, and thus respond positively to spousal control attempts. Prior research examining gender differences in psychological responses to social control is too scarce to provide a basis for favoring one of these two alternative predictions.

The Current Study

The potential effects of patients' expectations for their spouses' involvement in their health have received little attention in the literature on social control. The current study sought to address this gap in knowledge by investigating expectations for spousal involvement among married couples in which one individual had type 2 diabetes, a chronic condition that requires daily adherence to dietary and other health behaviors.

We first sought to examine whether patients' expectations for spousal involvement moderated the association between frequency of social control attempts and behavioral and affective reactions to such control attempts. We hypothesized that patients who expected spousal involvement in their diabetes management would report less behavioral resistance and hostility, more guilt/shame, and more positive reactions (e.g., appreciation, feeling loved/cared for) to more frequent spousal control, compared to patients who expected less spousal involvement in their diabetes management. In addition, building on the idea that women may differ in their expectations for spousal involvement in their health, we hypothesized that female patients who expected less spousal involvement would react more negatively to spousal control, compared to male patients. It is important to consider, however, that if social control falls outside of traditional gender roles for husbands, wives may appreciate these social control attempts precisely because they did not expect their husbands to be involved in their illness management.

We further sought to examine whether gender differences existed in expectations for spousal involvement, as well as the frequency of spousal social control attempts. On the basis of previous research suggesting that men are less effective than women in helping their partners make health behavior change (e.g., Westmaas et al., 2002), we anticipated that, compared to male patients, female patients would be less likely to expect spousal involvement in their health. Furthermore, based on previous research indicating that women tend to receive less social control than men (e.g., Markey et al., 2008; Umberson, 1992), we expected the female patients in this study to receive less social control than the male patients.

Method

Participants

The sample for the current study consisted of 191 older couples in which one partner was diagnosed with type 2 diabetes. Older adults are an important population in which to investigate the management of a chronic illness because a majority of older adults (88%) have one or more chronic illnesses (Centers for Disease Control and Prevention (CDC), 2003). Moreover, older adults have the highest prevalence of type 2 diabetes (CDC, 2007). To be eligible for this study, patients had to be 50 years of age or older, diagnosed with type 2 diabetes, and married to a nondiabetic spouse. Patients had a mean age of 66.89 years ($SD = 7.99$), with a majority of the patients being male (62.8%). The couples reported being married, on average, 39.36 years ($SD = 13.53$). A majority (95.3%) of the patients had at least a high-school education, and most (94.2%) were White, with 5.8% of patients being non-White (African American, Hispanic, Asian, Native American).

Participant recruitment—Participating couples were recruited through newspaper advertisements, online classified advertisements, flyers posted in a diabetes education center, and presentations at senior citizen centers inviting participation in a study of couples coping with diabetes. Prospective participants called a toll free number to receive an explanation of the study and to be screened for eligibility. After obtaining the patient's agreement to participate and verifying eligibility, research assistants contacted and consented the spouse.

Data collection—Questionnaires and consent forms were mailed to both patients and spouses to complete independently. Upon the return of completed measures, each member of the couple received \$10. Although data were collected from both the patient and spouse, the current study focused on patients' reports because perceptions of the spouses' social control attempts are likely to shape patients' responses. Previous research has documented considerable convergence between spouses' and patients' reports of control (Franks, Wendorf, Gonzalez, & Ketterer, 2004), which suggests that patients' reports meaningfully capture the exchanges of control that are occurring in the marital relationship.

Measures

Expectations for spousal involvement in patient's health—Five items measured normative beliefs, or expectations, about the level of involvement a spouse should have in a patient's health. Items were modified from a "beliefs about relationship norms" scale (Smith & Goodnow, 1999) to address spousal involvement in diabetes management. Patients were asked to rate on a 6-point Likert scale from 1 (*strongly disagree*) to 6 (*strongly agree*) how they felt about the responsibility spouses should have in managing their diabetic marital partners' health. Sample items include "It is a wife's [husband's] duty to be involved in helping her husband [wife] manage his [her] health" and "It is important that a husband

[wife] protects his wife's [her husband's] health, even if it causes them to quarrel." The items were averaged to compute a composite measure ($\alpha = .79$).

Frequency of spousal social control—We assessed the frequency with which patients reported their spouses had used social control tactics in the past month to influence their diabetic diet. We focused on dietary behaviors because dietary adherence is crucial in the management of type 2 diabetes, and patients report that it is the most difficult aspect of the treatment regimen to maintain (Lockwood, Frey, Gladish, & Hiss, 1986). Spouses are likely to participate in many meals with patients and, as a result, have opportunities to influence patients' dietary choices.

Two items assessed the frequency of social control: 1) providing warnings about and 2) attempting to restrict poor dietary practices by the patient. These both represent relatively forceful forms of social control, which have been posited in the literature to have dual effects on recipients, influencing health behavior while also arousing psychological distress. The warning item had the following preface (worded to be gender-appropriate): "Wives (Husbands) sometimes try to warn their husbands (wives) about the consequences of eating an unhealthy diet. For example, a wife (husband) might tell her husband (his wife) that if (s)he does not eat right, (s)he will become very sick.... Think about the warnings your wife (husband) has tried to give you about the consequences of eating an unhealthy diet." The warning item then asked: "How often, in the past month, has your wife (or husband) tried to warn you about the consequences of eating an unhealthy diet?"

The restricting item had the following preface: "Wives (Husbands) sometimes try to restrict their husbands' (wives') diet as a way of keeping them from eating unhealthy foods. For example, a wife (husband) might try to prevent her husband (his wife) from purchasing or ordering foods that are not allowed on his (her) diabetic diet.... Think about how your wife (husband) tried to restrict your diet." The restricting item then asked: "How often, in the past month, has your wife (or husband) tried to restrict your diet?"

Each item was rated on a 5-point Likert scale from 0 (*never*) to 4 (*very often – at least one time a day*). The warning and restricting items were highly correlated ($r = .56, p < .001$), and given that they both capture strong forms of social control, they were averaged to form a composite measure of the frequency of social control.

Behavioral resistance to spousal social control—Behavioral resistance to spousal control attempts was measured using two sets of four items adapted from Tucker and Anders (2001). Each set of items asked participants how they had responded when the spouse had engaged in a particular form of social control (e.g., "How did you respond when your wife (husband) tried to warn/restrict your diet?"). The four items in each set assessed: 1) ignoring the spouse's request, 2) doing the opposite of what (s)he wanted the patient to do, 3) hiding or disguising eating behavior, and 4) going along with the spouse's request (reverse coded). Each item was rated on a 6-point Likert scale from 1 (*not at all*) to 6 (*very much*). The four items that tapped patients' responses to their spouses' efforts to warn them about their diet and the four items that tapped patients' responses to their spouses' efforts to restrict their diet were averaged to form the composite measure of *behavioral resistance to social control* ($\alpha = .78$).

Emotional responses to spousal social control—Emotional responses to spousal social control were assessed with 12 affect items adapted from Lewis and Rook (1999). Six of these items assessed emotional responses to warning, and six items assessed emotional responses to restricting. A principal components factor analysis with varimax rotation revealed three distinct factors with eigenvalues greater than 1.0. The first factor reflected

hostility, and included four items that assessed how resentful/bitter and irritated/angry patients felt in response to spousal control attempts (e.g., “I felt irritated/angry when my wife tried to warn me about the consequences of eating an unhealthy diet”). The second factor reflected feelings of guilt/shame, and included two items that assessed how guilty/ashamed patients felt in response to spousal control attempts (e.g., “I felt guilty/ashamed when my wife tried to restrict my diet”). The third factor reflected appreciation, and included six items that assessed how loved/cared for, how appreciative/grateful, and how hopeful/optimistic patients felt in response to spousal control attempts (e.g., “I felt loved/cared for when my wife tried to warn me about the consequences of eating an unhealthy diet”). Items were rated on a five-point Likert scale from 1 (*very slightly or not at all*) to 5 (*extremely*).

Composite measures reflecting these three factors were constructed to capture patients’ emotional responses to social control (warning and restricting), yielding a four-item measure of *hostility* in response to social control ($\alpha = .83$), a two-item measure of *guilt/shame* in response to social control ($r = .64, p < .001$), and a six-item measure of *appreciation* in responses to social control ($\alpha = .92$).

Covariates—Marital quality was included as a covariate to control for its possible influence on both the nature of and responses to spousal social control (Tucker, 2002). Marital quality was assessed with the Quality of Marriage Index (Norton, 1983). Patients were asked to rate on a 6-point Likert scale from 1 (*strongly disagree*) to 6 (*strongly agree*) the extent to which they agreed or disagreed with five statements concerning their marriage (e.g., “Your relationship with your spouse is very stable” and “Your relationship with your spouse makes you happy”). Items were averaged to compute a composite scale ($\alpha = .95$). Age also was included as a covariate because older adults may respond to efforts to modify established health behavior patterns differently than their younger counterparts (e.g., Trief, Ploutz-Snyder, Britton, & Weinstock, 2004).

Results

Descriptive Analyses

Table 1 presents the means, standard deviations, and intercorrelations for the key study variables. Patients, on average, had fairly high expectations for spousal involvement in their health ($M = 4.18$ on the 6-point rating scale). In these correlational analyses, greater patient expectations for spousal involvement were significantly associated with male gender and more frequent social control. More frequent social control was significantly associated with more behavioral resistance, guilt/shame, and appreciation.

Reactions to Spousal Control as a Function of Expectations for Spousal Involvement, Frequency of Spousal Control, and Gender

We first conducted a series of multiple regression analyses to examine patients’ reactions to spousal social control (behavioral resistance, hostility, guilt/shame, and positive emotions) as a function of the frequency of social control, expectations for spousal involvement, and gender. Thirty-five patients reported receiving no social control and, therefore, were excluded from these analyses examining reactions to social control (remaining $N = 156$). Analyses comparing the characteristics of the participants who were retained versus excluded from the analyses of reactions revealed that participants who did not receive social control were significantly younger ($t(189) = -2.18, p < .05$), more likely to be female ($t(189) = 4.89, p < .001$), and more likely to have higher expectations for spousal involvement ($t(189) = -3.65, p < .001$), compared to participants who did receive social control. There

were no significant differences between these two groups with regard to education level, ethnicity, time since diagnosis, or marital quality.

In the multiple regression analyses, we first centered measures of social control and expectations for spousal involvement before calculating interaction terms. (Gender was dummy coded because of the directional nature of the gender-related hypotheses; male = 0, female = 1) (cf. Frazier, Tix, & Barron, 2004). For each regression analysis, we entered variables in the following order: covariates (step 1); frequency of social control, expectations for spousal involvement, and gender (step 2); three two-way interactions: frequency of social control $\times$ expectations for spousal involvement, frequency of social control $\times$ gender, and expectations for spousal involvement $\times$ gender (step 3); and one three-way interaction: frequency of social control $\times$ expectations for spousal involvement $\times$ gender (step 4). Interaction effects that were nonsignificant were trimmed, and only results for the significant steps are presented in the tables. The nature of any significant interaction was examined following procedures recommended by Aiken and West (1991).

We hypothesized that patients who expected more spousal involvement would exhibit less behavioral resistance, less hostility, more guilt/shame, and more positive emotions in response to the frequency of spousal control attempts, compared to patients who expected less spousal involvement in their diabetes management. In addition, we anticipated that expectations for spousal involvement would be especially important in influencing female patients' reactions to social control.

Behavioral resistance to spousal control—As shown in Table 2, a three-way interaction emerged involving social control frequency, expectations for spousal involvement, and gender ($\beta = -.26, p < .05$). A plot of the interaction revealed that female patients exhibited less behavioral resistance to more frequent spousal control if they had greater expectations for spousal involvement in their health (see Figure 1). The behavioral resistance exhibited by male patients, in contrast, was not affected by their expectations for spousal involvement in their health.

Hostility—The analyses of hostility revealed a two-way interaction between frequency of social control and expectations for spousal involvement ($\beta = -.19, p < .05$). Specifically, patients did not react with hostility to spousal control if they expected greater spousal involvement in their health (see Figure 2).

Guilt/shame—The analyses of guilt/shame revealed one significant main effect: Patients who expected their spouses to be more involved in their health reported more guilt/shame in response to spousal control ($\beta = .21, p < .05$).

Appreciation—The final set of analyses revealed that more frequent social control did not appear to kindle feelings of appreciation. Expectations for greater spousal involvement, however, were related to more feelings of appreciation in response to spousal control ($\beta = .25, p < .01$).

Gender Differences in Expectations for Spousal Involvement and Frequency of Spousal Control

Next, we conducted analyses to examine our hypothesis that female patients would be less likely than male patients to expect their spouses to be involved in their health. Consistent with this hypothesis, female patients reported lower expectations for their spouses to be involved in managing their health than did male patients, $M_s (SDs) = 3.65 (1.08)$ vs. $4.46 (1.01)$, $t(188) = 5.23, p < .001$. Reflecting this gender difference in expectations for spousal

involvement, female patients also reported receiving less frequent social control than did male patients, $M_s (SDs) = .89 (.92)$ vs. $1.91 (1.20)$, $t(189) = 6.61$, $p < .001$.

We undertook a supplemental post-hoc analysis to determine whether men and women differed in their views of their ability to manage their illness on their own, either with or without their spouses' involvement, which might have influenced their expectations for their spouses' involvement. The patients were asked how they felt they had managed their diabetes in the past month, choosing one of four statements that best described them ("You managed your diet very well without the involvement of your wife/husband," "You did not manage your diet very well, and your wife/husband was not involved," "You managed your diet very well with the involvement of your wife/husband," "You did not manage your diet very well, even though your wife/husband was involved"). A chi-square analysis revealed that more women than men (31.1% vs. 10.2%) reported managing their diet very well *without* the involvement of their spouses, whereas more men than women (74.1% vs. 40.0%) reported managing their diet very well *with* the involvement of their spouses, ($\chi^2(3, N = 153) = 20.73$, $p < .001$). The women in this sample appeared to be better able to manage their illness independently than did the men.

Discussion

Spouses frequently monitor, and often seek to influence, each other's health behavior (Lewis & Rook, 1999; Tucker, Orlando, Elliott & Klein, 2006), and this may be particularly true in the context of chronic illness (Stephens, Fekete, Franks, Rook, Druley, & Greene, 2009). The extent to which patients expect their spouses to be involved in their illness management may influence how patients respond to spouses' influence attempts, but this idea has received little attention in the literature on health-related social control. The current study sought to address this gap in knowledge by examining how expectations for spousal involvement are related to behavioral and emotional responses to spousal control. In addition, the current study examined gender differences in the nature and effects of patients' expectations for spousal involvement in their health.

Reactions to Spousal Control as a Function of Expectations for Spousal Involvement, Frequency of Spousal Control, and Gender

Patients' expectations for spousal involvement in their health appeared to play a role in shaping patients' reactions to their spouses' control attempts. Our findings generally were consistent with our hypotheses in suggesting that patients who expected greater spousal involvement in their health reacted less negatively and more positively to spousal control. Evidence for the moderating role of expectations for spousal involvement emerged in the analyses, and the interactions with gender supported our prediction that expectations for spousal involvement would be more consequential for women's reactions to spousal control. Some variations did emerge, however, across the different aspects of patients' reactions examined in this study.

Behavioral responses to spousal control—Female, but not male, patients who expected greater spousal involvement in their health exhibited less behavioral resistance to spousal control attempts directed at improving their dietary adherence. Our findings for women are consistent with prior research showing that unwelcome involvement by others in one's health is most likely to arouse negative reactions (such as behavioral resistance) (e.g., Markey et al., 2008). Men's behavioral resistance to their spouses' social control attempts, in contrast, was largely unaffected by their expectations for spousal involvement in their illness management. To the extent that wives' involvement in their husbands' health is seen as normative, men may not have reacted negatively to their wives' social control, even when

it involved the use of relatively stern tactics, such as providing warnings about or seeking to restrict their behavior.

Emotional responses to spousal control—Patients' expectations for spousal involvement in their disease management also appeared to influence their emotional responses to spouses' social control attempts. As predicted, patients who had low expectations for spousal involvement reacted with greater hostility to more frequent social control. Patients who had high expectations for spousal involvement, in contrast, did not react with hostility to more frequent social control. Chronically ill individuals who do not expect their partners to be involved in their disease management may find social control to be intrusive or demeaning. Among patients who do not expect spouses to be involved in their disease management, social control may have the unwelcome, and potentially offensive, connotation that the patients are unable to manage their condition successfully. These findings are consistent with the premise that social control, while intended to improve health behaviors, often has psychological costs (Lewis & Rook, 1999; Helgeson et al., 2004; Stephens, et al., 2009; Tucker & Mueller, 2000). Further research is needed to better understand why spousal control attempts that, in principle, are well-intended arouse resentment and hostility.

Greater expectations for spousal involvement were associated with greater guilt/shame in response to social control. This finding may indicate that patients feel guilty for expecting their spouses to be involved in their illness management or for burdening their spouses with the need to assist with their illness management. Self-conscious emotions, such as guilt and shame, can occur in response to interpersonal interactions in which people perceive themselves to be a source of stress, such as being a burden to their spouses (Tangney, 1991). Guilt/shame also may occur in response to spouses' negative evaluations of a specific behavior, such as not adhering well to a diet. Additionally, Baumeister, Stillwell, and Heatherton (1994) argue that guilt often is induced in the hope of producing change. Therefore, either self-induced or spouse-induced guilt/shame may be responsible for the association between expectations for spousal involvement and guilt/shame.

Expectations for spousal involvement also were associated with the extent to which patients experienced feelings of appreciation in response to spousal control attempts. Specifically, patients who expected greater spousal involvement in their diabetes management reacted with greater appreciation to spousal control attempts. These findings are consistent with previous research indicating that older adults sometimes construe others' social control attempts as manifestations of care (Rook, 1990; Rook & Ituarte, 1999).

Gender Differences in Expectations for Spousal Involvement and Frequency of Spousal Control

Consistent with gender role expectations, we found that male patients had higher expectations for spousal involvement than did female patients. Also, consistent with previous research, we found that women reported providing more social control and men reported receiving more social control (Markey et al., 2008; Umberson, 1992). These differences may reflect women's greater reported ability to manage chronic illnesses without their spouses' assistance. Support for this interpretation emerged in our supplemental analysis, which confirmed that the female patients were more likely than the male patients to report that they were managing their diabetes well without their spouses' help. Our findings also suggest that women's expectations for less spousal involvement are related to fewer social control attempts by their husbands. In a related vein, therefore, women may assume a more independent stance toward their own illness management, in part, because they expect less involvement from their husbands.

In evaluating the gender differences reported in this study, it is important to consider whether the specific health behavior under investigation, dietary behavior, may have influenced the pattern of results observed. Dietary management might be expected to fall more in the domain of women than men, and, consistent with this idea, evidence suggests that older women are more often involved in shopping and meal preparation than are older men (e.g., Miller & Brown, 2005). Yet although the male patients in our study received more social control, both male and female patients did experience social control from their spouses. Furthermore, studies that have examined non-dietary health behaviors (e.g., smoking) have found gender differences similar to ours, suggesting that women are more likely to seek to influence their spouses' health behaviors using social control strategies and are more effective in their influence attempts than are men (Tucker & Mueller, 2000; Westmaas, Wild, & Ferrence, 2002). Thus, the gender differences we observed may be amplified by, but not limited to, health behaviors (such as those involving diet) that are often construed as being linked to women's traditional roles.

Limitations and Future Research Directions

In evaluating the results of this study, some limitations need to be considered. The cross-sectional study design precludes firm conclusions that spousal control causes particular behavioral and emotional reactions in patients. Spouses' social control attempts and patients' behavioral and emotional reactions may be related in complex, reciprocal associations. Longitudinal studies with frequent, closely spaced assessments will be needed to probe such associations. In addition, it is unclear whether the findings of this study would generalize to other age groups, such as those in which chronic illnesses are less common or those with marriages of shorter duration. For example, the couples in our sample were married for nearly 40 years, on average, and spouses' involvement in their partners' illness management may have evolved over time. Spouses' efforts to improve partners' health behaviors might be supportive at the outset but might become more coercive over time if health behaviors do not improve (Franks et al., 2006; Rook, 1990), a shift in the nature of spousal involvement that might be more common in long-term than in short-term marriages. This possibility is reflected in our findings that patients who were not receiving any social control from their spouses were more likely to be younger, female, and to have higher expectations for spousal involvement, compared to patients who were receiving some degree of social control. The former group may welcome involvement from their spouses when it takes the form of more supportive, rather than regulatory, attempts. Additionally, the findings of the current study may not generalize to non-diabetic patient populations contending with quite different treatment regimens (Berg & Upchurch, 2007) or to same-sex couples in which gender roles may be less strongly linked to expectations for a partner's involvement in disease management (Wrubel et al., 2010).

Conclusion

This study investigated a social process, namely health-related social control, that is relevant to the everyday lives of couples managing chronic illnesses. The study contributes to the social control literature by examining patients' expectations for spousal involvement in the management of a chronic illness. It appears that spouses' use of social control to influence their ill partners' health behaviors may operate successfully only in certain contexts, such as when partners expect spouses to help them with the day-to-day requirements of disease management. Examining social network members' expectations for their involvement in each other's health may help to identify the conditions under which social control has beneficial versus detrimental effects, thus helping advance a broader understanding of how social control ultimately affects physical and psychological well-being.

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MEN WOMEN

Figure 1.
Greater Expectations for Spousal Involvement (ESI) are Associated with Less Behavioral Resistance to More Frequent Social Control among Women but not among Men

Figure 2.
Greater Expectations for Spousal Involvement (ESI) are Associated with Less Hostile Responses to More Frequent Social Control

Table 1

Means, Standard Deviations, and Intercorrelations for Study Variables (N = 191)

Variable	M	SD	1	2	3	4	5	6	7
1. Social control	1.53	1.21	—	.23**	-.41***	.50***	.04	.22**	.24**
2. ESI	4.16	1.10		—	-.36***	.08	-.25**	.21**	.42***
3. Gender ^a	37.20	N/A			—	-.18*	.23**	-.12	-.21**
4. Behavioral resistance	2.00	.79				—	.27***	.14	.02
5. Hostility	1.87	1.05					—	.28***	-.30***
6. Guilt/shame	2.69	1.40						—	.26***
7. Appreciation	4.26	1.28							—

^a Percent female (Male = 0, Female = 1). ESI=Expectations for Spousal Involvement.* $p < .05$;** $p < .01$;*** $p < .001$.

Table 2
Hierarchical Regression Analyses Predicting Behavioral and Emotional Responses to Social Control Frequency

Variable	Behavioral Resistance				Hostility				Guilt				Appreciation			
	B	SE B	β	ΔR^2	B	SE B	β	ΔR^2	B	SE B	β	ΔR^2	B	SE B	β	ΔR^2
SC Freq.	.13	.07	.18		.25	.08	.26**		.20	.11	.16		.06	.10	.05	
ESI	-.16	.08	-.21*		-.12	.10	-.12		.29	.12	.21*		.31	.10	.25**	
Gender	.17	.16	.10	.06*	.37	.21	.16	.10***	.08	.27	.03	.07*	.06	.24	.02	.09*
SC Freq. $\times$ ESI	.01	.06	.01		-.16	.07	-.19*									
SC Freq. $\times$ Gender	-.33	.16	-.21*		-.11	.20	-.05									
ESI $\times$ Gender	-.05	.16	-.04	.02	-.08	.19	-.04	.03								
SC Freq. $\times$ ESI $\times$ Gender	-.36	.15	-.26*	.03*												

Notes. Within each panel, headings indicate a separate multiple regression analysis. Covariates (not shown) included marital quality and age. Nonsignificant interaction effects were trimmed. Gender (Male = 0, Female = 1). SC = Social control. Freq. = Frequency. ESI = Expectations for Spousal Involvement.

* $p < .05$;

** $p < .01$