

UNINTENDED EFFECTS OF “STAYING POSITIVE”:  
INVESTIGATING THE INFLUENCE OF PARTNERS’ COPING STYLES  
ON PATIENTS’ ADJUSTMENT TO BREAST CANCER

Christine Paprocki

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Approved by:

Don Baucom

Jennifer Kirby

Jonathan Abramowitz

## **ABSTRACT**

CHRISTINE PAPROCKI: Unintended effects of “Staying Positive”: Investigating the Influence of Partners’ Coping Style on Patients’ Adjustment to Breast Cancer  
(Under the direction of Don Baucom)

Treatment for breast cancer involves both a patient and her family members. Partners may be particularly affected, as they are often the primary source of support for the patient. Some partners want to protect the patient by avoiding discussions of her cancer-related distress. However, research suggests that if partners do this, there may be detrimental effects on patients’ well-being. This paper presents findings from 161 couples enrolled in a couples-based intervention for women with early-stage breast cancer. The findings indicate that when partners of breast cancer patients engaged in distancing behavior, the patient experienced more depressive symptoms. Also, patients who had higher marital satisfaction reported more cancer pain when their partners avoided discussing the cancer compared to patients who had lower marital satisfaction. These findings imply that partners’ distancing behavior is associated with lower patient well-being, and perhaps functions differently in couples with high marital satisfaction.

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## CHAPTER 1

### INTRODUCTION

Breast cancer not only changes the life of the woman receiving the diagnosis, it also can dramatically affect the lives of her family members. For patients who are married or living with a partner, the partner is likely to be especially impacted by the cancer, as he or she is often the primary source of support for the patient. Cancer treatment can exhaust a patient and her partner, disrupting normal patterns of family interaction. Roles are challenged—for example, a mother who has been the primary caretaker of her children may become incapacitated by the treatment, requiring her husband to take on new parenting responsibilities. For many families, these disruptions can be almost as stressful as the cancer itself. The patient and her partner must develop strategies to cope with these new stressors pervading their everyday lives. However, the strategies that each person chooses, while perhaps individually effective, may not mesh well together from the perspective of the couple. Researchers investigating *dyadic coping* processes take into account how both members of a couple are responding to an illness such as cancer, and how their responses might interact adaptively or maladaptively (for review, see Berg & Upchurch, 2007). Understanding how the couple functions around the illness, in addition to how the patient and partner are coping as individuals, could be important in predicting adjustment to the cancer experience.

Research on dyadic coping emerged from a broader field of study investigating the influence of social integration and support on physical and psychological health. The underlying rationale of the dyadic coping model is based on some key findings of this line of research investigating social influences on health; thus, they will be reviewed below. Next, dyadic coping will be further defined, and various coping strategies that researchers have identified in couples facing serious illnesses will be described. Some of these coping strategies have been found to be maladaptive for both patients and their partners, and yet they persist. Reasons for why this might occur (for example, lack of knowledge, poor coping efficacy, or gender differences that lead to mismatched coping styles) will then be discussed. Finally, the details of the current investigation will be described.

## Background

### *Close Relationships and Health*

A great deal of empirical research has demonstrated reliable links between elements of an individual's social environment and his or her health and well-being. These elements include the structure of the social network, the quantity and quality of social support available, and the influence that social network members have on health behaviors specifically (House, Landis, & Umberson, 1988; House, Umberson, & Landis, 1988; Cohen & Wills, 1985). The specificity and underlying mechanisms of these effects are complex. While social isolation has been shown to be associated with higher risks of mortality (House et al., 1988), social relationships also can have a negative effect on physical health and psychological well-being, if they are characterized by conflict and unsupportive interactions (Rook, 1984; Seeman, 1996). In other words, the *quality* of social relationships matters for health outcomes. For those facing stressors such as a major illness, when the social



environment is perceived to be supportive, the process of recovery is bolstered; when it is perceived to be unsupportive, recovery can be impaired.

What might be some underlying mechanisms of the relationship between high quality social support and better health? One proposed pathway is that high quality social relationships improve health through promoting healthier behaviors—a wife may influence her husband to get an annual physical exam, a son may convince his mother to stop smoking. Another pathway is more direct—perhaps the mere presence of others, or supportive interactions with others, affect the body at the physiological level. Evidence for both of these pathways, indirect and direct, has been found (for review, see Cohen & Wills, 1985; Uchino, Cacioppo, & Kiecolt-Glaser, 1996). Intriguingly, social support has been reliably associated with the functioning of the body's immune, endocrine, and cardiovascular systems, above and beyond the influence of close relationships on overt health behaviors (Uchino et al., 1996). The quality of the marital relationship may be particularly important in this regard, as the partner is usually the person with whom one most frequently interacts. Indeed, evidence suggests that the marital relationship has both indirect and direct effects on physical health, and that these effects might be differentiated by gender, such that the relationship between marital conflict and adverse health outcomes is stronger for women than for men (Kiecolt-Glaser & Newton, 2001).

Research also has shown that women may particularly benefit, at the physiological level, to warm, supportive interactions with a partner. A recent study found that holding hands with a partner and discussing a time of feeling close as a couple led to decreased systolic blood pressure for women, but not for men (Grewan, Girdler, Amico, & Light, 2005). A similar effect was found in a sample of women undergoing a laboratory stress

task—those who received a neck massage from their spouse prior to the task experienced less physiological reactivity to the stressor (Ditzen et. al, 2007). In another study, self-reported “frequency of hugs” from a partner was associated with lower blood pressure and higher levels of oxytocin in women (Light, Grewan, & Amico, 2005). These studies imply that feeling close to a partner could have direct physiological benefits in times of stress. From a different perspective, some research supports this relationship in reverse—if people feel *distant* from their partners, they might feel physically *worse* as a result. One study showed this using a daily diary approach—in the 30 days leading up to a stressful event (one partner taking the state legal bar examination) couples filled out a daily report of how emotionally and physically close they felt to one another. For examinees, on the day after a day when they reported feeling more distant from their partners, they experienced more psychosomatic symptoms, such as headaches, muscle aches, and upset stomach (Stadler, Bolger, Paprocki, & Iida, 2008). Feeling close or distant from a partner can have important effects at the physiological level, especially during times of stress.

Cancer patients and their partners experience a great deal of stress while the patient undergoes treatment. Does social support and closeness with a partner improve patients’ physical health? In one study, patients who reported higher levels of social support from a spouse were found to have higher immune functioning (Baron, Cutrona, Hicklin, Russell, & Lubaroff, 1990). However, some researchers caution that the link between social support and immune function in cancer patients must be considered highly speculative, as some studies do not support this finding (Luecken & Compas, 2002). While research linking cancer patients’ psychosocial resources to *physiological* outcomes is still somewhat controversial, there have been consistent empirical reports of associations between family and partner

support and *psychological* health and well-being. For example, perceived family support has been linked with lower levels of psychological distress in cancer patients and their partners (Baider, Ever-Hadani, Goldzweig, Wygoda, & Peretz, 2003). In order to understand why some patients psychologically adjust better to breast cancer than others, it is important to look more closely at the specific behaviors of partners that patients' find supportive, and why some coping and support behaviors seem to be more helpful to them than others.

### *Coping Styles, Individual and Dyadic*

Researchers have often divided coping into two broad categories, *problem-focused* and *emotion-focused* coping. Problem-focused coping centers around dealing with instrumental problems that arise as a result of a stressor. For example, if a woman has to go to the hospital for chemotherapy treatment in the afternoons, her husband may need to leave work early to pick the children up from school. Emotion-focused coping, on the other hand, deals with the emotional distress that can arise as a result of a stressor. Discussing fears of dying from cancer with a partner or a close friend is an example of emotion-focused coping. A third category of coping, *relationship-focused* coping, also has been described (Coyne, Ellard, & Smith, 1990; Coyne & Smith, 1994) According to this model, partners can choose to cope through (a) *active engagement* with each other about the illness, which involves openly discussing feelings and approaching each other to solve problems that may arise; or (b) *protective buffering*, which involves one partner hiding his or her concerns from the other, denying or avoiding problems, and attempting to avoid any conflict with the partner to protect him or her from worrying about the stressor or focusing on it. In research on coping with illness within a couple framework, these forms of relationship-focused coping have become commonly used constructs.

Another model of dyadic coping, called the systemic-transactional perspective (Bodenmann, 1997), differentiates directly between positive and negative forms of dyadic coping. In the model, positive forms of dyadic coping include joint problem solving, expressing solidarity with the partner, relaxing together, and directly discussing a redistribution of tasks (like household chores) to ease the burden on an overloaded partner. While negative forms of dyadic coping include some overt hostile behaviors such as criticizing or mocking a partner, and disparaging a partner's concerns, there are also more subtle manifestations of negative dyadic coping, including offering support but suggesting that the support should not be needed, downplaying a partner's worries, and distancing or avoiding discussion of another partner's concerns. The positive forms of dyadic coping in Bodenmann's systemic-transactional model have been found to be associated with marital satisfaction in a longitudinal study following couples over a period of two years, while the negative forms of dyadic coping were associated with marital distress (Bodenmann, Pihet, & Kayser, 2006). It is important to emphasize that even if both partners have the *intention* of helping the other one to cope with a stressor, the net result of the couple's coping strategies at times may have a negative impact on both partners' adaptation to the stressful situation,

There has been a great deal of research on the relative effectiveness of various coping styles at reducing distress and promoting adjustment within the context of cancer. Most of this research suggests that avoidant coping styles and protective buffering are associated with greater psychological distress compared to more active coping styles. For example, in a sample of breast cancer patients, active coping was associated with higher quality of life, and avoidant coping was associated with lower quality of life for both patients and their family caregivers (Kershaw, Northouse, Kritpracha, Schafenacker, & Mood, 2004). Even protective

buffering reported by spouses but *not* reported by breast cancer patients was associated with greater patient distress, suggesting that even if the buffering operates *outside of the patient's awareness*, it can be harmful (Hinnen, Ranchor, Baas, Sanderman, & Hagedoorn, 2009). For spouses of patients with asthma and diabetes, greater use of protective buffering was found to predict prospectively poorer physical health for female patients, but not for male patients (De Ridder, Schreurs, & Kuijer, 2005). Interestingly, in this study, men benefitted from their wives using more protective buffering strategies, suggesting that there could be a gender difference in coping-style effectiveness. These studies, among others, illustrate that protective buffering is likely a maladaptive strategy for many individuals, and may be particularly harmful when the patient is a woman.

Because protective buffering is harmful for some patients, it is important to understand who is more likely to choose this strategy, under what circumstances, and also to consider for whom it is most detrimental. In a longitudinal study, it was found that for spouses of breast cancer patients, their initial level of distress at the time of their partners' cancer diagnosis, as well as their own trait neuroticism, were significant predictors of their propensity to engage in protective buffering of their wives (Hinnen, Hagedoorn, Sanderman, & Ranchor, 2007).

On the other hand, the women *receiving* support reported greater relationship satisfaction when partners used more active engagement coping strategies, and less satisfaction when partners used more protective buffering strategies. This negative relationship between protective buffering and relationship satisfaction was especially strong for women who rated themselves highly on personal assertiveness (Hinnen, Hagedoorn, Ranchor, & Sanderman,

2008). Perhaps for individuals who prefer to express their opinions openly, protective buffering from a partner feels restrictive, which might lead to tension in the relationship.

For individuals who are comfortable expressing their emotions and opinions, and expect open communication with a partner to be the norm, it may be especially distressing when such expectations are violated. Furthermore, this dynamic may operate at the level of the couple—for example, for couples who are highly satisfied in their relationship and are accustomed to a high degree of emotional intimacy, an abrupt shift in this pattern may be particularly disruptive to relationship functioning. On the other hand, for couples who are *not* satisfied with their relationships, the partners may expect *less* open communication with each other about emotional concerns, as they have developed patterns of looking elsewhere for that support (e.g., to friends or other family members) or cope on their own. Some research suggests that for individuals unhappy in their marriages, outside sources of support, such as interactions with friends or involvement in the community (through church groups, volunteer work, etc.) can buffer the association between marital distress and poor physical and psychological health (Paprocki, Patton, & Visser, 2008). However, for those who turn to their partner as their primary source of support, open engagement of emotional concerns may be vital for well-being. A recent study of breast cancer patients demonstrated that protective buffering from the partner predicted distress for women who were highly satisfied in their relationships, but *not* for those who had low relationship satisfaction (Manne et al., 2007). This indicates that couples who are, under normal circumstances, emotionally open with each other, may become particularly distressed during cancer treatment if one partner selects a protective buffering strategy—a strategy at odds with their typical mode of communication. Furthermore, patients who are highly satisfied in their relationships may not be as

accustomed to seeking support from other sources as patients less satisfied in their relationships, which may have contributed to this finding.

Whereas a husband responding to his wife's cancer by engaging in protective buffering can be detrimental, an even more harmful response can be an overt criticism or "correcting" of the coping strategy *she* has chosen for herself. How a husband responds to the coping efforts of his patient-wife can have a significant impact on how supportive she perceives him to be, and can also affect how capable she feels to cope with her illness. In a qualitative study interviewing cancer patients, patients described which spousal behaviors were most and least helpful. Among the least helpful were being critical about the patient's handling of his or her cancer experience, telling the patient he or she was "worrying too much" about the cancer, or criticizing his or her mental attitude (Dakof & Taylor, 1990). Another study of couples coping with caring for a child with a disability found that individuals who thought that their partners approved of their coping style had lower levels of distress (Marin, Holtzman, DeLongis, & Robinson, 2007). Breast cancer patients who perceived that their partners were critical of their efforts to cope with the cancer, or that their partners were uncomfortable speaking about the cancer, were more likely to choose maladaptive coping strategies themselves, such as wishing the illness away or denying the situation (Manne, Pape, Taylor, & Dougherty, 1999). Because partners are often the most frequently used and valuable source of support during the stressful cancer experience, the partner's view of the patient's coping efforts can significantly influence the patient's coping choices and feelings of self-efficacy around those choices.

While research points to detrimental effects of protective buffering, and of criticizing a patient's coping efforts, this pattern persists for some couples. Why might couples continue

to carry out a strategy that is likely to be maladaptive for both partners? Partners and patients may believe that disclosing worries and concerns is too distressing for the other to handle. However, research has shown that disclosing concerns about cancer to a partner (whether partner-to-patient or patient-to-partner) is not psychologically harmful for the recipient of the disclosure. In fact, *lower* levels of disclosure and more “holding back” were associated with greater psychological distress in a sample of patients with gastrointestinal cancer and their spouses (Porter, Keefe, Hurwitz, & Faber, 2005), and a disclosure-training intervention was found to benefit couples who initially reported high levels of holding back from discussing cancer concerns (Porter et al., 2009). In some cases, it seems that even *conflict* between partners may be more adaptive than not discussing worries or concerns about cancer (Giese-Davis, Hermanson, Koopman, Weibel, & Spiegel, 2000). This may be due to couples actively engaging difficult topics, rather than holding them in. Indeed, in a broader sense, it has been demonstrated that conflict in marriage is not necessarily harmful in the long run—in fact, certain types of conflict have been shown to be predictive of *improvement* in marital satisfaction longitudinally (Gottman & Krokoff, 1989). Furthermore, there has been some research suggesting that being “too nice” by holding back from addressing problems in the relationship can lead to increased marital distress in the long run (Schilling, Baucom, Burnett, Allen, & Ragland, 2003).

It is important to speculate more generally on why protective buffering is chosen as a coping strategy, despite its frequent detrimental effects. Researchers have attempted to address this question from several promising angles. Below we will explore three of these perspectives on underlying reasons for the persistence of protective buffering coping pattern:



(a) lack of knowledge or coping efficacy, (b) gender differences in coping preferences, and (c) mismatching between requested type of support and type received.

*Protective Buffering as “Default Option”*

One reason for the use of protective buffering could be a simple lack of knowledge about what would be the most helpful response. Coping-efficacy, a term used to describe feeling competent in effectively responding to a stressor, may be an important variable in this context. For those with low coping-efficacy, a default response to a partner with breast cancer might be to protect her from negative information, and to simply “cheer her up.” In a sample of partners of cancer patients, those with a high level of coping-efficacy engaged in more active coping strategies, whereas those with low coping-efficacy (i.e., were unsure of what they should do to help the cancer patient) engaged in more protective buffering (Kuijer et al., 2000). This indicates that buffering and “cheerleading” the patient may be a response one takes when the situation feels overwhelming and the appropriate way to interact with the patient is unclear. However, in several qualitative studies interviewing cancer patients, patients reported that when others around them engaged in “forced cheerfulness,” they felt more isolated and enmeshed in the sick role, and they reported that they would prefer to openly address their feelings about cancer (Wortman & Dunkel-Schetter, 1979; Peters-Golden, 1982).

While lack of knowledge or low efficacy for providing support may contribute to the pattern of patients’ and partners’ protective buffering, there likely are other factors driving the use and implementation of this coping strategy. One prominent factor that requires more in depth review of past literature is the difference in coping and support preferences across genders. It is important to investigate how these gender differences influence the use of

protective buffering coping strategies within couples (the majority of which include a male and female partner).

### *Gender Differences in Communication Styles*

In research on couple communication patterns, certain differences between men and women consistently recur. One distinction, widely held by the general public, is that when faced with difficulties, women tend to focus more on their emotional response, and men tend to focus more on factual information. Indeed, there is some evidence to support this differential pattern, under certain conditions. Within the context of a couple's relationship, gender differences appear to play a role in a recurring pattern of "demand-withdraw" interactions (Sullaway & Christensen, 1983). In this pattern, which is associated with lower marital satisfaction (Heavey, Christensen, & Malamuth 1995), the wife approaches her husband with complaints or emotional requests, and the husband responds by withdrawing from the conversation. However, at times, husbands and wives switch roles—most likely when the husband is discussing a change *he* wants in the relationship (Christensen & Heavey, 1990). On average, though, in most couples women are more likely to engage in more "demand" behaviors, and men are more likely to engage in more "withdraw" behaviors.

Researchers have investigated a wide variety of explanations for women's tendency to approach emotionally-heated discussions, and men's tendency to avoid them. Psychologists from several domains, in fact, have attempted to address this issue—cognitive and biological explanations have been postulated. We will review some of this research below, before considering these gender differences in the context of coping with a serious illness like cancer.

*Gender differences in relationship cognition.* How people *think* about their close relationships may differ across genders. In terms of frequency, there is evidence to suggest that women think and talk about their relationships more than men do. Women talked more about their relationships overall in a study of married couples, and had greater marital and life satisfaction the more their husbands engaged in “relationship talk” (Acitelli, 1992). However, husbands’ marital and life satisfaction were unrelated to either their own or their wives’ frequency of relationship talk. Some research in the field of couple communication supports the idea of the “husband hypothesis”— that the relational ability of men is more predictive of outcomes such as marital satisfaction than women’s relational ability, because women are *expected* to be more invested in their relationships, and the contribution of their male partners adds more to the variance in satisfaction.

The relation between relationship-talk and satisfaction may be more complex when both quantity and *quality* are taken into account. In coding both the quantity and quality of partners’ relationship-oriented communications (termed *relationship-schematic processing* or RSP), it was found that men reported more satisfaction when their wives engaged in more frequent and higher quality RSP, whereas women only reported more satisfaction when their husbands engaged in higher quality RSP (Sullivan & Baucom, 2005). These findings could suggest that women are more attentive to the *content* of relationship-talk, and that they might have a higher bar for being supported by a partner. In a study of perceptions of partner support attempts, it was found that women attended more to proximal factors around the supportive interaction (their mood in the moment), while men attended more to distal factors, such as global marital satisfaction and global support ratings (Carels & Baucom, 1999). These findings suggest that men may be more likely to store away their wives relationship-

talk in a “bank” of perceived supportiveness, whereas women are processing the quality of their partner’s support in specific interactions. Why might women be more attuned to relationship communication than men? Some researchers have suggested that biological differences may play a role.

*Gender differences in the physiological stress response.* Biobehavioral research has found a great deal of empirical support and physiological evidence for a model of stress-response termed “fight-or-flight.” In this model, an individual will respond to a threat or stressor by either confronting it or by removing him or herself from the situation. The body physiologically responds to aid these options through activation of the sympathetic nervous system, facilitating escape from danger. Recently, an alternative biobehavioral mechanism, termed “tend-and-befriend” has been postulated to exist in females (Taylor et al., 2000). This model suggests that women faced with stressors may have a predisposition to engage their social network and seek out support to facilitate protection of the self and offspring from danger. Oxytocin and female reproductive hormones are thought to underlie this response. While this response may evolutionarily have functioned to protect offspring as females were the primary caregivers, it may be reflected as well in women’s tendencies to seek out emotional support from partners in times of stress. In cancer patients, for example, women were found to have a higher dispositional need for affiliation and emotional support than men (Manne, Alfieri, Taylor, & Dougherty, 1999).

Interestingly, for men, “tend-and-befriend” type stress responses might even be harmful in some contexts. A study in college students found that talking through emotions with others when under stress was associated with greater adjustment to the stressor in women, but it was associated with *worse* adjustment over time in men (Stanton, Danoff-

Burg, Cameron, & Ellis, 1994). Perhaps at some level physiologically, men do not have as great a reserve of resources to process emotionally distressing content as women do. In a sample of cohabitating couples, when asked how they like their partners to respond when they are under stress, men were five times more likely than women to say that they would like their partner to “give them some space” (Burns, Snyder, Stadler, & Bolger, 2009). This pattern also can be seen in support-seeking behavior. Men are more likely to want to discuss both task-oriented and relationship-oriented problems with other men than with women, even given that they expect their male supporter will be more likely to use dismissive strategies in their support of a relationship problem than a female supporter would be (Barbee, Gulley, & Cunningham, 1990). It could be that men are more likely than women to prefer distraction as a strategy for coping with an emotionally-laden stressor. As cancer treatment is likely both highly stressful and emotional for patients, men and women might respond in different ways to being seriously ill.

*Gender differences in “illness roles.”* The cognitive and biological differences between men and women discussed above are important factors in how one partner supports the other when a serious chronic illness is impacting a heterosexual couple. Coping patterns differ based on whether it is the male or female partner who is experiencing the illness. In a study examining these difference in male and female “illness roles”, it was found that when a husband was sick, both partners were more likely to use active engagement coping strategies than when the wife was sick. When the wife was sick, the couple was also at greater risk of marital distress than when the husband was sick (Badr, 2004). In fact, one recent study demonstrated that couples were approximately six times more likely to get divorced or separated when the seriously ill partner was the wife, as compared to when the seriously ill

partner was the husband (Glantz et al., 2009). Because the healthy partner is the one providing the majority of the support, perhaps when the husband is ill, the wives engage in more active, emotional-approach style coping, which the husband may respond to with reciprocal engagement. However, when the wife is ill, perhaps the husband's tendency is to be more protective and to offer more distraction and avoidance as the preferred forms of support.

Many factors contribute to whether or not a certain style of dyadic coping works well for a couple dealing with a serious illness such as cancer. So far, we have discussed how the empirical literature seems to indicate that actively engaging emotional concerns and issues may be a more adaptive strategy for couples than when one partner is attempting to shield or even restrict the other from the expression of negative emotions. Research also suggests that restricting emotional expression during times of stress may be especially detrimental for women, both in terms of physical health and psychological well-being. Because men might tend more than women toward avoidance of discussing emotional concerns during stressful times, demand-withdraw dynamics may become particularly salient during cancer treatment for some couples. Furthermore, partners might believe that when a patient discusses negative emotions, this could even be harmful for her health, and may attempt to dissuade her from addressing concerns. However, as indicated above, most research indicates that on the contrary, mutual disclosures between patients and partners lead to more positive health outcomes. Providing effective support to a partner in need is not always an intuitive process for couples. For some partners, issues of when, how much, and what kind of support to provide can arise repeatedly as a source of concern in the relationship. The quality of a

partner's support attempts, and the context and circumstances that determine whether a response is perceived as helpful or not, will be discussed in the next section.

### *Matching Support Requested to Support Provided*

Attempting to support a person experiencing a stressful situation can unfortunately backfire. When an individual receives a type of support that he or she did not expect or desire, it can be distressing and can even be related to increased rates of depression (Revenson, Schiaffino, Majerovitz, & Gibofsky, 1991). In fact, negative social interactions are more strongly associated with health and well-being than positive interactions are (Rook, 1984). This greater influence of negative over positive social interaction is seen in the context of cancer as well, as the relationship between negative spouse responses and patient distress has been shown to be stronger than the relationship between positive spouse responses and patient well-being (Manne, Taylor, Dougherty, & Kemeny, 1997). It seems important, therefore, to investigate the conditions under which support attempts are optimally effective, so these unsuccessful support attempts can be avoided.

Certain elements of the context in which a supportive attempt is made are key in determining whether that attempt will be successful. These elements include amount, timing, and source of the support (Shinn, Lehmann, & Wong, 1984). When someone tries to offer *too much* support for a partner's problem, in perhaps an unsolicited manner, this can have detrimental effects by negatively impacting the recipient's self-esteem and self-efficacy to deal with the problem. In fact, some research has shown that the most effective support one can provide, in certain circumstances, is support that is unnoticed by the recipient, termed "invisible support" (Bolger, Zuckerman, & Kessler, 2000; Bolger & Amarel, 2007). This kind of support may be most beneficial during an achievement-oriented task, for which self-

esteem and efficacy are likely highly relevant. Timing is also an important variable for support—a partner may attempt to provide support at a time when the other person is not prepared to receive it, or, conversely, the support provider might not notice when a partner is making a bid for support and, therefore, miss an opportunity to provide it. Finally, the source of the support, as we have seen, is vital—for certain kinds of problems, only support from the partner will be effective, whereas for other kinds of problems, perhaps a friend or co-worker will be more helpful. For cancer patients, source of support is key. It has been found that a good helping relationship with other members of one's social network do not compensate for a poor helping relationship with one's spouse (Pistrang & Barker, 1995).

In order for support to be most effective, amount, timing, and the source need to be calibrated to meet the support recipient's expectations. This idea of calibration has been explored in models of “optimal matching” for support (Cutrona & Suhr, 1992). According to this model, desires for informational support (e.g., advice) or emotional support (e.g., comfort) varied based on perceived expertise of both the support recipient and support provider. When the support provider had a great deal of expertise about the recipient's problem (for example, if a wife is feeling stressed out about an upcoming presentation at work, and her husband gives speeches often for his job), then informational support was appreciated. However, if the source of support was not perceived to be an expert, then only emotional support was desired from that person. When the support *recipient* had more control over and expertise about the situation, then informational support from a provider led to low satisfaction. However, regardless of expertise of recipient or provider, emotional support was associated with greater satisfaction. These findings are relevant for cancer patients, as it has been reported that they often receive “mismatching” support from close



others. For example, patients in one study felt that advice and informational support from family and friends was upsetting, as they were not seen as experts on cancer. Instead, emotional support was preferred from family and friends (Dunkel-Schetter, 1984).

One element that seems to recur in the literature as a predictor of support effectiveness is *mutuality* of support, and in particular *reciprocal disclosure*. In one study, when couples were facing an upcoming stressor—one partner having to take the legal bar exam—receiving support at the daily level was paradoxically associated with both greater closeness and greater negative mood (Gleason, Iida, Shrout, & Bolger, 2008). This may be due to a loss of self-esteem when receiving support from a partner, especially in regards to a clearly achievement-oriented stressor. However, on days when support was *reciprocated*, when the recipient was also a provider, receiving support was associated with closeness and positive mood (Gleason, Iida, Shrout, & Bolger, 2003). Mutuality of support appears to have a buffering effect on some of the negative outcomes of support receipt, perhaps because it contributes to the support recipient's sense of efficacy and ability to contribute to the relationship.

Mutuality and reciprocal disclosure may be especially important variables within the context of couples facing cancer. In a study where breast cancer patients interacted with their partners about an issue of concern, patients' own frequency of disclosures did not predict patients' feelings of intimacy, but *partners'* frequency of disclosures predicted intimacy, feelings of acceptance, and caring (Manne et al., 2004). Furthermore, patients were less distressed when their partners responded to patients' disclosures with their own disclosures, and were more distressed when partners responded to patients' disclosures with proposed solutions or advice (Manne et al., 2004). As female patients are not likely to view their

partners as experts on cancer, it is likely that they would prefer their partners to describe their own emotional experience instead of attempting to provide factual information.

Providing support effectively depends on paying close attention to many contextual variables and calibrating one's response carefully to the needs of the recipient; effective support is an especially important goal when the recipient is in distress. In a study interviewing breast cancer patients, one of the *most distressing* aspects of the experience for some patients was a husband's inability to provide responsive, effective support (Peters-Golden, 1982). From the research reviewed above, some findings recur about what responsive, effective support-providers do: they engage emotionally; they avoid giving advice on information they are not experts about, and they respond to emotional disclosures of patients with reciprocal disclosures of their own emotions. Not only does this kind of responsive support appear to reduce distress in the moment, but it might also have long-term benefits for recovering from the cancer experience.

### *Summary*

When one partner is seriously ill, a couple's daily life and normal patterns of interactions can be significantly altered. Breast cancer treatment is an intensive process which places a great deal of stress on both a patient and her partner. While the patient and her partner may choose coping strategies that are effective for each of them as individuals, how they choose to deal with the cancer experience individually may not translate into effective *dyadic coping*. In fact, one partner's coping strategy may undermine that of the other partner. For example, if the patient chooses to express her fears and concerns and negative emotions about the cancer treatment openly with her partner (an *active engagement* approach), but her partner believes that negativity will be detrimental for her health and tries to distract her from

those emotions by telling her to “focus on the bright side,” the patient will not be able to carry out her own coping strategy.

As noted above in the research on gender differences in relationship communication and the stress response, women on average are more likely than men to deal with stress by approaching others and engaging with them emotionally. Some recent research even indicates that by *not* engaging emotionally with a partner and “holding in” negative emotions, women may be more at risk for experiencing psychological distress and stress-related physical symptoms. During treatment for breast cancer, an acutely stressful and emotional time, the association between a partner’s support and a patient’s well-being are likely to be pronounced, as breast cancer patients who are married or living with a partner typically look to their partners as a primary source of support. Researchers addressing cancer from a couples context have tended to find that reciprocity of support and mutual disclosure (in other words, actively engaging with and responding to one another emotionally) have been more adaptive as coping strategies than attempting to avoid discussing the negative emotions arising from the cancer experience. Understanding why some couples fall into maladaptive coping patterns could ultimately be valuable for partners of breast cancer patients who are unsure of how to respond most helpfully when their wives or girlfriends express negative emotions about their cancer, and for breast cancer patients who are seeking effective support from their partners.

### The Current Investigation

The current study investigated dyadic coping processes in patients undergoing treatment for early stage breast cancer and their partners. More specifically, we explored the effect that partners’ discouragement of patients’ negative emotional expression had on

patients' physical and psychological health. Furthermore, we attempted to break down the association between (a) partners' criticism of patients' emotionally expressive coping and (b) patients' physical and psychological health by investigating whether the association was stronger or weaker in various contexts (e.g., whether or not the couple was maritally distressed, whether or not they agreed on the importance of cancer-related issues, and how satisfied the patient was with support from sources other than her partner). The specific hypotheses of the current study are detailed below.

### Hypotheses

#### *Hypothesis 1*

When partners of breast cancer patients engage in more distancing behaviors (i.e., avoiding discussions about cancer concerns) and encourage emotional restraint in the patient (i.e., encouraging the patient not to focus on her negative emotions), we predicted that the patient would experience greater levels of psychological distress and physical symptomatology. This association would be in line with past research demonstrating that protective-buffering types of coping can be maladaptive for cancer patients. Because all of the patients in the current study are female, and all of the partners are male, this relationship of negative psychological and physical health associated with partners' distancing is likely to be more consistent than if we had a sample of both male and female patients. Furthermore, as past researchers have seen evidence for biological processes in females that facilitates a "reaching out" response to reduce stress (Taylor et al., 2000), we predicted that in addition to greater levels of psychological distress being associated with a partner's distancing, there would be greater numbers of physical stress-related symptoms (such as headaches, stomach

trouble, feeling weak—symptoms which could be characterized as “psychosomatic”) associated with a partner’s distancing.

### *Hypothesis 2*

In past research, there have been discrepancies over whether partners’ distancing and encouragement of emotional restraint is seen by patients as a form of support or not. On the one hand, patients may interpret their partners’ behaviors in a positive way—“he’s doing his best to cheer me up and get me to think on the bright side”—while, on the other hand, the behavior could be interpreted more negatively—“he doesn’t care about how I’m really feeling, he’s trying to shut out my concerns.” This distinction might be clarified by differentiating between patients’ reports of support *quality* versus support *quantity*. Support quality ratings may give patients who interpret their partners attempts at support as well-intentioned but ineffective a chance to express themselves more precisely than a simple quantity rating, in which both effective and ineffective support attempts may be grouped together. In the current study, we predicted that partners’ distancing and encouragement of emotional restraint would be negatively associated with patients’ ratings of support quality, but will be unrelated to (or positively associated with) ratings of support quantity. We expected this would be the case because the quantity ratings might include both ineffective and effective support attempts by the partner, whereas high quality ratings would only include those attempts that were perceived by the patient as helpful.

### *Hypothesis 3*

For some patients, a partner’s distancing and encouragement of emotional restraint might be more upsetting than for other patients. Relationship satisfaction is one factor that might contribute to being vulnerable to experiencing distress associated with a partner’s

distancing. Those in highly satisfied relationships are likely to expect that their partner will engage them emotionally when they are seriously ill. If this expectancy is violated, this is likely to be especially distressing. For a woman who has lower relationship satisfaction, and perhaps fewer expectations of emotional responsiveness from her partner, her partner's distancing during the cancer experience is likely to be less surprising and, thus, less distressing. She may already have alternative sources of support (other family members, friends) upon whom she relies to cope with difficult times. In the current study, we predicted that a partner's distancing and encouragement of emotional restraint would be especially detrimental (more distressing, higher rates of physical symptoms) for women who are more satisfied in their relationships overall.

#### *Hypothesis 4*

Another factor that might moderate the association between a partner's encouragement of a patient's emotional restraint and the patient's health is the degree to which the patient consults friends and family members *other than her partner* for support. We predicted that for patients who report more outside support, there would be a weaker association between their partners' distancing and their own distress (as compared to patients with fewer outside support resources). This was hypothesized because patients who seek emotional support outside of their marriage might have lower expectations for emotional support from their partners than patients for whom their partners are the primary or sole support resource; it is, therefore, less likely that they will be negatively impacted by partners' distancing behaviors.

### *Hypothesis 5*

Past research demonstrates that partners engage in protective buffering behaviors when they are uncertain about what else to do, i.e., when they have low “coping efficacy.” For the current study, we were also interested in exploring partners’ reasons for engaging in distancing behaviors, and had two secondary hypotheses related to this issue:

a.) We predicted that men who rated themselves as more anxious and depressed would be more likely to engage in distancing behaviors. This could be a defense against being overwhelmed by the stresses associated with the patient’s cancer, a “fight-or-flight” response, rather than the more female-oriented “tend-and-befriend” stress response.

b.) Another possible reason for a partner engaging in this sort of coping could be an underestimation of the extent to which cancer-related issues are bothering the patient. We predicted, therefore, that men who rated issues on an inventory of cancer concerns as lower in importance on average than their wives would be more likely to engage in distancing and encouragement of emotional restraint.

## CHAPTER 2

### METHOD

#### *Participants*

Participants were 161 heterosexual couples who were part of a larger project entitled CanThrive, a treatment-outcome study for women with early stage breast cancer. Couples were recruited from cancer clinics in the area surrounding University of North Carolina (UNC) at Chapel Hill and Duke University, and were treated during the study at hospital facilities affiliated with these two universities. All participants were either married or had been living together for at least 12 months prior to beginning the study. For the female partners, eligibility criteria included: (a) diagnosis with Stage I, II, or IIIa breast cancer in the year prior to recruitment, (b) no prior history of breast cancer, and (c) no diagnosis of any other kind of cancer within the previous five years. Both the patient and her partner were fluent in English, and both had to be willing to participate in the study in order for the couple to be eligible.

Demographic information was collected on both the patients and their partners. The patients in the study (all female) ranged in age from 25 to 82 ( $M = 52.59$ ,  $SD = 11.36$ ), and their partners (all male) ranged in age from 26 to 85 ( $M = 54.47$ ,  $SD = 11.85$ ). Patients were 85.1% White, 9.9% Black, 2.5% Hispanic, and 2.5% Asian or Pacific Islander. Their partners had a similar breakdown of ethnicity: 85.7% White, 9.3% Black, 1.9% Hispanic, 1.9% Asian or Pacific Islander, and 1.2% Other. The couples had been living together for an average of



23.86 years ( $SD = 2.86$ ). Patients and partners were similar on how many years of education they had received, both with a median of 16 years (college educated). The median household income for the couples was in the range of \$100,000 - \$249,999.

### *Procedure*

Women seeking treatment for breast cancer at UNC-Hospitals or Duke University Medical Center were recruited for participation in the larger CanThrive project (for more details, see Baucom et al., 2009). Each medical center's Institutional Review Board approved all procedures of this study. Eligible women seeking treatment were sent informational letters in the mail about the study and were contacted to determine if they were interested in participating. Couples who were interested came to study sites for an initial assessment, during which they completed a series of questionnaires (measures to be described below) and also participated in a videotaped interaction with each other, having a series of short conversations about cancer-related concerns. Following the initial assessment, patients completed a 30-day daily diary, in which they called in to an automated telephone system to report on their symptoms, their partners' support behaviors, and their mood. As compensation, couples received \$40 for completion of the initial assessment, and \$20 for completion of the daily diary reports.

After the initial assessment, couples were randomly assigned to one of three groups: (a) Treatment-As-Usual, in which couples received written materials about community resources for cancer patients, (b) Couples-based Cancer Education, in which couples received medical information about cancer treatment together, or (c) Relationship Enhancement, which was a couples-based cognitive-behavioral intervention, with sessions including both partners to discuss cancer-related concerns within the context of their

relationship. Following the treatment, couples returned for a post-treatment assessment, and follow-up assessments at 6 and 12 months post-treatment. The present study employed data primarily from the baseline assessment, as well as summary data from the 30-day daily diary reports. The measures used are described below.

### *Measures*

*Partner Responses to Cancer Inventory (PRCI)*. During their baseline assessment, patients completed a 45-item measure assessing how their partners have responded to their cancer (Manne & Schnoll, 2001). The scale consists of four subscales: (a) Emotional and Instrumental Support, (b) Cognitive Information and Guidance, (c) Encouraging Distancing and Self-Restraint, and (d) Criticism and Withdrawal. All items were rated on a 4-point scale, assessing the frequency that the partner enacted a particular behavior (anchors for the scale were Never, Rarely, Sometimes, and Often). Internal reliability for each subscale was adequate in the original validation sample. Cronbach's alpha scores for each subscale were as follows: Emotional and Instrumental Support = 0.76, Cognitive Information and Guidance = 0.91, Encouraging Distancing and Self-Restraint = 0.62, and Criticism and Withdrawal = 0.88. Validity for this scale has also been established through comparisons with other measures of social support and relationship functioning.

For the current study, a new 'Distancing' subscale was created, due to concerns about the short length and limited variance of the original 'Encouraging Distancing and Self-Restraint' subscale. To create a new subscale, 16 items were initially selected based on face validity (some were reverse scored from the "Emotional and Instrumental Support" subscale; some were selected from the "Criticism and Withdrawal" subscale, and the full "Encouraging Distancing and Self-Restraint" subscale was included). Reliability analyses were then

performed to determine which items grouped together. These analyses were run in an iterative process, such that items were dropped if the analysis indicated that the Cronbach's alpha for the full subscale would be improved should the item or items be removed from the subscale—this process continued until no one item compromised the reliability of the full subscale. Eight items were included in this final subscale ( $\alpha = 0.84$ ), and the wording of these items can be seen in the Appendix.

*Abbreviated Dyadic Adjustment Scale (ADAS).* The abbreviated DAS is a reliable and validated 7-item measure of global relationship satisfaction (Sharpley & Rogers, 1984). Patients and their partners both completed the measure. Three items ask about level of couples' agreement on different facets of life, rated on 6-point scale (from 0 = Always Disagree, to 5 = Always Agree); three items ask about the frequency of certain relationship behaviors, also measured on a 6-point scale (from 0 = Never, to 5 = More than once a day), and the final item assesses global relationship happiness on a 7-point scale (from 0 = Extremely Unhappy, to 6 = Perfect Happiness). The ADAS has shown good internal consistency, with an alpha coefficient of 0.76, and has been validated through its capacity to discriminate maritally distressed couples from maritally satisfied couples.

*Physical and Psychological Symptoms.* Several measures were used to assess physical and psychological symptoms in the breast cancer patients. The Brief Fatigue Inventory (BFI; Mendoza et al., 1999), and Brief Pain Inventory (BPI; Cleeland & Ryan, 1994) are each short measures that have been validated in samples of cancer patients. The BFI has patients rate current fatigue, typical fatigue during the past week, and worst amount of fatigue during the past week on a 10-point scale (1 = No fatigue, 10 = Fatigue as bad as you can imagine). The BFI has high internal consistency, with an alpha coefficient of 0.96.

Two items from the BPI were used in the current study, asking patients to rate their typical and worst cancer-related pain from the past week on a 10-point scale (0 = No pain, 10 = Pain as bad as you can imagine). As with the BFI, validity and reliability of the BPI has been found to be strong.

For the measurement of psychological and psychosomatic symptoms, both patients and their partners filled out the Brief Symptom Inventory-18 (BSI-18; Derogatis, 2000), an 18-item measure of level of distress associated with a variety of psychosomatic symptoms (e.g., “feeling tense or keyed up,” “Nausea or upset stomach”, “Feeling weak in parts of your body”). Each item is rated on 5-point scale (0 = Not at all, 4 = Extremely). The BSI-18 consists of four scales measuring Somatization, Depression, Anxiety, and Global Severity. It has been demonstrated to exhibit high internal and test-retest reliability, and has been validated on cancer patient samples.

*Support from Partner.* To assess the quality and quantity of support that patients received from their partners, patients completed an adapted daily version of the Source Specific Social Provisions Scale (SPS; Cutrona, 1989). This measure was completed during the 30-day daily diary period following the baseline assessment. Once per day, patients called in to an automatic telephone system to answer questions about their daily mood, functioning, and partner support behaviors. The items on the adapted version of the SPS assess both the frequency of specific support behaviors (helping with chores, emotional support, and giving advice), and how satisfied the patient was with the support. All items were rated on a 6-point scale (0 = Not at all, 5 = A great deal). Ratings were summed to create two subscales indicating amount of support and satisfaction with support. Because this short version of the SPS was adapted for daily use, no reliability or validity statistics are

available. However, internal reliability of the original SPS subscales is adequate, with Cronbach's alpha coefficients ranging from .64 to .76 (Cutrona & Russell, 1987).

In addition to the daily diary version of the SPS, a single item on the baseline assessment also measured partner support: "How do you feel about the support you have received from your partner for your cancer experience in the past week?" This item was rated on a 7-point scale (0 = Extremely dissatisfied, 6 = Extremely satisfied). This item also was used in analyses of partner support in the current investigation.

*Support from Friends and Family.* To assess the degree to which patients possess sources of emotional and instrumental support other than their partners, the social/family well-being subscale of the Functional Assessment of Cancer Therapy—Breast (FACT-B) Quality-of-Life Instrument was used (Brady et. al, 1997). This subscale was adapted for use in the current investigation by dropping the two items referring to the partner's support and retaining the items assessing support from family and friends. Because this was an adapted version of the FACT-B social/family well-being subscale, no reliability or validity statistics are available. However, internal reliability of the original FACT-B subscales is high, with Cronbach's alpha coefficients ranging from .63 to .86 (Brady et al., 1997).

*Issue Inventory (Cancer-Related).* To assess level of agreement between patient and partner on the importance of various issues related to cancer, patients and partners completed a 16-item inventory of common cancer-related concerns (Manne, 2003), and rated how often the item had been problematic for them on a 4-point scale (0 = No problem for me and/or my partner, 3 = This has frequently been a problem for me and/or my partner). The primary function of the inventory was to serve as a basis for selecting a topic for an interaction task in which partners had 7-minute conversations with each other about issues of greatest concern.

However, for the purposes of the current investigation, difference scores between patient and partner ratings on these items were calculated to assess whether patients and partners were “on the same page” about cancer concerns, or if partners were under- or overestimating patients’ concerns. No validity or reliability statistics exist for this unpublished issue inventory, and all analyses making use of this variable will be considered exploratory.

## CHAPTER 3

### RESULTS

#### *Descriptive Statistics*

Information about the distributions of key variables is described below. The primary predictor variable in the analyses was partner distancing behavior. Relationship satisfaction and support from friends and other family members were also considered as potential moderator variables. The outcome variables included patient reports of symptoms of depression, anxiety, somatization, fatigue, and pain; as well as quality and quantity of emotional support received. The male partners' reports of symptoms of depression and anxiety were considered as predictors of distancing behavior. Descriptive statistics were obtained for all of these variables and are described below and presented in Table 1 in the Appendix. Two control variables were included in the analyses and are also described below.

*Distancing.* The women in our sample tended not to report much distancing behavior from their partners. This is consistent with the fact that these women reported high relationship satisfaction and high levels of support from their partners (see sections below for further descriptives on these variables). Women reported an average of 1.53 on a scale of 1=Never to 4=Often for their partners' overall distancing behaviors ( $SD = 0.56$ )—therefore, the distribution for this variable was positively skewed (see Table 1 in Appendix).

*Relationship Satisfaction & Support from Friends.* The couples in this sample were not selected for relationship distress, and on average they reported fairly high satisfaction

with their relationships. On a scale of overall relationship happiness, women reported an average corresponding to 'Very Happy' on a 7-point scale from 'Extremely Unhappy' to 'Perfect Happiness'. On the Abbreviated Dyadic Adjustment Scale (ADAS), on average, women in the sample reported scores in the average range of relationship satisfaction, according to ADAS norms (Sharpley & Rogers, 1984). Additionally, women reported high levels of perceived support from friends and family other than their partners. When indicating how much support they received from friends and family, women reported a mean corresponding to a rating between 'Quite a bit' and 'Very much' support received (see Table 1 in Appendix).

*Symptoms Experienced by Patient.* A variety of patient-reported symptoms were used in the analyses as outcome variables. Subscales of depression and anxiety on the Basic Symptom Inventory (BSI) were used to measure psychological distress of the patient. The women reported a mean depression score of 3.47 ( $SD = 3.64$ ), which is well below the clinical range (scores range from a possible 0 to 24 on the BSI subscales). Similarly, levels of anxiety were low in the sample, with a mean score of 4.20 ( $SD = 3.76$ ). To measure stress-related physical symptoms, the somatization subscale of the BSI was used, as well as the Brief Fatigue and Brief Pain Inventories (BFI; BPI). Women reported low levels of somatization ( $M = 3.33$ ;  $SD = 3.16$ ). Scores on the BFI ( $M = 4.22$ ;  $SD = 2.13$ ) and BPI ( $M = 2.46$ ;  $SD = 1.92$ ) were at similar levels to those of the cancer-patient norms for these scales (Cleland & Ryan, 1994; Mendoza, 1999).

*Perceived Emotional Support from Partner.* Quality and quantity of emotional support were outcome variables used in the analyses testing Hypothesis 2. The women in the sample reported high levels of emotional support from their partners. In an item on the



background questionnaire asking about satisfaction with support received from the partner in the past week, the average response fell between ‘Moderately satisfied’ and ‘Extremely satisfied’ ( $M = 5.24$ ;  $SD = 1.38$ ; scale: 0 = Extremely dissatisfied to 6 =Extremely satisfied). Quality and quantity of emotional support were also measured by taking an average of ratings made by the women over the course of a 30-day daily diary. For both quality and quantity of support received, the average score reported by women in the sample (quality:  $M = 3.41$ ,  $SD = 0.93$ ; quantity:  $M = 3.70$ ,  $SD = 0.92$ ) indicates that women tended to report quality and quantity scores of emotional support above the midpoint of the scale, which ranged from 0 = ‘Not at all’ to 5 = ‘A great deal.’

*Partners’ Psychological Distress.* One set of analyses investigates whether male partners’ reports of symptoms of depression or anxiety predict distancing behavior. The men in the sample reported low levels of depression and anxiety, with a mean of 2.18 ( $SD = 2.94$ ) for depression on the BSI, and a mean of 2.99 ( $SD = 3.10$ ) for anxiety. Both of these means are below clinical levels on these subscales, which have possible ranges of 0 to 24.

*Control Variables.* The hypothesized relationships between partner distancing and various patient outcomes may be influenced by factors external to the hypotheses of the current study. For example, severity of illness might affect the way a patient interprets her partner’s behavior; therefore, cancer stage was included in analyses as a control variable when it was significantly correlated with the outcome variable of interest (see Table 2 in Appendix). No patient included in the study had a cancer stage beyond IIIA. Cancer stage was fairly normally distributed in our sample, with 10% of the women in Stage 0, 30% in Stage I, 22% in Stage IIA, 14% in Stage IIB, and 10% in Stage IIIA. Additionally, the length of the partners’ relationship might affect how the patient interprets her partner’s behavior, so

a measure of number of years the partners have lived together was included in analyses as a control variable when it was significantly correlated with the outcome variable of interest (see Table 2 in Appendix). The couples lived together for a mean of 24 years, with a standard deviation of 14 years (with a range of 1 year to 56 years).

### *Hypothesis 1*

The first hypothesis was that partners' distancing behaviors would be positively associated with patients' psychological distress and reporting of stress-related physical symptoms. This was tested with the following model:

$$\text{PsyS} = B_1\text{DS} + B_0$$

Two linear regression analyses were conducted to test this model. In the first, PsyS represented the predicted number of symptoms of psychological distress as measured on the Depression subscale of the Brief Symptom Inventory (BSI), and in the second, PsyS represented the number of symptoms on the Anxiety subscale of the BSI. For both analyses,  $B_1$  is the slope for the Distancing subscale on the Partner Responses to Cancer Inventory (PRCI), DS is the score on the Distancing subscale on the PRCI, and  $B_0$  is the intercept (the predicted number of symptoms when the score on the PRCI subscale equals zero). Because two dependent variables were tested in two analyses for this hypothesis, a Bonferroni correction was used to maintain the familywise error rate at  $\alpha = .05$ ; therefore the  $\alpha$ -level was set at .025 for each test. Greater distancing behavior significantly predicted more patient-reported symptoms of depression, and there was a non-significant trend in the same direction for symptoms of anxiety (see Table 3).

Next, the main effect of partners' distancing on patients' reporting of stress-related physical symptoms was tested with the following model:

$$\text{PhysS} = B_1\text{DS} + B_0$$

For this model, three regression analyses were run, where PhysS represented: (a) the number of psychosomatic symptoms as measured by the Somatization subscale on the BSI; (b) the degree of fatigue as reported on the Brief Fatigue inventory; and (c) the severity of cancer pain experienced as reported on the Brief Pain inventory. Because three dependent variables were tested in three analyses for this hypothesis, a Bonferroni correction was used to maintain the familywise error rate at  $\alpha = .05$ ; therefore the  $\alpha$ -level was set at .017 for each test. There were two non-significant trends indicating that greater distancing behavior was associated with more patient-reported fatigue and somatization (see Table 4). However, there was no association between distancing and patient-reported cancer pain.

### *Hypothesis 2*

For the second hypothesis, we predicted that partners' distancing would be negatively associated with patients' ratings of support *quality*; however, we predicted that this association would not be significant for ratings of support *quantity*. This hypothesis was tested with the following model:

$$\text{SQ} = B_1\text{DS} + B_0$$

Three linear regression analyses were run, with SQ representing: (a) the patients' support quality ratings on the baseline questionnaire, (b) an average of the 30-day diary measure using the adapted Source Specific Social Provisions Scale (SPS), and (c) the patients' support quantity ratings on the adapted SPS. As in the models above, a Bonferroni correction was used, setting the  $\alpha$ -level at .017 for each test. The predictor variables were equivalent to those presented in the models for Hypothesis 1. The results of the regression analyses indicated that distancing was significantly negatively associated with support quality *and*

quantity, as measured both in the background questionnaire and in the daily diary (see Table 5). Therefore, this hypothesis was only partially supported, as distancing was associated with both quality and quantity of support, rather than only predicting quality of support.

### *Hypothesis 3*

The third hypothesis was that patients who reported greater relationship satisfaction would be more distressed by partners' distancing behaviors than patients reporting lower relationship satisfaction. This interaction effect was tested using the following models:

$$\text{PsyS} = B_1\text{DS} + B_2\text{RS} + B_3\text{DS}*\text{RS} + B_0$$

$$\text{PhyS} = B_1\text{DS} + B_2\text{RS} + B_3\text{DS}*\text{RS} + B_0$$

The dependent variables and DS are the same as those defined for the first model of Hypothesis 1. RS represents relationship satisfaction, as measured by the Abbreviated Dyadic Adjustment Scale. The interaction term,  $B_3\text{DS}*\text{RS}$ , is the multiplicative relationship between distancing and relationship satisfaction. When testing for a moderation effect on psychological distress, the  $\alpha$ -level was set at .025, as two dependent measures of distress were tested in two linear regression analyses. When testing for a moderation effect on stress-related physical symptoms, the  $\alpha$ -level was set at .017, as three dependent measures of symptoms were used in three linear regression analyses. The independent variables were mean-centered for this analysis.

Results indicated no significant interaction between relationship satisfaction and distancing behavior on psychological distress (anxiety and depression symptoms). However, there was a significant interaction effect between relationship satisfaction and distancing predicting patient-reported pain, such that for those with greater relationship satisfaction, their partners' distancing behaviors were associated with higher levels of patient-reported

pain (see Figure 1). There also was a non-significant trend following a similar pattern for an interactive effect of relationship satisfaction and distancing predicting patient somatization (see Figure 2). There was no significant interactive effect between relationship satisfaction and distancing predicting patient-reported fatigue. For all results of the analyses testing Hypothesis 3, see Tables 6 - 7.

#### *Hypothesis 4*

The fourth hypothesis was that patients with more sources of support outside their relationship with their partner would be less distressed by partners' distancing behaviors. The interaction effect was tested with the following models:

$$\text{PsyS} = B_1\text{DS} + B_2\text{OS} + B_3\text{DS*OS} + B_0$$

$$\text{PhysS} = B_1\text{DS} + B_2\text{OS} + B_3\text{DS*OS} + B_0$$

The dependent variables and DS were defined in the first model described for Hypothesis 1. OS represented patients' satisfaction with outside sources of support, as measured by the adapted social/family well-being subscale of the Functional Assessment of Cancer Therapy. The interaction term,  $B_3\text{OS*RS}$ , was the multiplicative relationship between distancing and outside support satisfaction, included in the model to test for a moderation effect. The independent variables were mean-centered for this analysis. Bonferroni corrections were used for these analyses in an equivalent manner to the corrections used in the analyses for Hypothesis 3. Results of these analyses indicated one non-significant trend: the interactive effect of distancing and outside support was associated with symptoms of depression, such that for those who were less satisfied with outside support, partners' distancing was more positively related to patient-reported symptoms of depression (see Figure 3). No other trends or significant relationships were found (see Tables 8 - 9 for all results for Hypothesis 4).

### *Hypothesis 5*

Hypothesis 5 is concerned with reasons why men might engage in distancing behavior as a coping strategy. Hypothesis 5a is that men who are more anxious or more depressed will be more likely to engage in distancing behaviors. This was tested using the following model:

$$DS = B_1\text{PsyS-M} + B_0$$

PsyS-M represented male partners' reported number of symptoms of psychological distress as measured on the Depression and Anxiety subscales of the Brief Symptom Inventory. All other variables have been defined in previous models. Results indicated a non-significant trend indicating a positive relationship between partners' symptoms of depression and their distancing behavior (see Table 10).

Hypothesis 5b is that partners who underestimate the level of the patients' cancer concerns will be more likely to engage in distancing behaviors. This was tested using the following model:

$$DS = B_1\text{UC} + B_0$$

Where UC represents the degree to which the male partners underestimated the importance of cancer-related concerns of their female partners on the Cancer-Related Issue Inventory, as calculated by the average of difference scores between patients' and partners' ratings of how frequently various cancer-related issues have been a problem for the couple. All other variables have been defined in previous models. Results supported this hypothesis, such that the more partners underestimated the patients' cancer-related concerns, the more likely they were to engage in distancing behavior (see Table 10).

## CHAPTER 4

### DISCUSSION

A diagnosis of breast cancer can influence how the patient and her partner interact. Some of these changes might be expected, such as the partner taking on a larger caretaking role for the family. Other changes might be less expected, such as a partner becoming more withdrawn, or avoiding discussing important issues related to the cancer. The patient and partner might choose coping strategies as individuals that work well together for them as a couple, or they might choose divergent strategies that make it difficult for the two of them to address cancer together as a team. The primary aim of this study was to investigate whether the partner's choice of a "distancing" coping strategy would be associated with the patient's psychological and physical functioning. Furthermore, we investigated whether distancing strategies were more detrimental for some types of couples versus other types of couples (i.e., those who were more satisfied with their relationships, or those who had more outside support resources). The results supported our hypotheses for the most part. As predicted, partners' distancing behaviors were positively associated with symptoms of depression, anxiety, somatization, and fatigue; and negatively associated with emotional support. The association between distancing and physical symptoms was stronger for patients reporting greater relationship satisfaction, and the association between distancing and depressive symptoms was stronger for patients with fewer sources of support outside their marriages. Partners experiencing more depressive symptoms were more likely to engage in distancing

behavior, and partners who underestimated how problematic patients rated various cancer-related issues were also more likely to engage in distancing behavior. In the following section, we will discuss the psychological implications of these findings, limitations of our methodology, and directions for future research.

When faced with cancer, some degree of avoidance is a natural response for many patients and their partners. The fear and uncertainty that accompanies the diagnosis might require the patient and his or her close family members, at times, to put the disease out of their minds and try to forget about the situation. However, for some people this can become more than a momentary response. Avoidance becomes the basis for a coping strategy. Furthermore, if the partner of a cancer patient favors such a strategy, he or she may engage in “protective buffering”—attempting to shield the patient from thoughts of the cancer, or discussions of related negative emotions. Our results are consistent with a large body of research suggesting that avoidance and protective buffering might be harmful for cancer patients, and that these strategies are associated with negative psychological and physical symptoms. Not possessing a reliable outlet for the expression of negative emotions related to the cancer might be harmful for patients. Furthermore, this experience may be particularly detrimental to female patients, given recent findings demonstrating that for women, more so than for men, physiological stress responses can be attenuated through emotional closeness with others (Ditzen et al., 2007; Light et al., 2005; Taylor et al., 2000). Given that breast cancer treatment is likely to be a stressful period in a woman’s life, it is not surprising that if the woman feels her partner is distancing himself from her, she is more likely to experience psychological distress and physical symptoms such as increased fatigue.



While one could argue that this association could also be looked at as evidence that partners are more likely to distance from the patient *in response to* the patient's increased symptoms—e.g., a husband giving his depressed wife some “space”—past research has supported the causal explanation of distancing leading to increased symptoms in patients (Manne 1999; 2004; 2007). In the current study we are unable to determine causality of this association. However, results indicated that partners who distanced were less likely to provide emotional support—furthermore, distancing measured during a baseline questionnaire predicted quality and quantity of emotional support reported during a subsequent diary period. Past research and theory leads us to speculate that partners' distancing behaviors are perceived negatively by patients and likely contribute to increased risk of psychological distress and stress-related physical symptoms. While the current study cannot indicate causal direction, the findings are consistent with the explanation, supported by past research, that partners' distancing behaviors can have harmful effects on patients.

Beyond supporting past research findings that partners' distancing is associated with increased patient distress, the current study also investigated whether this association was stronger for some couples than for other couples. Less research has been conducted exploring this question; however, our findings did parallel those of one previous study demonstrating that protective buffering was associated with greater psychological distress for couples who reported *higher* marital satisfaction (Manne, 2007). In the current study, partners' distancing behavior was more highly associated to patients' reports of pain and somatization for those with higher relationship satisfaction. Why might those in happier relationships be more vulnerable to this association between distancing and symptoms? One explanation is that those in more highly satisfied relationships have come to depend on their partners for

support, and expect that even in times of high stress, high quality emotional support will be available to them. When this expectancy is violated and support is not received, it might be more distressing than for those who regularly are unhappy with their partners' support attempts (or lack thereof). Epstein and Baucom (2002) discuss that when the *assumptions* and *expectancies* partners hold about each other are violated, especially in response to negative events, this can be distressing for both partners. Another potential explanation is that one's partner is a more salient stimulus when the relationship is good; therefore, interactions with the partner in a strong relationship are more central to the patient's well-being than when in a distressed relationship. The loss of interactions through the partner's withdrawal in happy relationships is therefore more distressing. Unfortunately, there is no prior research to support one of these explanation over the other, and only additional research can help to clarify whether one or both of these explanations are valid.

Interestingly, while past research has primarily focused on how distancing and protective buffering lead to increased psychological distress in patients, our findings indicated that the moderating effect of relationship satisfaction occurred only for more physically-based symptoms—patient-reported pain and symptoms of somatization. It was not the case in the current study that the association between distancing and *psychological* distress was stronger for those in happier relationships, as has been found in one previous study (Manne, 2007). While speculation on the pattern of results is extremely tentative and necessarily post-hoc, it could be that for women in happy relationships, the presentation of physical symptoms like pain or somatization might be easier to express than psychological distress. For example, a great deal of research indicates that individuals with higher relationship satisfaction are less likely to experience clinical depression or anxiety than those

who are in distressed relationships (Whisman, 1999). Therefore, women in high-functioning and satisfying relationships who are experiencing cancer might respond to their partners' distancing behavior not through reporting depression or anxiety but rather through other means such as physical symptoms. While any conclusions on the basis of the current findings must be considered tentative, the finding that distancing behavior might be interpreted differently by couples in highly satisfied relationships than those in distressed relationships is intriguing and deserving of further inquiry.

Expanding beyond the social sphere of the patient and partner, features of the broader social network of the patient might also play a role in how a partner's distancing behavior impacts the patient. Some individuals might not rely on their partners regularly for emotional support. It could be that for some people, other family members or friends provide more high quality emotional support than the partner does, and they, therefore, look to other members of their social network in times of distress. This may or may not be related to relationship satisfaction. For some couples, this pattern of seeking outside support could be normative; for others, seeking outside support may be due to dissatisfaction with the relationship. In the current study, we found that the association between distancing and depressive symptoms was stronger for those with little outside support from friends and family than for those with a great deal of outside support. It could be that these outside relationships provide a buffer against depressive symptoms when a partner does not provide support during cancer treatment.

This interaction effect did not hold for other types of symptoms, such as anxiety or physical symptoms. Again, proposed reasons for why this pattern of results must be considered tentative. It is possible that depressive symptoms in particular were found to be

more highly related to partners' distancing for those with less support from friends because depression often is associated with a sense of loneliness and isolation. Thus the lack of a supportive partner and fewer friends to offer support might be a particularly depressing context when confronting cancer. Unfortunately our overall understanding of how support from a partner and friends interact to affect the patient is unclear. That is, some past research has indicated that other family members or friends cannot make up for the lack of a supportive partner (Pistrang & Barker, 1995). Overall, however, the results regarding whether friends and family can act as a buffer against negative outcomes related to having a poor relationship with one's partner are mixed, and at times contradictory (House et al., 1988, Julien & Markman, 1991, Pistrang & Barker, 1995). Further research is needed in this area to determine if outside support can make up for a lack of support from a partner and under what circumstances such a buffer is effective.

Because the larger pattern of results from the current study appears to suggest that partners' distancing behaviors can be harmful for patients, it may be tempting to conclude that partners of cancer patients should simply be told to stop such behavior. However, a problem with such an approach is that it does not account for the reasons why partners are distancing from the patients—distancing may be a coping strategy for these men. In the current study, unfortunately, there is a confound between gender and patient/partner status. In other words, we cannot determine whether it is more likely for male partners of cancer patients to engage in distancing behavior than female partners would be. However, a body of past research does suggest that men are more likely than women to engage in protective buffering or avoidance as a coping strategy (Stanton et al., 1994, Sullaway & Christensen, 1983). Recent research has shown that men tend to be more physiologically reactive to

psychological stress than women, and perhaps avoidance strategies are a way to lessen the impact of such physiological responses (Kudielka & Kirschbaum, 2005). The current study found that depressive symptoms and distancing behavior are associated in these male partners. Although we cannot determine a causal direction in this association, one possibility is that distancing from the patient's cancer may act as a coping strategy for the partner who may be overwhelmed by negative emotions. Further research is needed to test this hypothesis in a sample where patient/partner status is not confounded with gender. However, it should be noted that we should not conclude from the results of the current study that it would be helpful to simply tell men not to engage in distancing behaviors—we need to better understand why some partners are behaving this way and perhaps determine alternative coping strategies for partners that might be more adaptive for the couple as a whole.

The results of the current study also indicate that partners who underestimate patients' cancer-related concerns are more likely to engage in distancing behaviors. Again, we cannot determine any causal direction to this relationship, and it is likely reciprocal: if a partner distances, he is less likely to learn about the issues that concern the patient, and therefore more likely to underestimate their severity. On the other hand, thinking that there are few issues bothering the patient might lead to greater distancing, because if the partner believes everything is fine, then there would be no need to discuss cancer-related issues. To address this distancing pattern, couples could be taught basic communication strategies when facing cancer treatment. Such strategies can be helpful for couples experiencing a wide range of relationship difficulties, and dealing with the stresses of cancer treatment may be a period when communication is especially strained yet important.

There are several limitations to the current study that should be addressed. First, this research is cross-sectional and correlational in nature; therefore, causal relationships cannot be determined. Any speculation on such relationships is for the purposes of discussion and should be considered tentative—conclusions must be withheld until further research can be conducted that allows for causal relationships to be determined. Second, the sample is primarily white and upper-middle class; thus, findings cannot be generalized to the broader population. Third, as mentioned in the discussion of results above, there is a confound between gender and patient/partner status in the current study design. In future work, it would be helpful to parse these factors, including patients and partners of both genders in the sample to more fully explore possible gender effects. Although the above limitations are important to take note of when interpreting the results of the current study, they do not undermine the significance of the findings. Investigating factors that are associated with distancing behavior, even though causality cannot be determined, is an important first step in understanding why this behavioral pattern is occurring and how it might be impacting patients.

While any clinical implications of the current findings must be considered tentative, there are several results that could be generative for future work in this context. Distancing behavior from a partner during another partner's cancer treatment should be investigated further for the psychological and physiological impact it may have on the patient. A great deal of work has been conducted on the effects of protective buffering coping styles, but investigations need to be expanded into more diverse populations, in terms of gender, socioeconomic status, race, and types of illness. More research is also needed which addresses who is most at risk of experiencing detrimental outcomes in response to a partner's

distancing behavior. One key finding of the current study is that it appears there may be an increased vulnerability for more highly satisfied couples. This is not an intuitive result—in many cases, relationship satisfaction is a protective factor. Furthermore, couples who are happy in their relationships might be less likely to seek treatment incorporating couples-based interventions, when in fact, they may be most in need of such support when one partner becomes seriously ill. Strategies employed by the partner that are intended to be helpful and supportive (e.g., trying to distract the patient from her negative emotions) might backfire. Therefore, nondistressed couples may be a particularly important group to work with during cancer treatment. Finally, the results of the current study imply that partners may be distancing as a coping strategy; therefore, more research is needed to determine if alternative coping strategies can be employed that better serve both individuals in the relationship. However, it is important not to take the findings of the current study as a recommendation to inform partners that they should not engage in distancing behaviors at all, at least not without offering viable alternative strategies.

In relationships, partners can have different needs for emotional closeness and sharing. At a given moment, one partner may wish to discuss highly emotional issues while the other is seeking greater distance or to avoid such conversations. While discussing difficult issues, such negotiations for closeness and space are part of the natural ebb and flow of relationships, and although these negotiations can cause distress when the two partners have different desires or needs for addressing distressing topics, they are a natural part of relationships which couples must learn to address effectively. However, this pattern can become more intense, or more important, during times of crisis for the couple, such as when one partner has been diagnosed with a life-threatening illness. During these times, needs or

preferences for addressing highly emotional issues such as cancer may change, which can disrupt normal patterns of interaction for the couple. The patient may want more time and energy devoted to discussing cancer than her partner during this vulnerable period. Some partners may share this desire to address emotional reactions to the cancer. However, for other partners, the emotionally stressful nature of the situation may increase their need for space and distance from the disorder. Having a divergence of needs to address the cancer during this traumatic time may be harmful for both patient and partner. Therefore, looking at such patterns is a valuable area of inquiry. Such research could ultimately serve to help couples adapt to one of the most stressful times in their lives with minimal disturbance to their broader relationship. Although differences in partners' desires to address individual and relationship concerns are a common occurrence in relationships, it is worthwhile to gain a better understanding of this process during stressful periods such as cancer treatment, in order to decrease levels of distress for both patients and their partners.



## Appendix

### Distancing subscale

During the past month, when dealing with the cancer experience, your partner...  
(response scale: Never, Rarely, Sometimes, Often)

1. Asked you how you were feeling. *(reverse-scored)*
2. Avoided being around you if you weren't feeling well.
3. Gave you the idea he really did not want to talk about the problem you were having.
4. Seemed uncomfortable talking to you about your illness.
5. Was not emotionally supportive of you, when you were expecting some support.
6. Encouraged you to keep your feelings to yourself.
7. Listened to you confide your worries or concerns about your illness. *(reverse-scored)*
8. Encouraged you to let your feelings out. *(reverse-scored)*

Statistical Tables

Table 1

*Descriptive statistics for all variables*

Variable	<i>M</i>	<i>SD</i>
Distancing	12.24	4.46
Relationship satisfaction	25.40	4.77
Support from friends	6.67	1.54
Depression (patient)	3.47	3.64
Anxiety (patient)	4.20	3.76
Somatization	3.33	3.16
Fatigue	4.22	2.13
Pain	2.46	1.92
Support satisfaction (past week)	5.24	1.38
Support satisfaction (diary)	3.70	0.92
Support quantity (diary)	3.41	0.93
Depression (partner)	2.18	2.94
Anxiety (partner)	2.99	3.10

Table 2  
*Correlations between control and outcome variables*

	Depression	Anxiety	Somat.	Fatigue	Pain	Support Quantity (diary)	Support satisfaction (diary)	Support satisfaction (past week)
Length of relationship	-.240**	-.214**	-.246**	-.205**	-.188*	.047	.043	.177*
Cancer stage	.058	.040	.244**	.166*	.114	.044	.038	-.084

\*\*  $p < 0.01$  (2-tailed)

\* $p < 0.05$  (2-tailed)

Table 3: Hypothesis 1, psychological symptoms

*Results from regression analyses predicting patient-reported symptoms of depression and anxiety from partners' distancing behavior, controlling for relationship length*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.057	.019	-2.98**
Distancing	.261	.063	4.17**

*Dependent variable: Depression symptoms*

Relationship length	-.058	.021	-2.72**
Distancing	.128	.069	1.85

*Dependent variable: Anxiety symptoms*

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)

Table 4: Hypothesis 1, physical symptoms

*Results from regression analyses predicting patient-reported symptoms of somatization, fatigue and pain from partners' distancing behavior, controlling for cancer stage (when predicting somatization and fatigue) and relationship length*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.051	.017	-3.07**
Cancer stage	.544	.196	2.77**
Distancing	.104	.052	1.98

*Dependent variable: Somatization*

Relationship length	-.022	.012	-1.82
Cancer stage	.307	.144	2.13*
Distancing	.081	.037	2.18*

*Dependent variable: Fatigue*

Relationship length	-.027	.011	-2.47*
Distancing	.022	.034	0.64

*Dependent variable: Pain*

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)

Table 5: Hypothesis 2

*Results from regression analyses predicting support quality and quantity from partners' distancing behavior, controlling for relationship length (when predicting patient satisfaction with prior week's support)*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	.018	.007	2.63**
Distancing	-.152	.021	-7.24**

*Dependent variable: Satisfaction with prior week's support (from baseline questionnaire)*

Distancing	-.098	.015	-6.70**
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*Dependent variable: Satisfaction with support (daily diary)*

Distancing	-.096	.015	-6.36**
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*Dependent variable: Quantity of support (daily diary)*

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)

Table 6: Hypothesis 3, psychological symptoms

*Results from regression analyses predicting patient-reported symptoms of depression and anxiety from partners' distancing behavior, relationship satisfaction, and their interaction, controlling for relationship length*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.056	.020	-2.85**
Relationship satisfaction	-.052	.072	-.728
Distancing	.251	.081	3.08**
Distancing by Rel. satis.	.007	.012	.587

*Dependent variable: Depression symptoms*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.059	.022	-2.70**
Relationship satisfaction	.030	.079	.373
Distancing	.130	.090	1.45
Distancing by Rel. satis.	-.005	.013	-.394

*Dependent variable: Anxiety symptoms*

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)

Table 7: Hypothesis 3, physical symptoms

*Results from regression analyses predicting patient-reported symptoms of somatization, fatigue and pain from partners' distancing behavior, relationship satisfaction, and their interaction, controlling for cancer stage (when predicting somatization and fatigue) and relationship length*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.051	.017	-3.02**
Cancer stage	.536	.195	2.75**
Relationship satisfaction	-.067	.062	-1.08
Distancing	.128	.068	1.87
Distancing by Rel. satis.	.021	.010	2.09*

*Dependent variable: Somatization*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.024	.012	-1.93
Cancer stage	.290	.146	1.99
Relationship satisfaction	.026	.047	.554
Distancing	.113	.051	2.22*
Distancing by Rel. satis.	.004	.006	.667

*Dependent variable: Fatigue*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.028	.011	-2.53*
Relationship satisfaction	.006	.040	.144
Distancing	.076	.045	1.68
Distancing by Rel. satis.	.013	.005	2.46*

*Dependent variable: Pain*

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)

Table 8: Hypothesis 4, psychological symptoms

*Results from regression analyses predicting patient-reported symptoms of depression and anxiety from partners' distancing behavior, support from friends, and their interaction, controlling for relationship length*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.054	.018	-3.01**
Support from friends	-.819	.172	-4.76**
Distancing	.206	.060	3.46**
Distancing by Friend sup.	-.071	.038	-1.87

*Dependent variable: Depression symptoms*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.057	.021	-2.71**
Support from friends	-.533	.201	-2.66*
Distancing	.096	.070	1.38
Distancing by Friend sup.	-.027	.045	-.616

*Dependent variable: Anxiety symptoms*

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)



Table 9: Hypothesis 4, physical symptoms

*Results from regression analyses predicting patient-reported symptoms of somatization, fatigue and pain from partners' distancing behavior, support from friends, and their interaction, controlling for cancer stage (when predicting somatization and fatigue) and relationship length*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.049	.017	-2.94**
Cancer stage	.550	.197	2.80**
Support from friends	-.278	.157	-1.77
Distancing	.083	.053	1.56
Distancing by Friend sup.	-.031	.034	-.900

*Dependent variable: Somatization*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.021	.012	-1.76
Cancer stage	.310	.141	2.20*
Support from friends	-.377	.112	-3.37**
Distancing	.055	.038	1.47
Distancing by Friend sup.	.001	.021	.045

*Dependent variable: Fatigue*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Relationship length	-.025	.011	-2.31*
Support from friends	-.303	.102	-2.96**
Distancing	.006	.035	.161
Distancing by Friend sup.	.019	.019	.977

*Dependent variable: Pain*

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)

Table 10: Hypothesis 5

*Results from regression analyses predicting partner distancing behavior from (a) partner-reported symptoms of depression, (b) partner-reported symptoms of anxiety, and (c) discrepancies between patient and partner reports on a cancer issue inventory*

Variable	<i>B</i>	<i>SE</i>	<i>t</i>
Partner depression	.212	.120	1.76
<i>Dependent variable: Partner distancing behavior</i>			
Partner anxiety	.047	.115	.405
<i>Dependent variable: Partner distancing behavior</i>			
Issue inventory	.165	.042	3.53**
<i>Dependent variable: Partner distancing behavior</i>			

\*\*  $p < 0.01$  (2-tailed)

\*  $p < 0.05$  (2-tailed)

## Figures

Figure 1: Marital Satisfaction moderates the relationship between Distancing and Reported Cancer Pain

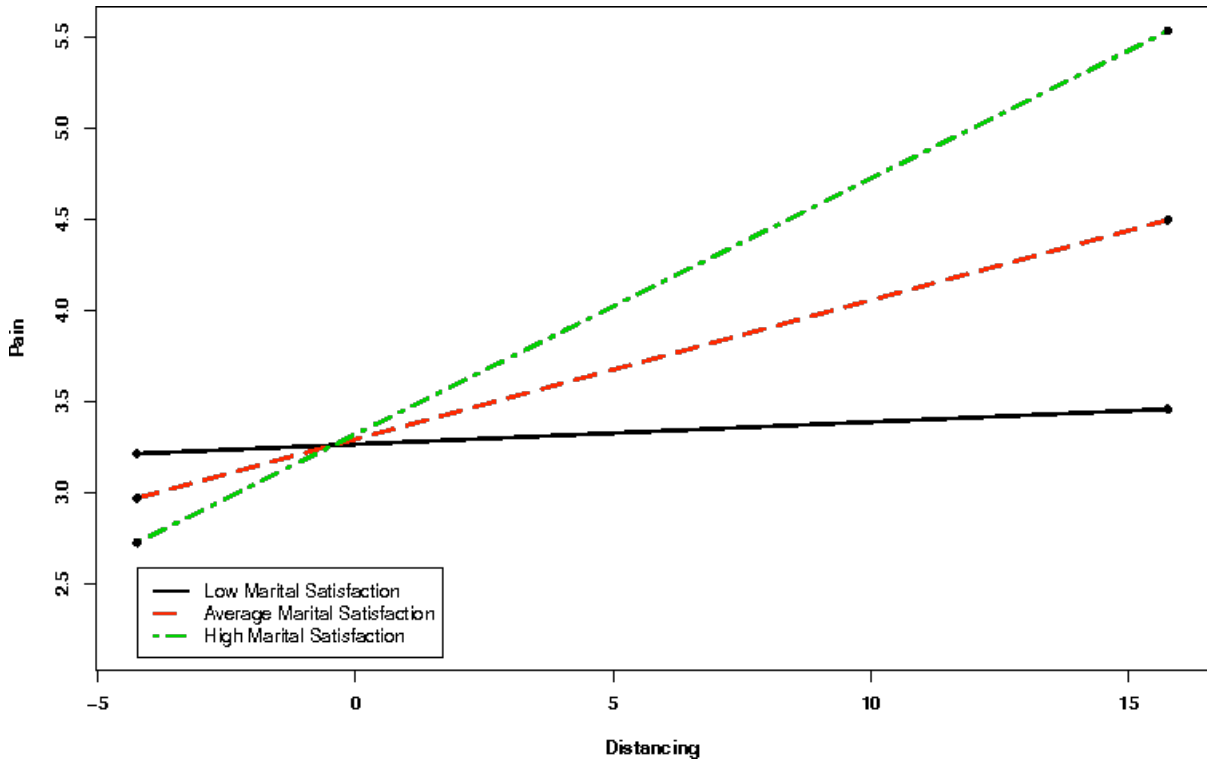


Figure 2: Marital Satisfaction moderates the relationship between Distancing and Somatization

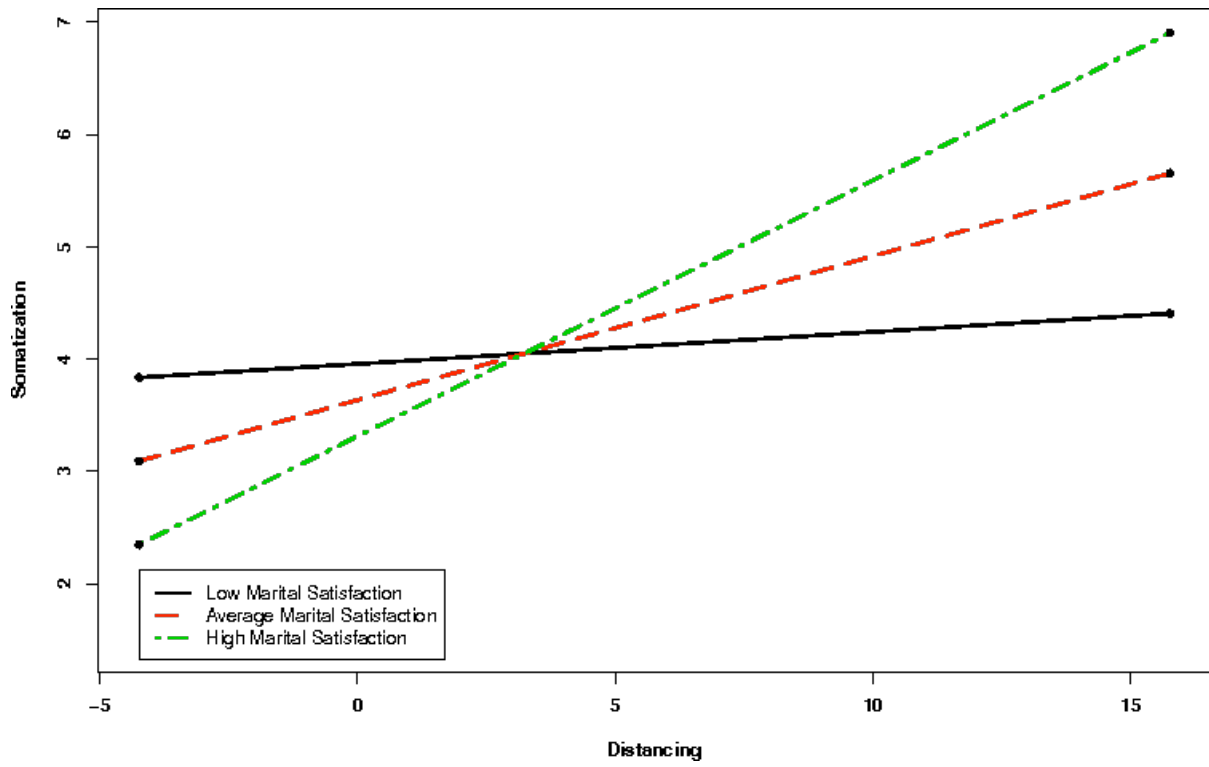
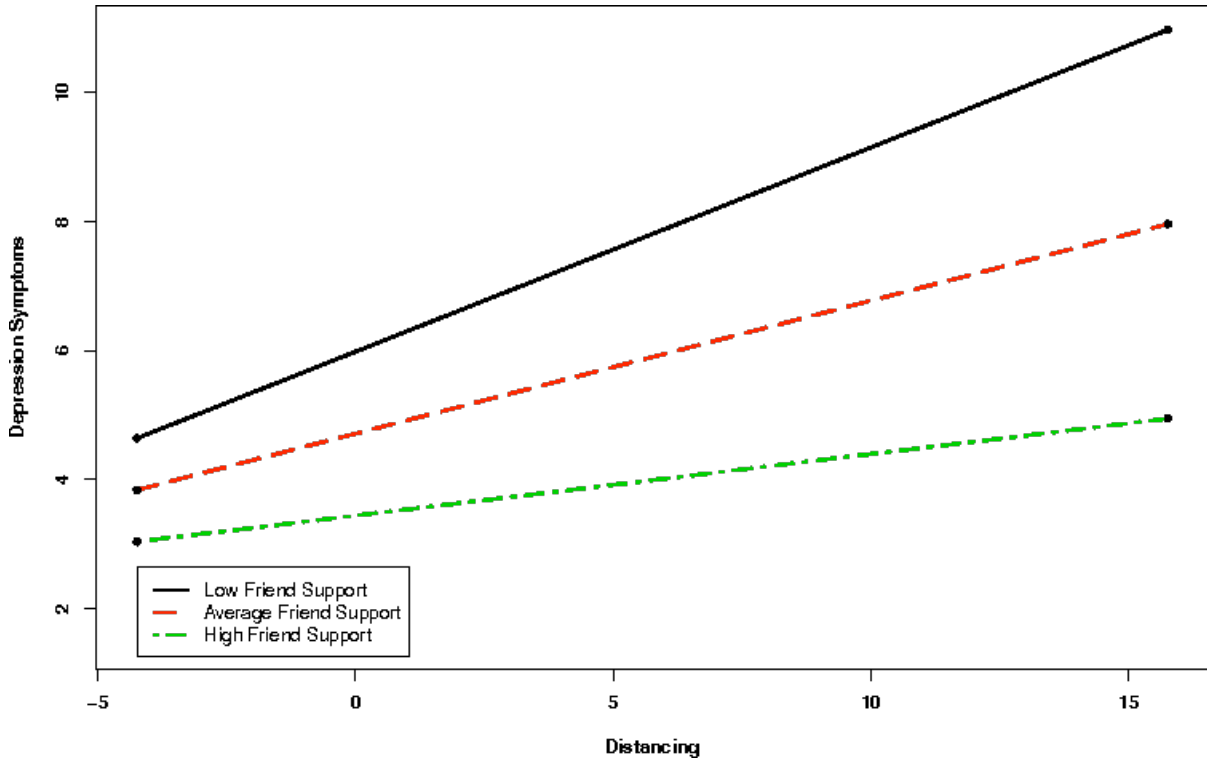


Figure 3: Outside Support moderates the relationship between Distancing and Depressive Symptoms



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