

Describing Health-Related Outcomes for Couples Experiencing Prostate Cancer: Differences and Similarities

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Purpose/Objectives: To describe health-related outcomes for couples dealing with prostate cancer before the patient started treatment and 6, 12, and 18 months after treatment.

Design: Survey with longitudinal, comparative, and predictive elements.

Setting: Tertiary care nonprofit medical center in the southwestern United States.

Sample: A convenience sample of 216 patients treated for prostate cancer and their partners was enrolled. The mean age of patients was 68 years; 64 years for their partners. The average length of marriage was about 35 years. About 75% of patients and more than 50% of partners had at least some college education.

Methods: Study participants completed questionnaires before treatment and 6, 12, and 18 months after treatment.

Main Research Variables: Health-related quality of life, health status, and marital satisfaction.

Findings: Patients' scores were associated with partners' scores more than 50% of the time throughout the study. Relationship satisfaction was the most strongly related variable between patient and partner. Cross-lag analyses suggest that couples' scores demonstrate a reciprocal pattern of influence between the dyads throughout the study.

Conclusions: Patients' scores were associated with partners' scores on most outcome variables. Both are affected by prostate cancer and the treatment experience.

Implications for Nursing: Nurses should actively include partners in all information and education sessions connected with prostate cancer treatment and follow-up. In addition, the unique experiences of partners of patients with prostate cancer should be identified and addressed.

Key Points . . .

- ▶ Survivors of prostate cancer are the fastest growing group of cancer survivors in the United States.
- ▶ Prostate cancer and treatment have an emotional and physical effect on patients and their partners.
- ▶ Partners' health-related and relational outcome is affected regardless of the type of treatment patients receive for prostate cancer. Integrating partners into long-term follow-up nursing care will help address their unique needs.

considerably longer after prostate cancer diagnosis and treatment (Institute of Medicine and National Research Council of the National Academies, 2005; Lewis, 2004). The purpose of this study was to describe the health status, health-related quality of life (HRQOL), and marital satisfaction of patients who have been diagnosed and treated for early-stage prostate cancer and their partners.

Health-Related Quality of Life

Although most studies have focused on mortality and morbidity for patients with prostate cancer, some have focused on HRQOL outcomes, ranging from soon after treatment to months or years after treatment (Althof, 2002; Bacon, Giovannucci, Testa, & Kawachi, 2001; Kim et al., 2001; Sunny, Hopfgarten, Adolfsson, & Steineck, 2007). More than 50% of patients who have been treated for prostate cancer report

Prostate cancer is the most common non-skin cancer diagnosis afflicting men, accounting for an estimated 33% of all cancer cases with about 186,320 new cases diagnosed in 2008 (American Cancer Society, 2008). Although prostate cancer is unique to men, it also affects their partners. The experience of diagnosis and treatment can have a number of physical, psychological, relational, and emotional short- and long-term effects on patients and their partners (Canada, Neese, Sui, & Schover, 2005; Centers for Disease Control and Prevention, 2003; Crowe & Costello, 2003; Fan, 2002; Harden, 2005; Harden et al., 2002; Litwin, Melmed, & Nakazon, 2001; Skerrett, 2003; Walsh, Marschke, Ricker, & Burnett, 2000). Understanding health-related outcomes is important for patients who have been treated for and survived prostate cancer and their partners because patients are living

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adverse urinary, bowel, and sexual health outcomes that can continue for several years following initial treatment (Lee, Hall, McQuellon, Case, & McCullough, 2001; Litwin et al., 2001; Wei et al., 2002). Incontinence rates reported in the literature vary widely, but they seem to occur most often immediately following surgery (Drachenberg, 2000). External beam radiation therapy for prostate cancer can injure the pelvic bed and neurovascular bundles, which also can lead to bowel issues and sexual dysfunction. A reported 25%–65% of patients who have been treated for prostate cancer complain of diarrhea, bowel urgency, and rectal bleeding. In addition, complaints of urinary complications and sexual dysfunction also exist (Bacon et al., 2001; Eller et al., 2006; Galbraith, Ramirez, & Pedro, 2001; Incrocci, Slob, & Levandag, 2002). Patients who have had surgery for prostate cancer report fewer bowel-related complications but tend to experience more urinary complications. Patients treated with radiation report more gastrointestinal, bowel, and rectal treatment-related side effects. All treatment groups report diminished sexual function (Egawa et al., 2001; Litwin et al.; Robinson et al., 2002).

Sexuality and Intimacy Issues for Couples Experiencing Prostate Cancer

Reports of sexual dysfunction following all types of prostate cancer treatment range from 33%–98% (Dahn et al., 2004; Lee et al., 2001; Mirone, Imbimbo, Palmieri, Long, & Fusco, 2003; Schover et al., 2002b). Some patients report seeking professional help for their sexual dysfunction without much success (Bertero, 2001; Bokhour, Clarke, Inui, Silliman, & Talcott, 2001). Sexual dysfunction for patients treated for prostate cancer is complex and goes beyond just physical issues. Researchers and clinicians have focused primarily on erectile dysfunction but have not consistently addressed the broader issues of intimacy (Cooperberg et al., 2003). More than 50% of patients treated for prostate cancer reported a need for additional information regarding sexuality and intimacy-related issues. Thirty-nine percent reported feeling that they had lost part of their manhood (Lintz et al., 2003).

A growing body of literature is focusing on the experiences of couples who have gone through the prostate cancer diagnosis and treatment process (Carlson, Ottenbreit, St. Pierre, & Bultz, 2001; Feldman-Stewart, Brundage, & Mackillop, 2001; Harden, Northouse, & Mood, 2006; Malcarme et al., 2002; Mann, Babb, Pinover, Horwitz, & Ebbert, 2004; O'Rourke, 2007; Skerrett, 2003; Wai-Ming, 2002). Some researchers have noted that partners of patients with prostate cancer experience more psychological distress than the patient (Harden, 2005; Kiss & Meryn, 2001; Perez, Skinner, & Meyerowitz, 2002). The patients also reported frustrations with their relationship and often find it difficult to share emotions and concerns with their partner (Harden). Less than 50% of the patients who reported sexual dysfunction as a treatment sequelae believed that their partners supported them in their efforts to find help (Neese, Schover, Klein, Zippe, & Kupelian, 2003). Being part of a strong, positive, safe, committed, and supportive relational dyad with good communication skills can buffer against psychological distress for patients with prostate cancer (Banthia et al., 2003; Canada et al., 2005; Lewis, 2004; Maliski, Heilemann, & McCorkle, 2001). Few interventions that target relationship outcomes have been tested on long-term

survivors of prostate cancer and their partners (Canada et al.; Crowe & Costello, 2003); however, the couples that have did identify a range of important health-related issues that go far beyond physical sexual dysfunction, including assistance with intracouple communication, help with managing relationship issues, and help with other health-related outcomes associated with treatment sequelae (Mead, 2002; Sanders, Pedro, Bantum, & Galbraith, 2006).

Research in the area of HRQOL, relational, and intimacy issues for survivors of prostate cancer and treatment and their partners remains limited despite a substantive increase in prostate cancer-related discussions in the literature since the late 1990s. Partners of patients with prostate cancer continue to be neglected, although it has been demonstrated that they are influenced by the patient's health status. Limited information exists regarding how prostate cancer affects couples' adaptation to treatment-related health outcomes (e.g., unfavorable sexual sequelae, intimacy issues).

Study Rationale

The rationale for this study is constructed from Padilla et al.'s (1983) conceptualization of HRQOL for patients with cancer, an article on the "seasons of survival" by Mullen (1985), and the Family Systems Theory by Minuchin (1974).

Health-Related Quality of Life

HRQOL for patients with prostate cancer and their families is a complex multifactorial concept embracing many dimensions. Scholars and clinical scientists agree that HRQOL is constructed of patients' and family members' evaluative responses to psychological, physical, social, spiritual, and somatic function. The responses can affect length of survival (Litwin et al., 2001; Padilla et al., 1983). HRQOL for patients with prostate cancer is comprised of their perceptions of how the dimensions of their lives are affected by the diagnosis of prostate cancer and is arrived at by comparisons of actual life experiences to an ideal life or what is normal for them. Therefore, an ideal and healthy HRQOL is the end result of an adaptive process engaged in by patients who are subjected to the distress of the diagnosis of prostate cancer and its related treatments.

"Seasons of Survival" From Cancer

The perspective that lasting complex combinations of physical, psychological, and social effects for patients with cancer extending long after treatment has been completed is at the core of exploring an understanding of surviving cancer. Mullen (1985) suggested that surviving cancer has three distinct phases or seasons: acute, extended, and permanent survival. Acute survival centers around fears of mortality at the time of diagnosis and treatment. This phase can last from the time of diagnosis up to one year. The phase of extended survival is when the patient focuses on lingering treatment-related morbidities and the nagging possibility of disease recurrence. This phase often can last from one to five years. Patients in permanent or long-term survival are challenged with the physical, emotional, and interpersonal sequelae that result from the diagnosis, treatment, and recovery process. This phase is thought to extend beyond five years after treatment.

During the first few weeks and months after treatment, patients with prostate cancer report ongoing concerns about mortality, rising prostate-specific antigen (PSA) levels that

would signify a recurrence of disease, side effects regardless of which treatment was chosen, and sexual or relationship concerns. As a result of late effects from prostate cancer treatment emerging after one year, patients continue to express concerns about PSA, treatment-related symptoms, and sexual function. Therefore, following patients diagnosed and treated for prostate cancer and their partners by assessing health status, HRQOL, and relationship satisfaction through the “seasons of their survival” is a necessary step in understanding their unique experiences.

The Family Systems Theory Applied to Couples Experiencing Prostate Cancer

The affect of the diagnosis of cancer is felt by more than just the patient. The Family Systems Theory suggests that when a person is diagnosed with cancer, the entire family must find ways to incorporate the experience into daily life (Minuchin, 1974). Because of the broad range of family-related activities that are influenced by a cancer diagnosis (e.g., intimacy, communication, finances, transportation, responding to the threat of death), the experience must be viewed as having an effect on the functional balance of the entire family system (Minuchin). Not only does prostate cancer threaten the health status and HRQOL of the patient, it also has a direct and reciprocal affect on how the couple relates emotionally, physically, and intimately. Therefore, the Family Systems Theory provides an additional perspective for understanding that the diagnosis and treatment for prostate cancer challenges the relationship satisfaction patterns between the patient and partner.

Methods

Participants were enrolled into the study at the time the patient decided to obtain treatment for stage I or II prostate cancer at a university medical center in the southwestern United States. The treatment strategies were conventional external beam radiation, proton beam radiation, surgery, mixed beam radiation (a combination of conventional external and proton beam radiation), or watchful waiting. In addition, the patients had to be partnered in a marriage or committed relationship. All participants were required to speak, write, or understand English or Spanish; have no known cognitive deficits; be able to meet their own activities of daily living; and not have other primary comorbidities. Patients who had been diagnosed previously with prostate cancer were not eligible to participate.

A total of 216 couples were enrolled into the study. At six months, 198 couples remained (8% attrition); at 12 months, 187 couples remained (13% attrition); and at 18 months, 161 couples remained in the study (overall attrition rate of 26%). The patients and their partners each were provided with their own questionnaire packets four times over the course of the study (just before treatment and at 6, 12, and 18 months after treatment). Participants were initially recruited in person or by telephone by the principal investigator. Participants were asked to sign the institutional review board-approved consent form if they agreed to participate. The follow-up telephone contacts and mailing of the questionnaire packets were conducted by research assistants. All participants were reminded that it was important not to collaborate with their partner while completing the questionnaires. Missing data were replaced with values predicted from regression equations where scores that

highly correlated with the variables that contained the missing data were used to predict the best replacement value for that variable (Tabachnick & Fidell, 1998).

Instruments

Participants were asked for descriptive information such as age, ethnicity, marital status, length of relationship, income, education, and the frequency, type, and severity of comorbidities. Cancer stage, Gleason scores, and PSA were collected from the medical record.

The **Quality-of-Life Index (QLI)** (Padilla et al., 1983) was designed to assess HRQOL. Three aspects of the scale were assessed, including general physical condition, important human activities, and general quality of life. The QLI contains 14 items and uses a 100 mm linear analog scale. Examples of end points that served as anchors for the linear analog scale were “none” or “not at all” at the left end of the scale to “normal for me” at the right end of the scale. Scores were obtained by measuring the point at which the patient marked an “X” and averaging those measurements for all 14 items. Internal consistency was 0.88.

As a general measure of health status, the **Medical Outcomes Study General Health Survey (SF-36)** contains 36 items that represent eight health concepts: physical functioning, social functioning, physical role function, emotional role function, mental health, energy, pain, and general health. Reliability coefficients for the scales ranged from 0.81–0.88 (Stewart, Hays, & Ware, 1988). Scores for the subscales ranged from 0–100, with high scores reflecting better health. Two additional scores were calculated from the eight scales: physical components summary (PCS) and mental components summary (MCS) scores. The two scores represent aggregate scores based on the scales that measured the eight health concepts. The PCS score is derived from the physical function, physical role function, pain, and general health scales, and the MCS is derived from the mental health, energy, social function, and emotional role function scales. The scores are standardized and have a mean of 50 and a standard deviation of 10 (Ware, Kosinski, & Keller, 1994).

The **Dyadic Adjustment Scale (DAS)** (Spanier, 1976) was designed to assess the quality of marriage and other similar dyads and satisfaction with the relationship. The 32-item scale was constructed of four empirically supported components of consensus, satisfaction, cohesion, and affectional expression. Items are scored on Likert-type scales and the range of total scores for the measure is 0–151, with higher numbers representing a higher level of marital adjustment and satisfaction. The internal consistency reliability coefficient for the measure was 0.96, and it has been assessed for criterion and construct validity.

Data Analysis

Differences between patients’ and partners’ scores on the outcome measures were compared using multiple dependent t tests. Multiple regression was used to determine the second order partial correlations while controlling for frequency and severity of other health issues reported for patients and partners. Exploratory cross-lag models were constructed to provide another way to look at the relationships among the HRQOL outcome measures across time and variables to see how much influence the patients and partners had on each others’ scores over the course of the study. Cross-lag analyses are

Table 1. Demographic Characteristics of Patients

Variable	Watchful Waiting (N = 12)	Surgery (N = 39)	Conventional Radiation (N = 8)	Mixed Beam Radiation (N = 48)	Proton Beam Radiation (N = 109)
\bar{X} age (years)	73	61	68	70	67
Average years with partner	40	27	44	30	33
At least some college	67%	72%	63%	86%	82%
Caucasian	92%	68%	88%	90%	90%
Average number of other health issues	1.9	1.2	1.7	1.6	1.2
\bar{X} affect of other health issues	3.1	1.8	2.3	2.0	1.9
Average prostate-specific antigen	7.0	7.9	7.0	11.8	6.1
\bar{X} Gleason score	7.0	6.0	5.0	6.0	6.0
Receiving hormone treatment	33%	8%	13%	71%	22%

N = 216

useful when a lag in time between two variables is apparent and interest exists in the cross correlations between the variables across both time and the variable (Munro, Visintainer, & Page, 1986).

Results

Description of Study Participants

Men: The average patient was aged 67.8 years; patients in the watchful waiting group were the oldest (\bar{X} = 73) and patients in the surgery group were the youngest (\bar{X} = 61). The patients reported that they had been married for an average of 34.8 years. Seventy-four percent of the patients had at least some college education and most were Caucasian (86%). The patients reported they had one to two (\bar{X} = 1.5) other health issues that affected their lives between “slightly” to “moderately,” with an average score of 2.2 on a scale of 1–5. The average PSA before treatment was 8 ng/ml with the patients in the mixed-beam radiation group having the highest average PSA of 11.8. Total Gleason scores for the sample ranged from 5–7. Twenty-nine percent of the patients had received some form of hormone intervention before treatment for prostate cancer with the patients in the surgery group having received hormones least often (8%); 71% of the patients in the mixed-beam radiation group received hormone treatment before they started their treatment for prostate cancer (see Table 1).

Partners: The average age of the partners in the study was 64 years, with the partners of patients who had surgery being the youngest. Sixty percent had at least some college education. The majority of the partners in the study were Caucasian (86%); 6% reported they were Hispanic and 5% were African American. The partners reported they had between one to two health issues (\bar{X} = 1.5) themselves and that their health issues

affected them between “none” to “slightly,” with an average score of 1.9 on a scale from 1–5. All partners were women (see Table 2).

Instrument Scores

Because multiple tests were used, a risk for inflated study-wise error existed. In addition, because the group sizes were uneven, caution should be used in interpreting the findings and more focus should be given to trends that are present in the data.

Before treatment began, the patients reported better scores than their partners on a number of subscales of the SF-36, including relationship satisfaction (p = 0.05), physical role function (p = 0.05), emotional role function (p = 0.01), mental health (p < 0.001), and pain (p < 0.001). However, the partners reported better general health (p = 0.006) than the patients before treatment. The partners reported better HRQOL (p = 0.001) than the patients at the six month time point; however, the patients again reported better mental health (p = 0.04). In addition, the patients reported they had better general health (p = 0.007) than their partners. The partners reported better HRQOL (p < 0.001) and general health (p = 0.05) than the patients at the 12 months time point; however, the patients continued to indicate they had better mental health (p = 0.04) than their partners.

At the last data collection point (18 months), the partners again reported they had better overall HRQOL (p = 0.009). Partners also reported more energy (p = 0.001) and better mental health (p = 0.02) than the patients. To provide a better overall summary of the findings between the couples, the PCS and MCS were calculated. Based on the overall summary, a difference was noted between patients and their partners only on the measure on the MCS before treatment (p = 0.009) (see Figures 1 and 2). No other significant differences existed

Table 2. Demographic Characteristics of Patients' Partners

Variable	Watchful Waiting (N = 12)	Surgery (N = 39)	Conventional Radiation (N = 8)	Mixed Beam Radiation (N = 48)	Proton Beam Radiation (N = 109)
\bar{X} age (years)	68	56	68	66	62
At least some college	75%	64%	13%	71%	75%
Caucasian	92%	74%	88%	91%	86%
Average number of other health issues	1.9	1.4	0.9	1.5	1.6
\bar{X} impact of other health issues	2.0	2.2	1.6	1.8	2.0

N = 216

between the patients and partners when the summary scores were considered. The patients' scores on all outcome measures predicted 63% of their partners' scores on the corresponding variable (see Table 3).

The patients' scores before treatment significantly predicted partners' scores on 5 of the 10 outcome measures, including relationship satisfaction, emotional role function, energy, mental health, and social function. Patients' scores six months after treatment predicted partners' scores on 7 of the 10 outcome measures, including HRQOL, relationship satisfaction, physical function, physical role function, emotional role function, mental health, and general health. A similar pattern was noted 12 months after treatment in that patients' scores predicted partners' scores on 9 of the 10 outcome measures; pain was the only variable not associated between the couples.

Patients' scores 18 months after treatment predicted partners' scores on 7 of the 10 outcome measures, including HRQOL, relationship satisfaction, physical function, physical role function, emotional role function, energy, and social function. However, no changes were seen in the magnitude of the relationship between patients' and partners' scores from before treatment to the 18 month time point.

The authors in the current study examined how well patients' scores on the outcome variables predicted partners' scores on the same variables over time. In addition, determining whether the predictions held up over the four data time points in the study also was studied. The HRQOL of the patients before treatment predicted partners' HRQOL at six months. Partners' scores, in turn, predicted patients' HRQOL at 12 months. The pattern was slightly different in terms of relationship satisfaction. Partners' relationship satisfaction scores before treatment predicted patients' scores at six months. Partners' relationship satisfaction scores at six months again predicted patients' scores at 12 months.

The eight health status subscales were used to calculate MCS and PCS. Partners' scores on the MCS scale at six months predicted patients' scores on the same scale at 12 and 18 months. In addition, patients' scores on the MCS at 12 months predicted partners' scores at 18 months; however, it was a negative relationship (see Figure 3).

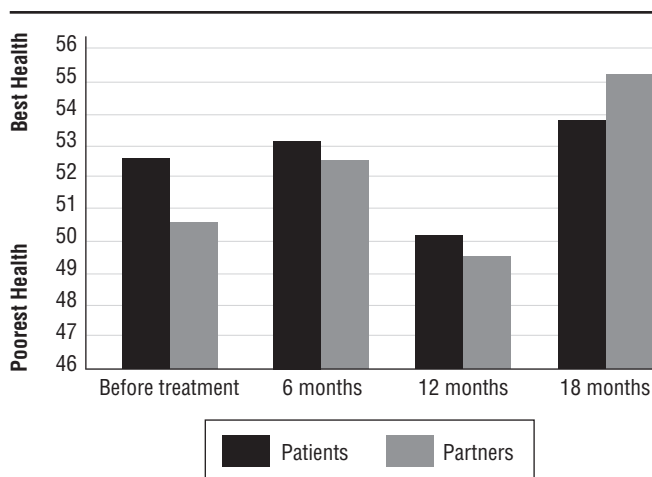
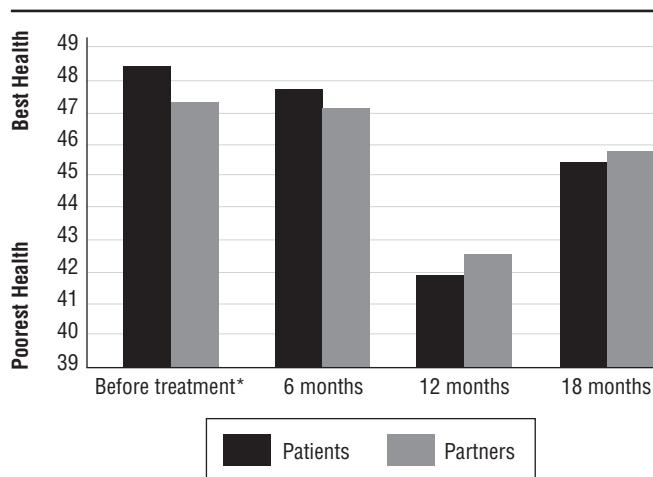


Figure 1. Comparisons of Mental Component Summary Scores Between Patients and Partners Over 18 Months



* $p \leq 0.05$

Figure 2. Comparisons of Physical Component Summary Scores Between Patients and Partners Over 18 Months

The picture for the PCS scale was more complex. Patients' scores before treatment and at six months predicted partners' scores on the PCS scale at 6 and 12 months, respectively. However, partners' scores on the same scale before treatment and at six months predicted patients' scores at 12 months only (see Figure 4).

Discussion

As anticipated, based on the Family Systems Theory, patients' scores predicted partners' scores on all of the outcome variables for at least one of the four data collection time points over the course of the 18-month study. Patients' and partners' scores were most strongly related in their relationship satisfaction; this was expected because the questionnaire items assessed how the couples were interacting with each other and their perceptions of closeness in the relationship. This supports observations others have made about couples who have experienced prostate cancer; often both members of the dyad report similar perceptions when asked about their marital relationship (Banthia et al., 2003; Maliski et al., 2001). In contrast, when each member of a dyad is asked about their own specific health issue, their reports are not explicitly linked to each other. In particular, patients may have experienced side effects related to treatment, such as bowel and urinary issues, that could have affected the physical components of their health status assessment.

Patients' HRQOL scores also predicted partners' scores at 6, 12, and 18 months, although the prediction was not as strong as the patient's prediction of his partner's relationship satisfaction. Items on this scale were more focused on how cancer-related symptoms might affect an individual. The expected outcome was that partners would experience some of the same outcomes as the patients receiving the treatment and that prediction was supported. Again, although somewhat weaker, partners' responses indicated that their HRQOL was influenced by what patients were experiencing after they completed treatment. The finding that patients and partners are both affected by the treatment also has been found in

Table 3. Partial Correlations Between Patients' and Partners' Outcome Measures

Outcome Measure	Before Treatment	6 Months	12 Months	18 Months
QLI—Health-related quality of life	0.13	0.38**	0.28**	0.28**
DAS—Relationship satisfaction	0.65**	0.63**	0.58**	0.51**
SF-36—Physical function	0.13	0.26**	0.20*	0.32**
SF-36—Physical role function	0.14	0.16*	0.32**	0.29**
SF-36—Emotional role function	0.19**	0.26**	0.35**	0.37**
SF-36—Energy	0.25**	0.09	0.26**	0.19*
SF-36—Mental health	0.35**	0.22**	0.31**	0.14
SF-36—Social function	0.29**	0.04	0.33**	0.23**
SF-36—Bodily pain	0.016	0.09	0.12	0.02
SF-36—General health	0.059	0.21**	0.20*	0.12

* $p < 0.05$; ** $p < 0.01$

DAS—Dyadic Adjustment Scale; QLI—Quality-of-Life Index; SF-36—Medical Outcomes Study General Health Survey

studies of couples experiencing breast cancer (Manne, Ostroff, Winkel, Grana, & Fox, 2005; Wai-Ming, 2002), providing additional support for how connected couples are as they progress through a serious life event.

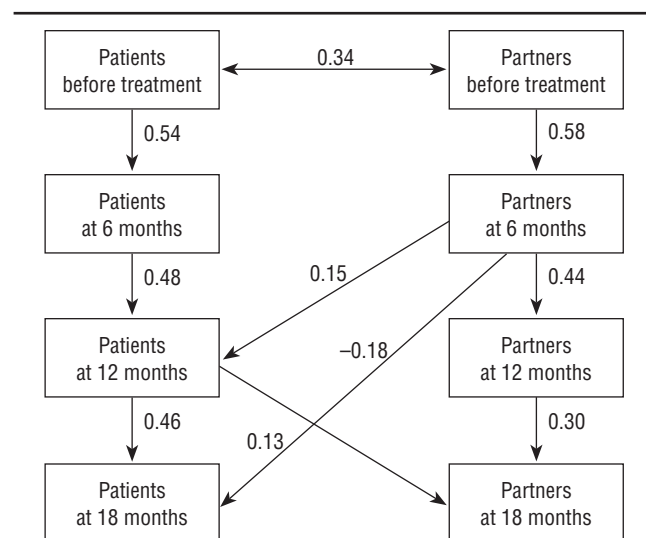
Among the eight health status scales, patients' and partners' scores were most consistently associated was emotional role function as correlated at all four data collection time points in the study. This provides additional evidence that HRQOL, relationship satisfaction, and emotional experiences are closely tied as patients and partners experience prostate cancer diagnoses and treatment.

In addition, patients and partners scores were associated in regard to physical function, social function, energy, and mental health at three of the four data collection time points in the study. A stronger connection between physical function occurred after treatment was completed and when patients and partners could reflect on the treatment-related physical limitations (Deimling, Sterns, Bowman, & Kahana, 2005). In addition, any affect on physical function could influence social function, which is consistent with HRQOL being a complex multifactorial concept that embraces a number of broad dimensions, including psychological, physical, social, spiritual, and somatic function (Litwin et al., 2001; Padilla et al., 1983). A statistical connection between scores of physical and emotional variables further supported this idea. Patients and partners may have experienced changes in energy as they moved into the maintenance and self-management aspects consistent with extended survivorship (Mullen, 1985). Again, because patients' mental health scores predicted partners' scores throughout most of the study, the results provide further support that the experience affects patients and partners alike.

The exploratory cross-lag modeling provided an additional perspective on how patients' and partners' experiences with prostate cancer and treatment were reciprocal. In terms of HRQOL, patients' and partners' outcomes predicted each others' scores at multiple data collection time points over the course of the study. One possible explanation is that as a couple progresses through the diagnosis and treatment experience, roles within the relationship dyad may change. Partners may need to assume more of an emotional caregiving role even if the patient is not expressing overt treatment-related symptoms. Partners feel like they are expected to be the emotional caregivers even if patients are not exhibiting any obvious physical symptoms

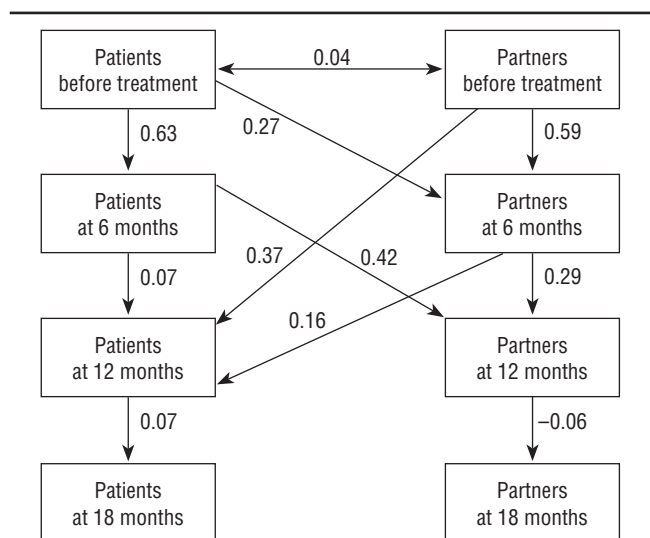
(Sanders et al., 2006). However, the cross-lag analyses demonstrates that partners' scores on relationship satisfaction predicted patients' scores, consistent with anecdotal comments made by study participants where the partners indicated that they felt the patients relied on them for relational stability, particularly during times of health challenges.

Lastly, the patterns of influence between dyad members with respect to health status is similar to the patterns observed with HRQOL where both patients and partners had a reciprocal affect on each other over the course of the four data collection time points. For example, partners' scores on the MCS six months after treatment predicted patients' MCS scores at 12 and 18 months after treatment. At the same time, patients' scores on the PCS before treatment and at the six-month time point predicted partners' scores on the same measure 6 and 12 months after treatment. Partners clearly feel the affect of patients' experiences as they go through treatment, a conclusion that is consistent with other findings for this population (Canada et al., 2005; Cooperbreg et al., 2003; Schover et al., 2002a).



Note. Only significant ($p \leq 0.05$) coefficients are shown. Error coefficients are not shown. Selected coefficients are shown between times.

Figure 3. Cross-Lag Model of Mental Component Summary Scores



Note. Only significant ($p \leq 0.05$) coefficients are shown. Error coefficients are not shown. Selected coefficients are shown between times.

Figure 4. Cross-Lag Model of Physical Component Summary Scores

Limitations

The study was conducted at a southwestern university medical center where the ethnic representation in the sample population did not reflect the ethnic distribution in the area. Therefore, caution should be used when applying the findings. In addition, the number of participants was uneven in each of the five groups in the study, making statistical comparisons among the groups less stable. Also, 26% of the participants dropped out over the course of the 18 month study. Couples who dropped out might have had different experiences with diagnosis and treatment and were not adequately represented in the final analyses. And, all partners were female; therefore the findings cannot be generalized to same-sex couples who are coping with a prostate cancer diagnosis and corresponding treatment.

Implications for Nursing

The primary focus of the study was to describe how the experiences of patients who were diagnosed and treated for early-stage prostate cancer affected their partners. Although partners are not the ones who have received treatment, they were still clearly affected in emotional and physical ways by what patients experienced. Therefore, it is important for healthcare providers to actively include partners in all clinical

experiences, treatment planning and implementation, and long-term follow-up. Nurses can do this by actively including the partners in the care process and ensuring that they are informed about support groups and other educational resources available to survivors of prostate cancer. Nurses also can ask for partner input in all assessments the patient participates in before and after treatment. The partner often has additional information that could potentially influence healthcare decisions.

In addition, determining the unique needs of the partners of patients with prostate cancer is essential and nurses should strive to design treatment, care plans, and follow-up approaches that incorporate their needs, particularly because the concerns of the partners often are not actively sought throughout the diagnosis, treatment, and follow-up process. Nurses should talk to the partner individually to gauge her concerns. Often, when the partner is afforded an opportunity to speak with members of the healthcare team, additional information may emerge that will assist in planning care throughout all phases of treatment. The nurse can encourage the partner to pay attention to her own health and emotional needs so she can continue in the caregiver role. Because most of the attention is focused on the patient, a partner's particular needs can be easily overlooked.

Couples may have concerns about possible sequelae from prostate cancer treatment as they progress into extended and long-term or permanent survivorship. Because patients are living longer after diagnosis and treatment, different needs may emerge as they transition through the subsequent phases of survivorship. In this short-term study, health-related outcomes demonstrated variability over time, suggesting survivorship may not follow a linear trajectory. Therefore, nurses in any clinical setting who interact with couples who have survived prostate cancer and treatment should construct an integrated and inclusive clinical approach to care that will assist couples in managing their responses to a prostate cancer diagnosis, its related treatment, and any sequelae. An example of integrated care for extended and long-term or permanent survivorship includes individualized relational and communication assessments for the couple as a part of all routine assessments during follow-up clinic visits for both cancer and noncancer-related appointments. Following this strategy will contribute to the overall HRQOL and relationship of the patient and partner as they continue to survive as a couple living with a chronic illness.

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