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Pilot Feasibility Study of a Telephone-Based Couples Intervention for Physical Intimacy and Sexual Concerns in Colorectal Cancer

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Abstract

No studies have tested interventions addressing the sexual concerns of colorectal cancer patients and their partners. We report findings from a pilot feasibility study of a novel telephone-based Intimacy Enhancement protocol that addresses the intimacy and sexual concerns of couples facing colorectal cancer. Based on a flexible coping model (Reese, Keefe, Somers, & Abernethy, 2010), the intervention was designed to help couples make cognitive and behavioral shifts in their intimate relationships. Eighteen individuals (9 dyads) completed the intervention and completed measures of feasibility (frequency, ease of use, and helpfulness of skills, ratings of rapport), program evaluations, and measures of sexual and relationship functioning. Most participants reported that the intervention was “quite a bit” or “extremely helpful” and that they had used the skills taught within the past week. The skills most commonly practiced and perceived as most helpful tended to be behavioral (e.g., trying a new sexual activity). The largest effect sizes ($.60$) were found for sexual distress, sexual function (female), and sexual communication. Findings from this pilot study suggest that the Intimacy Enhancement protocol is feasible and holds promise for improving sexual and intimacy outcomes in colorectal cancer patients and their partners. Research and clinical implications are discussed.

Keywords

Colorectal cancer; Sexuality; Sexual Dysfunctions; Couple Therapy; Feasibility Studies

Introduction

Although advances in medical and surgical treatments have improved survival and recurrence rates for those with colorectal cancer, many of the treatments have a significant negative impact on sexual function and quality of life (Holm, Singnomklao, Rutqvist, & Cedermarck, 1996). These negative effects can last years after treatment is complete (Camilleri-Brennan & Steele, 2001; Schmidt, Bestmann, Kuchler, Longo, & Kremer, 2005).

Up to 75% of individuals with colorectal cancer experience significant sexual problems after treatment (Chorost, Weber, Lee, Rodriguez-Bigas, & Petrelli, 2000), with as many as one third refraining from sex completely following treatment, irrespective of the presence of physiological dysfunction (Manderson, 2005). Men who have been treated for colorectal cancer commonly experience difficulties with erectile function while women experience decreased lubrication, vaginal atrophy, and pain during sexual intercourse as a result of these treatments (Hendren, et al., 2005; Nesbakken, Nygaard, Bull-Njaa, Carlsen, & Eri, 2000; Sterk, et al., 2005). Having a stoma and an external colostomy pouch (for collection of stool) may lead to particular sexual problems including poor body image (Ronson & Body, 2002; White, 2000), loss of spontaneity, and difficulties created by GI symptoms such as gas or ostomy leakage during sexual activity (Manderson, 2005). Couples also can face significant challenges in their relationships, such as feeling as though their roles have shifted from lovers to patient/caregiver, difficulties with communicating about sex due to the embarrassing topics of feces or odor in the sexual domain, and avoidance of sexual activity (Manderson, 2005; Turnbull, 2001). Yet, surprisingly, to our knowledge, there are no interventions that address the sexual concerns and problems experienced by colorectal cancer patients and their partners.

We developed an intervention that addresses sexual concerns of colorectal cancer patients and their spouses or partners based on: a) an approach we previously described as flexibility in coping with sexual concerns for patients with cancer (Reese, Keefe, Somers, & Abernethy, 2010), b) empirical literature on sexuality in colorectal cancer including interventions in cancer that address sexuality (Canada, Neese, Sui, & Schover, 2005), and c) empirically supported theories of behavioral couple therapy (Epstein & Baucom, 2002) and sex therapy (Leiblum, 2007). This program is telephone-based to reduce participant burden and focuses on the broader target of enhancing intimacy, which we define as an interpersonal process involving mutual sharing and understanding, feelings of closeness, warmth, and affection. This study employs techniques that prior studies addressing sexual issues have also used, such as communication skills training and sensate focus (Canada, et al., 2005; Kalaitzi, et al., 2007). The current intervention is unique in focusing on the broader notion of intimacy and for including individuals with any sexual concerns as opposed to focusing on alleviating a particular sexual dysfunction, such as Erectile Dysfunction (Canada, et al., 2005; Titta, Tavolini, Moro, Cisternino, & Bassi, 2006) or Female Sexual Arousal Disorder (Brotto, et al., 2008). Mounting research supports the use of telephone-based interventions in addressing psychosocial concerns for cancer patients (Campbell, et al., 2007; Porter, et al., 2011). This format may be particularly useful for interventions such as this one that include sensitive material and that involve patients who otherwise might be unable to participate due to travel restrictions. However, it is also possible that the lack of face-to-face contact may reinforce the notion of sexuality as a 'taboo' subject or make it difficult for participants to engage the material. The purpose of the current pilot study was to collect preliminary data on the feasibility and efficacy of the intervention. We hypothesized that the intervention study would be feasible as measured by recruitment and retention rates and participant reports of frequency, helpfulness, and ease of use of skills taught in the intervention. We also hypothesized that preliminary analyses of effect sizes obtained through pre/post scores on outcome measures would show improvements in sexual and relationship outcomes.

Methods

All study procedures were reviewed and approved by the Institutional Review Board at Duke University Medical Center. All participants signed written consent forms.

Study Participants

Patients were eligible if they a) were 21 years of age or older; b) were married or living with a partner for at least 1 year; c) had undergone surgery or other treatment for colorectal cancer; and d) and were able to read and write English. Inclusion was limited to patients with some degree of sexual concerns as assessed by the following question: "Over the past month, how satisfied have you been with your sex life?" Those who indicated they were "not at all," "a little bit," or "somewhat" satisfied were eligible while those who were "quite a bit" or "very" satisfied were excluded. We made this decision because a) this study was designed to help participants identify and address specific problems in their intimate relationships and may not be relevant to couples indicating no problems, and because b) as this was a pilot study, we wanted to ensure that participants would have adequate potential for improvement on outcomes. There were no specific inclusion/exclusion criteria for partners.

Recruitment

Members of the research team used the Duke University cancer registry, medical records screens, and referrals from oncology care providers in the GI Cancer Clinic to recruit individuals who had been diagnosed with colorectal cancer within the five year period beginning in January 2003 and ending in March 2008 using an informational letter from the study team and the patient's physician. Patients were also recruited in-person directly during a routine clinic visit and through responses to advertisements posted in the GI Cancer Clinic. Couples were reimbursed \$10 for completion of each of the two study assessments for a total of \$20 per couple.

Intimacy Enhancement Intervention

Table 1 describes the components of each session of the Intimacy Enhancement Intervention. The Intimacy Enhancement intervention consisted of four 50-minute phone-based sessions teaching patients and their partners a variety of behavioral skills for coping with sexual challenges. Techniques from both sex therapy and couple/marital therapy were incorporated, such as engaging in non-judgmental sensual touching (i.e., sensate focus) (Masters & Johnson, 1970), improving sexual communication, identifying and challenging overly negative or inflexible sexually-related cognitions, and broadening the repertoire of both sexual and non-sexual intimacy building activities. This protocol was specifically developed to address the unique sexual and intimacy-related concerns of colorectal cancer patients and their partners in the context of colorectal cancer. For instance, in session 1, participants received and discussed educational information describing the impact of colorectal cancer on sex and intimacy, identified challenges from a list derived from literature on colorectal cancer, and formulated goals based on these challenges. In sessions 2, participants engaged in communication exercises that used examples from the context of colorectal cancer. Communication skills training included learning about effective communication (i.e., problem-solving and sharing exchanges) and speaker/listener roles, identifying communication challenges, and engaging in a communication practice exercise (sharing discussion). Session 3 included cognitive restructuring exercises designed to help participants notice and change negative or inflexible cognitions related to their sexual relationship and changes related to their cancer and behavioral activities designed to enhance intimacy were also discussed during this session. The general sex therapy technique of sensate focus (e.g., non-demand sensual touching) (Masters & Johnson, 1970) was included as a stepped series of exercises to be completed by participants in between sessions beginning at the first session, with the goal of decreasing avoidance of sensual behaviors and increasing intimacy. Participants were given additional practice assignments to complete between sessions that were designed to strengthen skills learned in session, such as communication practice exercises, and engaging in enjoyable intimacy-building activities.

The manual for this intervention was developed by the first author and is available upon request. Both members of the couple were present for all telephone calls. Sessions were scheduled on a weekly basis whenever possible and all sessions of the intervention were delivered by the first author, J.B.R.

Measures

Assessment questionnaires were collected prior to participation in the first intervention session and immediately after completion of the last session. All questionnaires were completed by participants at home and returned by mail. Demographic and medical information collected from patients included age, gender, education, ethnicity, length of marriage, employment status, stage of disease at diagnosis, age at diagnosis, prior and current use of an ostomy appliance, type of treatment, and time since cancer treatment ended (if applicable).

Feasibility Measures

Utilization of Skills—Participants' self-report of utilization of skills were gathered at post-treatment to provide a measure of study feasibility. Questions were used to assess the perceived frequency, helpfulness, and ease of use of each of skills learned. The skills included in this measure were: Having a discussion about how colorectal cancer affected your sexuality; doing a Focus on Intimacy (sensate focus) exercise; discussing your sexual wants and needs; using "I Statements" when talking with your partner about sexuality or intimacy; trying a strategy to solve a sexual problem (i.e., used a lubricant, tried Viagra); trying a new sexual activity with your partner; challenging negative thoughts; participating in an intimacy building activity other than a Focus on Intimacy activity; and doing something to increase your sexual desire. Frequency of use of skills was assessed through using responses on a 5-point scale where 0=never and 4=twice a day or more. Participants rated the helpfulness of each skill on a 5-point Likert scale where 0=not helpful at all and 4=extremely helpful. Participants rated how easy it was to use each skill using a 5-point Likert scale where 0=not easy at all and 4=extremely easy. The time frame for these questions was the past week.

Program Evaluation—At post-treatment, participants were asked to rate how *easy* it was for them to participate in the study overall and how *helpful* the program was to them overall from 0=Not easy/helpful at all to 3=Extremely easy/helpful. They were also asked to respond with their level of agreement to the following items using a 10-point scale where 1=Strongly disagree and 10=Strongly agree: This program met my expectations; I found this program helpful in improving the intimacy in my relationship with my partner; Overall, I liked the telephone-based nature of the program; and I believe that this is an important program for people with colorectal cancer.

Outcome Measures

Sexual Distress—The Index of Sexual Satisfaction (ISS) (Hudson, Harrison, & Crosscup, 1981) consists of 25 items assessing sexual distress (e.g., "I try to avoid sexual contact with my partner"). Higher scores indicate higher degree of sexual distress. Internal reliability for this scale was high (Cronbach's $\alpha = .94$).

Sexual Function—Sexual function was assessed using the total sexual function scores from the Female Sexual Function Index (FSFI) (R. Rosen, et al., 2000) (19 items) and the International Index of Erectile Functioning (IIEF) (R. C. Rosen, et al., 1997) (15 items). Higher scores indicate greater sexual function. Internal reliability coefficients for sexual function for the FSFI and the IIEF were high (Cronbach's α s = .96 and .94, respectively).

Sexual Communication—The Dyadic Sexual Communication Scale (DSCS) (Catania, 1986), a 13-item scale (e.g., “My partner and I can usually talk calmly about our sex life”), was used to assess perceived quality of communication about sex in intimate relationships. Higher scores indicate better communication. Internal reliability was adequate (Cronbach’s $\alpha = .68$).

Intimacy—The Miller Social Intimacy Scale (MSIS) (Miller & Lefcourt, 1982) is a 17-item self-report questionnaire that assesses degree of intimacy, closeness, and trust that an individual feels in a relationship toward his or her significant partner (e.g., “How often do you confide very personal information to him/her?”). Higher scores indicate greater intimacy. This scale exhibited high internal reliability in the current study sample (Cronbach’s $\alpha = .90$).

Dyadic Adjustment—The 4-item Dyadic Adjustment Scale (DAS-4) (Sabourin, Valois, & Lussier, 2005) was constructed using a nonparametric analysis of the 32-item Dyadic Adjustment Scale. Higher scores indicate a greater degree of dyadic adjustment. Internal reliability was found to be high in the current study sample (Cronbach’s $\alpha = .84$).

Statistical Analyses

Descriptive analyses were conducted to examine recruitment data, pre/post means on outcome measures, and responses to feasibility measures. Pre/post effect sizes were conducted separately for patients and partners by subtracting the mean baseline score from mean post-treatment score and dividing by the standard deviation of the baseline mean. Because of the small sample size, significance values were not computed and only complete data (i.e., data from participants available at both pre/post-treatment) were considered. The magnitude of effect sizes was defined according to standard convention for Cohen’s d statistic where a large effect size $\geq .80$, a medium effect size is between .30 and .60, and a small effect size is between .20-.30 (Cohen, 1988).

Results

Feasibility

Recruitment and Retention—Of the 45 patients screened, 11 patients (24.4%) were excluded for the following reasons: reported being “quite a bit” or “very” sexually satisfied (8); no partner (2); wrong tumor site (1). Of the remaining 34 patients who were eligible, 20 (58.8%) did not agree to participate for the following reasons: lack of time (4); lack of interest (3); partner not interested (1); partner health reasons (3); patient not willing to discuss issues (1); issues are improving (1); family issues (1); no reason (3); and unable to contact (3). Fourteen couples consented to the study, with 11 couples participating in at least one session and 9 couples completing all sessions and all assessments. Two couples withdrew prior to the first session and one was lost to contact after consenting. One couple left the study after one session due to recurrent disease in the patient; one couple completed 4 sessions but did not return the follow-up assessment packet. On average, couples completed the four sessions within 5.1 weeks ($SD = 1.1$; range = 4-7). Baseline demographic and medical data for the nine couples who completed all study activities are presented in Table 2. Reports of utilization of skills and of ease and helpfulness of skills are shown in Table 3 and are uniformly high.

Program Evaluation—The majority of study participants (83%) rated the intervention as at least “quite a bit” easy to participate in overall, and as at least “quite a bit” helpful overall. The majority of participants also reported that the intervention met their expectations (83%), that they believed this to be an important program for people with colorectal cancer (83%),

that they liked the telephone-based nature of the program (78%), and that the intervention was at least “quite a bit” helpful in improving intimacy in their relationship (72%).

Preliminary Effect Sizes

Baseline and post-treatment means for the couples who completed the study are presented in Table 4. Patient data showed large effect sizes ($> .80$) for sexual distress, female sexual function, and sexual communication; a medium effect size (.30 - .60) for dyadic adjustment; and small effect sizes (.20 - .30) for intimacy. For patients, male sexual function showed little improvement. Data from spouses showed large effect sizes ($> .80$) for female sexual function and medium effect sizes (.30 - .60) for the remaining outcome measures (i.e., sexual distress, male sexual function, sexual communication, and intimacy, and dyadic adjustment).

Discussion

Findings from this pilot study present preliminary evidence of the feasibility and efficacy of a novel program developed specifically to help colorectal cancer patients and their partners learn skills to cope with the effects of cancer treatment on physical intimacy and sexuality. Results from couples who participated showed that most perceived the program as quite easy to participate in, quite helpful overall, and as being an important program for people with colorectal cancer. Further, the large majority of the participants had practiced skills taught in the program during the week they completed the post-treatment measures. The skills that emerged as the most helpful to participants were those that were behavioral in nature and that were most heavily emphasized throughout the program, including communication, engaging in sensual touching and other intimacy-building activities, and trying new sexual activities. The skill of challenging thoughts was less commonly practiced which may be because this relatively complex skill takes longer to form into habit compared with the behavioral skills.

The recruitment and retention rates in this study are comparable to those found in other couple-based or caregiver-assisted intervention studies which generally fall between 30-50% (Baucom, et al., 2009; Given, et al., 2004; Kurtz, Kurtz, Given, & Given, 2005; S. L. Manne, et al., 2005) but also suggest that there is considerable work ahead for improving recruitment and retention rates for such studies. Studies examining couple-based interventions in cancer have shown significant challenges in recruiting and retaining couples (Baucom, et al., 2009; Canada, et al., 2005; Fredman, et al., 2009; S. Manne & Badr, 2008). Some potential reasons for this difficulty in recruiting for couple-based studies in cancer are distance to travel for the study and poor timing of approaching a patient immediately after diagnosis. Identifying the right time to approach patients for recruitment is a challenge. Recruiting too early (i.e., immediately after diagnosis) may mean the couple is unable to focus on issues other than treatment while recruiting too late (i.e., well into the survivorship phase) makes it harder to recruit patients as they are less often seen in clinic and may not want to deal with reminders of cancer once they have returned to life after cancer treatment. It would be interesting to collect information on which member of the couple, i.e., the patient or partner, is more interested in participating in the intervention as this may influence whether the couple participates. Obtaining this information may lead to more targeted recruitment efforts. Having staff actively involved in research is often invaluable; accordingly, a lack of encouragement by physicians can be an important reason behind lower than ideal recruitment rates for such trials (Fredman, et al., 2009).

Based on our pilot data, we have obtained funding to conduct a larger controlled testing the efficacy of the Intimacy Enhancement protocol. We are employing several strategies that will enhance recruitment rates in this larger trial. First, we are continuing to utilize a

telephone-based format which eliminates the participant burden of travel. Second, we are expanding the inclusion criteria to include patients still in treatment as well as those who have completed treatment, thereby increasing the number of time points at which patients are approached in their treatment trajectories. Ultimately, further research will be necessary to identify the best times to recruit patients into these kinds of studies. Third, we are integrating study staff into the oncology treatment teams by having staff attend team meetings and be present on routine clinic days (i.e., medical oncology, radiation oncology, and surgery). A longer-term strategy to overcome these recruitment challenges (i.e., finding the appropriate time to approach a patient, and lack of involvement by providers) may be to integrate an evaluation of sexual and relationship issues into the symptom management process by providers as part of routine cancer care. Finally, a potential reason for limited enrollment may have been the length of the patient questionnaires, although we did not receive specific complaints to this effect. The potential role of limiting assessment batteries should be considered in future work. Even with expanded recruiting efforts, difficulties in recruiting and retaining couples are to be expected. Requiring two people to be interested and willing to participate instead of one increases the likelihood that there will be a refusal, and in fact, interventions that incorporate the spouse or caregiver tend to have recruitment rates on the lower end of the average range for psychosocial interventions (i.e., 34-43%) (Given, et al., 2004; Kurtz, et al., 2005; S. L. Manne, et al., 2005). Inevitably, not all couples experiencing sexual problems will be interested in obtaining help for these issues, such as couples who start out with no sexual activity and are uninterested in focusing on this aspect of their relationship. If expanded recruitment efforts were to increase recruitment rates by even 10%, this would be a positive increase that would fall within the ranges seen in prior studies. Future studies might benefit from assessing *reasons* for lack of interest in participating in a study such as this one in greater detail.

This study offered an examination of the preliminary efficacy of this protocol. Effect size analyses showed large to medium effects on nearly all sexual and relationship outcomes, with the largest improvements seen for sexual distress, sexual function for female participants, and sexual communication. Because we analyzed effect sizes separately for patients and spouses, and because the sexual function measures are gender-specific, the numbers of participants included in the effect size calculations for sexual function, in particular, are quite low; these effect sizes should be interpreted with caution. It is worth noting that the largest improvements were seen for measures assessing perceived quality of the sexual relationship such as sexual distress. This is not surprising given that the Intimacy Enhancement intervention targeted improved coping with sexual and intimacy-related difficulties, rather than solving a particular sexual problem or dysfunction and given that trials aimed at improving sexual function also often lead to improvements in general sexual distress or satisfaction (Brotto, Yule, & Breckon, 2010). Interestingly, male sexual function for both patients and spouses started out in the low range, i.e., more than one standard deviation below the mean of a normal population (or -42.9) (Hendren, et al., 2005; R. C. Rosen, et al., 1997) and increased to the normal range for spouses only. Male sexual function in spouses may have started out low because of their own age or medical conditions, stress over their wives' disease, or other factors. The fact that male spouses' sexual function was more malleable than those of male patients suggests that non-physiological factors may be playing more of a role in the spouses' sexual function at baseline than that of the patients. Even when including only couples who report some degree of sexual problems, there is still likely to be variability in the levels of sexual function and activity of couples in a trial such as this. Future studies with larger sample sizes will be needed to examine which couples benefit the most in their sexual outcomes from interventions such as this (i.e., those who start out with poor or relatively better sexual function), to determine which outcomes are most likely to be improved through participation, and to identify mechanisms of change. Further, because we included both

sexually active and sexually inactive participants in this intervention, it is conceivable that any resumption of sexual activity would artificially inflate the intervention's effects. However, only two participants indicated a clear lack of sexual activity at baseline and resumption of sexual activity (on the FSFI or IIEF) after the intervention, making such inflation unlikely. In the future, it would be informative to compare the effects of such an intervention on couples who were sexually inactive or active at baseline.

Large effect sizes were seen for sexual communication, which is expected given that communication skills were explicitly taught and practiced in this intervention through both in session and at-home exercises. We suspect that the smaller changes seen in intimacy and dyadic adjustment may be due to characteristics of these measures. Specifically, the intimacy scale captures feelings of trust and sharing with one's partner, which may be too general to be responsive to the material presented in this intervention. In addition, we used the very brief four-item measure of dyadic adjustment which may function better as a measure to screen for significant distress but which may not have the sensitivity to catch subtle improvements in marital quality. Both patients and spouses began the study in the non-distressed range of dyadic adjustment (≥ 12) although they were only two points above the cutoff score suggested by Sabourin and colleagues (Sabourin, et al., 2005) to represent "borderline" distressed on the 4-item DAS (i.e., 14). In future studies, it would be interesting to compare the improvement of couples who start the intervention with high marital adjustment with those who start with low marital adjustment. Further, some couples are likely to have sexual and/or relationship difficulties that persist beyond the intervention sessions and for whom additional assistance or counseling is likely to be beneficial. These couples should be offered additional support such as resources and referrals to appropriate therapists at the conclusion of their participation in the study.

The generalizability of the findings from this study is limited because of the small sample size and lack of a control group. Without a control group, it is not possible to draw definitive conclusions about the efficacy of the Intimacy Enhancement protocol tested in this study. We also do not have support for the durability of effects seen in this study due to lack of long-term follow-up, which will be important to do in future studies. Despite these limitations, this study has several strengths, including the use of a comprehensive set of outcome and feasibility measures, a grounding in empirically supported cognitive and behavioral studies of sexual and relationship therapy, and a test of a novel intervention utilizing both a telephone and couple-based format. The vast majority of participants in this study liked the telephone-based format of this study, offering evidence for the use of this format in interventions addressing issues of an interpersonal or sexual nature. Telephone-based studies may present unique challenges for dyads such as ensuring that both members of the couple adequately engage with the material. Though we did not collect individual measures of study participation from participants, we employed several strategies to ensure that both members of the couple engaged the intervention material including making sure that both members of the couple participated equally in communication exercises. Future studies would benefit from examining how best to include and engage both members of a dyad in telephone or other media-based interventions. By providing support for the feasibility of a program developed to address sexual and intimacy concerns for colorectal cancer patients and their partners, this study contributes to research on sexual concerns in cancer and treatment approaches to such concerns. In addition, we believe that the intervention studied here is flexible enough to be adapted to suit the needs of other oncology populations as well as couples facing other medical conditions.

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Table 1

Summary of Intimacy Enhancement intervention sessions

Session	Session Targets	Session Activities	Homework Assignments	
1	Set framework and establish rapport; Provide information about sexuality in colorectal cancer	Provide education and normalization of concerns; Identify challenges using list of frequently mentioned challenges of CRC patients; Set goals; Introduce Focus on Intimacy exercise	1	Read educational handouts
			2	Focus on Intimacy Exercise 1 (touching above the waist)
2	Improving communication about sex and intimacy	Review homework; Identify positive and negative methods of communication; Discuss problem-solving and sharing exchanges; Engage in communication practice exercise	1	Communication practice exercise
			2	Focus on Intimacy Exercise 2 (below the waist excluding genitals)
3	Enhancing intimacy through problem-solving and challenging thoughts	Review homework; Discuss problem-solving in relation to sexual concerns; Identify negative/inflexible thoughts; Practice challenging negative/inflexible thoughts; Discuss broadening range of intimacy-building activities	1	Engage in intimacy-building activity
			2	Focus on Intimacy Exercise 3 (below the waist including genitals)
4	Planning Ahead/Preparing for Challenges	Review homework; Review skills; Evaluate progress toward goals; Discuss plans for continued skills practice; Discuss plans for approaching future challenges; Conclude program	Complete post-treatment packets	

Table 2

Baseline characteristics of study patients

Characteristic	Mean	Standard Deviation	%	n
Patients (<i>n</i> = 9)				
Gender (% male)			65	5
Age	61.6	14.5		
Ethnicity				
White			89	8
Hispanic			11	1
Education				
Less than high school			11	1
High school graduate			22	2
Some college/ Associate's degree			33	3
Graduate degree			33	3
Length of marriage (in years)	34.0	16.1		
Employment Status				
Full Time			33	3
Part Time			11	1
Retired			44	4
On disability			11	1
Rectal cancer (vs. Colon)			67	6
Time since treatment completion				
Less than one month			11	1
1-3 months			11	1
3-6 months			11	1
6-12 months			22	2
12-24 months			22	2
> 24 months			11	1
Disease stage				
Stage I			22	2
Stage II			56	5
Stage IV			22	2
Past ostomy use			22	2
Current ostomy use			33	3
Treatment				
Surgery only			22	2
Surgery and radiation			11	1
Surgery, chemotherapy, and radiation			67	6

Table 3

Utilization of skills by participants (N=18)

Skill	% using skill past week	once in	% reporting the skill was quite a bit or extremely easy to use *	% reporting the skill was quite a bit or extremely helpful *
Having a discussion about how colorectal cancer affected your sexuality	72%		83%	83%
Doing a focus on intimacy (sensitive focus) exercise	83%		69%	71%
Discussing your sexual wants and needs	61%		82%	73%
Using "I" statements when talking with your partner about sexuality or intimacy	72%		77%	92%
Trying a strategy to solve a sexual problem	39%		57%	71%
Trying a new sexual activity with your partner	83%		90%	90%
Challenging negative thoughts	61%		55%	55%
Participating in an intimacy building activity (other than a Focus on Intimacy exercise)	82%		85%	77%
Doing something to increase your sexual desire	50%		33%	78%

* Ease and helpfulness of skills were reported out of the participants who had reported engaging in this skill over the past week.

Table 4

Baseline and post-treatment data for patients and spouses

Measure	Possible Range	Baseline Mean (SD)	Post-treatment mean (SD)	Effect Size
<i>Patients</i>				
Sexual Distress	0-100	39.6 (10.7)	28.8 (12.9)	-1.0
Sexual Function- Female	2-36	10.1 (10.3)	21.9 (0.07)	1.2
Sexual Function- Male	5-75	26.0 (16.2)	29.6 (16.8)	0.22
Sexual Communication	13-78	58.4 (7.2)	64.3 (5.8)	0.82
Intimacy	17-170	136.6 (22.5)	143.1 (11.1)	0.29
Dyadic Adjustment	0-24	15.7 (4.4)	17.1 (2.2)	0.33
<i>Spouses</i>				
Sexual Distress	--	39.0 (19.4)	28.2 (25.0)	-0.56
Sexual Function- Female	--	11.6 (7.7)	21.5 (11.0)	1.3
Sexual Function- Male	--	33.5 (23.7)	48.0 (26.2)	0.61
Sexual Communication	--	60.4 (6.6)	64.9 (10.0)	0.68
Intimacy	--	133.8 (19.3)	144.0 (21.8)	0.53
Dyadic Adjustment	--	15.7 (3.4)	17.2 (2.8)	0.45

Note: Sexual Distress=ISS; Higher scores on ISS indicate greater degree of distress; Sexual Communication=DSCS; Sexual Function-Female=FSFI total score; Erectile Function=IIEF Erectile Function Domain score; Intimacy=MSIS; Dyadic Adjustment=DAS-4; Complete data were available for all measures except for sexual function for female patients (n=2) and female spouses (n=4).