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Cancer-related Concerns of Spouses of Women with Breast Cancer

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Abstract

Objective—To describe spouses' reported cancer-related demands attributed to their wife's breast cancer and to test the construct and predictive validity of a brief standardized measure of these demands.

Methods—Cross-sectional and longitudinal data were obtained from 151 spouses of women newly diagnosed with non-metastatic breast cancer. Descriptive statistics were computed to describe spouses' dominant cancer-related demands and multivariate regression analyses tested the construct and predictive validity of the standardized measure.

Results—Five categories of spouses' cancer-related demands were identified, such as concerns about: spouses' own functioning; wife's well being and response to treatment; couples' sexual activities; the family's and children's well-being; and the spouses' role in supporting their wives. A 33-item short version of the standardized measure of cancer demands demonstrated construct and predictive validity that was comparable to a 123-item version of the same questionnaire. Greater numbers of illness demands occurred when spouses were more depressed and had less confidence in their ability to manage the impact of the cancer ($F=18.08$ (3, 103), $p<.001$). Predictive validity was established by the short form's ability to significantly predict the quality of marital communication and spouses' self-efficacy at a two-month interval.

Conclusion—The short-version of the standardized measure of cancer-related demands shows promise for future application in clinic settings. Additional testing of the questionnaire is warranted. Spouses' breast cancer-related demands deserve attention by providers. In the absence of assisting them, spouses' illness pressures have deleterious consequences for the quality of marital communication and spouses' self-confidence.

Keywords

breast cancer; oncology; cancer-related pressures; demands of illness; spouse adjustment; questionnaire development

Introduction

Background and Significance

Breast cancer is an illness of the couple, not a disease of the patient [1-3]. Elevated levels of spousal distress (anxiety, depressed mood) and problems in marital communication have been documented in both cross sectional and longitudinal studies [4-12].

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Despite the magnitude of spouses' distress and its potential impact on their wives' adjustment, there are few descriptive studies of the concerns spouses explicitly attribute to their wives' breast cancer. Of the limited number of studies, study samples have been small and heterogeneous on the type of cancer, disease staging, or length of time of diagnosis. Furthermore, earlier studies have focused more on spouses' distress and psychological morbidity, not their specific cancer-related concerns. What is still needed is a descriptive study of spouses' cancer-related concerns for a homogeneous sample of spouses. Cancer-related demands of illness are defined as the concerns attributed to the cancer experienced by spouses [13].

What is also needed is a brief, valid and reliable measure of spouses' cancer-related concerns that is of potential use in a clinical setting. Although a measure of illness-related demands exists [13], it has been primarily used in assessing the diagnosed patients' demands and has been psychometrically evaluated in heterogeneous populations. Furthermore, the existing measure is burdensome. What is still needed is a valid and reliable *brief* measure of spouses' reported cancer-related concerns that has potential application in research and clinical practice.

The current study has 3 aims: To derive a short-version of a standardized measure of cancer-related spouses' demands from a lengthier standardized measure; to describe the dominant breast cancer-related demands spouses attribute to their wives' diagnosis and treatment for breast cancer; and to test the construct and predictive validity of the short version of the standardized measure of spouses' illness demands.

Methods

Study sample

The sample for the current study consisted of a subsample of spouses who were recruited into a larger two-group randomized control trial of couples affected by recently diagnosed non-metastatic breast cancer (Lewis & Fletcher, Under review). In the larger trial, study participants were intimately partnered or married couples within child-rearing age in which the woman was diagnosed within one year of study entry with Stage 0, I, IIA, or IIB breast cancer, verified through surgical pathology report. Participants in the trial were recruited from two states in the Pacific Northwest; spouses were eligible if they were able to speak, read, and write English as one of their languages and lived within 100 miles of the study center. Study participants were recruited from health maintenance organizations; medical, radiation, and surgical oncologists; and university-affiliated clinics. After approval from the human subjects committees, initial contact to the family was made by an intermediary and followed by a contact from the research team.

The sample for analysis purposes for the current study consisted of all spouses whose wives were diagnosed within 7 months with breast cancer at time of entry into study. A total of 151 spouses met this criterion from the larger sample in the clinical trial.

Spouses in the sample for the current analysis averaged 45.2 (SD 7.5) years of age were well educated and averaged 15.4 (SD 2.4) years of education, and 90% were employed full or part time. Family income was $50,000 or higher for over 60% of the sample. Eighty-nine percent of the men were Caucasian; other ethnicities included Asian (3%), African American (3%), Hispanic (3%), and Native American or Other (5%). The length of the couples' relationship averaged 17.2 (SD 8.6) years.

Rates of depressed mood in the spouses at study entry were low with only 17.2 percent of spouses scoring 16 or higher on the CES-D, a known cut off point for clinically elevated levels of depressive symptoms. Marital distress for husbands was also low; only 10.6% of spouses scored < 100 on the Spanier Dyadic Adjustment Scale, the clinical cut off score for marital maladjustment.

Wives averaged 43.2 (SD 6.4) years of age and had been diagnosed an average of 3.6 (SD 1.4) months when they were recruited to the study. They averaged 15 (SD 2.0) years of education and 70% were employed full or part time. Fifty-nine percent of the women were surgically treated with non-breast conserving surgery and 80% were either receiving adjuvant therapy or were within 3 months of treatment completion at the time of their spouses' participation in the study. The majority (89%) of women were Caucasian; 9 (6%) were Asian, 3 (2%) were Native American and 4 (3%) were African American, Hispanic or other subgroups. Couples had an average of 2 children in the home, the average age of which was 12.6 (SD 3.9) years and 61% were boys. Wives' distress levels were higher than their husbands; 27.8% scored above the clinical cut off for depression on the CES-D Scale and 11.9% scored <100 on the Spanier Dyadic Adjustment Scale.

Study design

The study involved both cross-sectional and longitudinal designs, each of which related to the study aims. The cross-sectional design provided baseline data from 151 spouses of women accrued into the trial, before the to couples' randomization, and was used for study aims 1 and 2. In addition, longitudinal data were obtained at baseline and at 2-months from spouses who had been randomized to the no-treatment control group and were used for study aim 3 (n=73). All study participants completed self-report standardized questionnaires in a confidential setting in their homes, administered by specially trained research assistants who were “blind” to randomization status.

Study measures

Standardized measures were obtained on spouses' cancer- related demands (Demands of Illness Inventory), spouses' depressed mood (Center for Epidemiological Studies-Depression-CES-D), spouses' cancer-related self-efficacy (CASE), marital communication (Mutuality and Interpersonal Sensitivity Scale-MIS), and marital adjustment (Spanier Dyadic Adjustment Scale-DAS). Demographic and treatment information were obtained through self-report measures and disease staging was verified through surgical pathology report.

Demands of Illness Inventory—The original Demands of Illness Inventory (DOII) is a 125-item self-report measure of the perceived illness-related demands, concerns, and stressors attributed to a chronic disease or its treatment [13]. Cronbach's alpha internal consistency reliability for the total instrument was 0.96 as determined in a sample of 125 men whose wives either had breast cancer (n=96) or diabetes (n=29). The scale contained seven theoretical dimensions: physical symptoms, personal meaning, self-image, social relationships, family functioning, monitoring symptoms, and treatment evaluation [13-15]. The question stems ask respondents to tell the extent to which they have had these experiences as the result of their partner's health problem during the last two weeks including today. Ordinal response options range from a “not at all” (0) to “extremely” (4).

The original DOII has well established internal consistency reliability; concurrent, predictive, and construct validity for patients and their husbands in heterogeneous samples with different types of serious illness, including bone marrow transplant recipients [13,16,17]. A shortened 59-item version demonstrated an internal consistency coefficient of 0.93 in a sample of 125 bone marrow transplant recipients [18].

Marital Communication—The quality of martial communication was measured with the Mutuality & Interpersonal Sensitivity Scale (MIS) [3,19]. The MIS is a 23-item self-report questionnaire that measures two aspects of marital communication about the breast cancer: open communication and avoiding bad thoughts about the breast cancer. An example item on the Open Communication subscale is, “We understand how each of us is feeling about the breast cancer.” An example item on the Avoiding Bad Thoughts subscale is, “We don't talk together about the sadness I feel about the breast cancer.” Negative responses are reverse coded so that higher scores denote higher quality of marital communication about the breast cancer.

The internal consistency reliability coefficient for the total scale of the MIS, calculated for the current study sample, is 0.91. The internal consistency reliability coefficients for the Open Communication and the Avoiding Bad Thoughts subscales are 0.84 and 0.83 respectively.

Marital Adjustment—Marital Adjustment was measured by the 32-item Dyadic Adjustment Scale [20,21]. The four theoretical subscales include affectional expression, consensus, cohesion, and satisfaction. Internal consistency reliability for the current study sample was 0.90 for the total scale and subscale reliabilities ranged from 0.67 to 0.84. The validity of this instrument has been examined in earlier studies, and is positively associated with higher levels of psychosocial functioning in mothers with chronic medical illness [22].

Depressed Mood—Depressed Mood was measured by the Center for Epidemiological Studies-Depression Scale (CES-D) [23,24]. The CES-D is a 20 item self-report scale which measures the frequency in which symptoms of depressed mood are experienced within the past week. The internal consistency reliability in this study sample is 0.83. Scores can range from 0 to 60 and a score of 16 or higher may indicate a clinical level of depression. Internal consistency ranged from 0.84 to 0.85 in three samples from general populations [23]. This instrument has been linked to the broader concept of “distress” in cancer-related research and the validation of the CES-D has been well-established [25-27].

Self-Efficacy—Self-efficacy was measured by the Cancer Self-Efficacy Scale-Spouse (CASE), a 23-item self-report measure of a person's level of self-confidence in being able to manage the impact that cancer has on both oneself and the spouse [3]. Higher scores denote higher self-confidence. The wording and format of the structured response options derive from Social Cognitive Theory [28-30]. There are two theoretical dimensions in the scale: self-management and family management. Self-management measures confidence in managing the impact of the cancer in general, e.g., “I am able to use information and resources to cope with the demands of the cancer and its treatments.” Family management measures confidence in supporting and managing the impact of the cancer on the patient/partner, e.g., “I am able to support my spouse through the cancer.”

The internal consistency reliability of the CASE for the spouses in the current study sample was 0.97 for the total scale, and 0.95 for both the self-management subscale and the family management subscale.

Study Results

Preparatory Analysis

Before conducting analyses, data were inspected for sampling distribution, outliers, covariates and floor and ceiling effects. Data were transformed on the measure of depressed mood (CES-D). All other data met requirements for regression analyses and no subsequent data transformations were necessary.

Study Aim 1: To derive a short-version of the Demands of Illness Inventory for use in a homogenous sample of spouse-caregivers.

A short version of the Demands of Illness Inventory (DOII) was derived from the longer version using a systematic phased process. Initially, item frequencies from the study sample of 151 spouses were inspected from the pool of items in the original scale. Items were identified that spouses chose as “quite a bit” or “extremely” demanding. All items that met this criterion were retained for use in the short version of the DOII. This first step enabled us to identify items that spouses chose as both relevant and as dominant pressures they attributed to their wife's breast cancer during the first 7 months of diagnosis and treatment. Second, the percent of spouses who chose the items was calculated. See Table 1. The short version of the DOII contained 33 items that were selected by 18 to 42 percent of the spouses.

In addition, items were inspected that spouses rated as “not at all” or “rarely” demanding. These non-relevant illness-related demands are summarized in Table 2 and were not retained in the short version of the scale. Items in which the majority of spouses responded that the item was “a little bit” or “moderately” demanding were also deleted. Finally, items were deleted in which less than 18% of the spouses responded that the item was “quite a bit” or “extremely” demanding. These analyses resulted in removing a total of 90 items from the original 123-item questionnaire.

The internal consistency reliability of the total scale of the short-version of the DOII was 0.94 for the sample of 151 spouses. The internal consistency reliabilities of the 5 theoretical subscales for the short version of the DOI are listed in Table 3; reliabilities ranged from 0.77 to 0.89 for this study sample.

The final 33-item short version, referred to as the DOII-S, contained five theoretical subscales: 1) Personal concerns about self, including uncertainties; 2) concerns about the wife's well being; 3) concerns about sexual activities; 4) family concerns, including children; and 5) concerns about his role with his wife during treatment. A summary of these dominant illness-related demands follows, described from the content of the items that comprised each subscale.

Spouses were concerned about themselves, including their own mortality, the need to reorder their life priorities, and the multiple uncertainties they were facing because of their wives' breast cancer. Spouses felt unprepared for what they were facing, regularly wondered if their life would ever return to normal, and found themselves ruminating on how they were handling their situation.

Spouses were concerned about their wives' response to medical treatment. They wanted more facts about treatment and were intensely preoccupied about the cancer spreading and going undetected by the medical team, even as their wife was in active treatment. Spouses' concerns about treatment and outcomes extended into the future as well: Would the cancer be controllable if it returned and where would it return?

Spouses were concerned about changes in their sexual relationship with their wife. This included many aspects of their sexual relationship, including the quality, frequency, and the inadequacy of time to be sexually intimate with their wife.

Spouses were concerned about their family's well-being. They were preoccupied with what would happen to their family and what would happen to their children. Spouses felt pressured by the possibility that their children might face the same illness or that their children might need more emotional support than they were receiving.

Spouses were concerned about their role in helping their wife with the cancer and its treatment. They struggled with what they could do to help them and worried about protecting their wives from stress.

Study Aim 3: To test the construct and predictive validity of a short version of the Demands of Illness Inventory and compare it to the longer version of the scale.

Analyses for Study Aim 3 involved two tests, a test of the construct validity and a test of the predictive validity. To test the construct validity of both the long- (123 items) and short-version (33 items) of illness demands, linear regression equations were computed to predict the total demands of illness for the spouses. Included in the linear regression equation were demographic variables, diagnosis and treatment variables, and measures of spouses' depressed mood (CES-D), spouses' self efficacy (CASE) from the self-management and family-management subscales; quality of marital communication (MIS Open Communication and Avoiding Bad Thoughts subscales), and Marital Adjustment (DAS consensus, satisfaction, cohesion, and expression subscales). Demographic variables included spouse age, years in the relationship, number of children in the home, years of spousal education, age of children, if there was an adolescent in the home, and family income. Diagnosis and treatment variables included: length of time since wife's initial diagnosis, type of breast surgery, status of wife's treatment, and treatment complexity. Variables were entered in a stepwise method. In the first step, demographic, diagnosis and treatment variables were entered, followed by the other variables. See Table 4 for results.

Results revealed that spouses had greater numbers of breast cancer-related concerns when they had more depressive symptoms, had higher cohesion but lower expression on the Dyadic Adjustment Scale, had less confidence in their ability to self manage the cancer, and were worse at avoiding bad thoughts in communicating about the cancer with their wives. These results were consistent for both the long version [F=29.52(5,142), p<.001] and the short version [F=18.39 (5,142), p<.001].

The predictive validity of both the long and short-version of the DOII was tested by examining its ability to predict spouses' scores at a 2-month interval on depressed mood, marital adjustment, marital communication, and self-efficacy. Data to test predictive validity were obtained from the subsample of 73 spouses who had been randomized to the control group. Spouses' baseline measure of illness demands were entered as covariates in the regression analyses, in addition to the predictor variables. See Table 5.

The long-version of the DOII significantly predicted the satisfaction subscale of marital adjustment (p=0.008); the spouses' self-efficacy total scale score (p<0.001) as well as its two subscales, the self-management subscale (p<0.001) and the family-management subscale (p=0.001). The long version of the DOII also significantly predicted the quality of marital communication total scale score on the MIS (p=0.003) and the MIS open communication subscale score (p<0.001).

Results for the short version of the DOII were comparable to results obtained from the long-version. The short version predicted the CASE total score (p=0.008), as well as its two subscale scores, self-management (p=0.003) and family-management (p=0.017). In addition, the short version significantly predicted the MIS total scale (p=0.009) and its open communication subscale (p<0.001). The only scale predicted by the long version of the DOII that was not predicted by the short version of the DOII was the satisfaction subscale of the Dyadic Adjustment Scale.

Discussion of Results

Spouses attribute specific illness-related demands to the early diagnosis and treatment period of their wives' non-metastatic breast cancer. During the first seven months, spouses are concerned about their wives' well-being, the potential success or non-success of medical treatment, and what to do to support and protect her from the stressors from breast cancer and treatment. Spouses fear for their own future, their children's future, and they fear cancer recurrence and progression, even during active treatment for the disease. Rather than “rest” in the treatment, spouses fear the cancer will go undetected by the medical team even as the medical team is administering treatment.

Spouses' concerns are not personal issues of relevance only to the spouse. Rather, spouses' concerns have a demonstrated impact on how well the spouse talks and supports his wife about the breast cancer over time. Recall that greater numbers of spouses' illness-related demands resulted in spouses' diminished conversation with their wife over time. This result argues for the importance of helping spouses' deal with their illness-related demands. In the absence of helping them, current evidence is that spouses will be less likely to talk openly with their wife about the breast cancer and be increasingly less confident in managing the cancer's impact over time.

Given the content and severity of spouses' illness-related concerns documented in this study, the spouse, not just the diagnosed patient, needs to be the focus of service. Except for a national hot line, and for programs offered by non-profit or local agencies, spouses have no systematic source of assistance to help them manage the impact of their wife' breast cancer.

Providers cannot view the patient's treatment period in neutral terms for the spouse or as a time to wait-and-see. Spouses are psychologically cueing, evaluating themselves in self-deprecatory terms, and worrying about everything from treatment outcomes to their adequacy to be a supportive husband.

Future programs are needed to help spouses add to their ways of emotionally and behaviorally managing the acute treatment period as well as add to spouses' abilities to frame the acute phase of medical treatment in less threatening ways. Unabated emotional mobilization in spouses likely has negative long-range implications for their own health as well as their effectiveness in being a major source of support for their wife. This is particularly unfortunate because the spouse is known to be the wife's preferred confidant and social support is potentially linked to survival [31].

The short form of the DOII holds promise as a clinical tool for practical application. The DOII-S demonstrated acceptable internal consistency reliability and predictive and construct validity. Like the longer scale, the short form was able to predict spouses' adjustment and functioning at 2 months on standardized measures of self-efficacy and couples' marital communication, including open communication in the marriage about the breast cancer.

Caution is in order. The results of the current study are limited to predominantly well-educated middle class spouses of child-rearing age, in long-term marriages, the majority of whom score in the normal range on both depressed mood and marital adjustment. Results may not generalize to other populations.

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Table 1

Dominant Cancer-related Demands of Illness, Retained on Short Version of Scale (subscales denoted by superscript)

Item No.	DOII-S (33-items)	Responses of 3 or 4 (%) *	
13^{1}	I think about the value my life has for me.	64	(42%)
21^{4}	I think about what will happen to my family in the future	61	(40%)
48^{2}	I worry about how my partner is responding to her illness	58	(38%)
52^{5}	I need to protect my partner from stress	58	(38%)
40^{3}	The frequency of my sexual activities has changed	54	(36%)
88^{2}	I wonder if her illness can be controlled in the future	54	(36%)
89^{2}	I wonder if the illness is spreading undetected	54	(36%)
55^{2}	My partner has had to change her work patterns	53	(35%)
54^{5}	I need to help my partner with her treatment	52	(34%)
113^{2}	I want more facts about the treatments	51	(34%)
16^{1}	I think about how I might reorder the priorities in my life	48	(32%)
19^{1}	I think about the uncertainties I face	45	(30%)
14^{1}	I think about how long I might live	44	(29%)
18^{1}	I think about how unprepared I've been for this experience	43	(28%)
50^{5}	I need to be more sensitive to my partners moods	43	(28%)
85^{2}	I worry her illness may reoccur with its initial severity	42	(28%)
125^{2}	I think she often feels worse rather than better after treatment	42	(28%)
28^{2}	I think about what has caused the illness	41	(27%)
39^{3}	The quality of my sexual activities has changed	40	(26%)
17^{1}	I think about my own mortality.	38	(25%)
22^{4}	I think about if my children will face the same illness	38	(25%)
51^{5}	I need to provide more emotional support to my partner	37	(25%)
63^{4}	Our family has had to decide what is really important to us	37	(25%)
123^{2}	I worry about the physical side effects of treatment	36	(24%)
20^{1}	I think about if my life will ever return to normal	34	(23%)
41^{3}	There isn't time or energy for sexual activities.	34	(23%)
87^{1}	I think about how I'm handling the illness situation	33	(22%)
43^{4}	The children need more emotional support	31	(21%)
38^{2}	My wife takes more responsibility for household tasks	30	(20%)
105^{2}	It is difficult waiting for the results of medical tests	30	(20%)
42^{4}	I worry about how my children are reacting to my partner's illness	29	(19%)

Item No.	**DOII-S (33-items)**	**Responses of 3 or 4 (%)** [*]	
93[2]	I worry the illness will involve other parts of her body in the future	29	(19%)
106[2]	It is difficult waiting for her to undergo treatment or surgery	27	(18%)

[*] Responses: 3 = "Quite a Bit" or 4 ="Extremely"

[1] Personal Concerns about self, including uncertainties

[2] Concerns about wife's will being

[3] Concerns about sexual activities

[4] Family concerns, including children

[5] Concern about spouse's role with his wife

Table 2

Spouses' Low Incident Cancer-related Demands Not Retained in DOII-S

Item No.	Item description	“Not at all” responses (%)*	
59	I've had trouble finding a job	141	(93.4%)
8	I have experienced numbness or tingling in parts of my body	137	(90.7%)
82	I think about her not being able to have children	135	(89.4%)
10	I have experienced heavy feelings in my arms or legs	134	(88.7%)
110	At times my wife's health care providers do not tell me the truth about her health status	133	(88.1%)
109	At times my wife's health care providers made decisions without my best interests in mind	132	(87.4%)
76	I feel dissatisfied with the way my wife looks	129	(85.4%)
3	I have experienced pains in heart or chest	127	(84.1%)
111	At times my wife's health care providers do not show concern for me as a person	126	(83.4%)
119	I'm not satisfied with the progress of her treatment	125	(82.8%)
56	I'm not able to work at my job	123	(81.5%)
75	I feel my wife is less attractive	122	(80.8%)
90	I wonder why my wife still receives treatments even though her symptoms have subsided	122	(80.8%)
120	I'm not satisfied with her hospital care	122	(80.8%)

Table 3

Correlations and Internal Consistency Reliabilities for Short Version of Demands of Illness Inventory (DOII-S) Compared with Long Version of Demands of Illness Inventory (DOII).

Subscale name	**Alpha Reliabilities**	**Partner High Demands (DOII-S)**	**Personal concerns about self**	**Concerns about wife's well being**	**Concerns about sexual activities**	**Family concerns, including children**	**Concern about spouse's own role**
Alpha Reliabilities		0.94	0.89	0.86	0.88	0.80	0.77
DOII Total Score	0.96	.93**	.80**	.82**	.60**	.81**	.64**
Physical Symptoms	0.87	.56**	.52**	.44**	.42**	.52**	.31**
Personal Meaning	0.91	.87**	.93**	.71**	.39**	.82**	.47**
Family Functioning	0.93	.85**	.67**	.71**	.67**	.77**	.71**
Social Relations	0.85	.67**	.54**	.56**	.55**	.60**	.49**
Self-Image	0.83	.50**	.43**	.42**	.43**	.41**	.33**
Monitoring Symptoms	0.89	.81**	.71**	.86**	.46**	.73**	.53**
Treatment Issues	0.89	.66**	.50**	.69**	.36**	.50**	.48**

**p<.001

Table 4

Regression Results Predicting Demands of Illness at Baseline, Comparing Long- and Short-version of Demands of Illness Inventory (n=151)

Linear Regression Variables	**DOII (123 items) F=29.52 (5, 142), p<0.001**		**DOII-S (33 items) F=18.39 (5, 142), p<0.001**	
	Stand. β	**p-value**	**Stand. β**	**p-value**
CES-D	0.31	<0.001	0.30	<0.001
CASE Self Management	-0.22	0.002	-0.17	0.034
MIS Avoiding Bad Thoughts	-0.18	0.009	-0.21	0.008
DAS Expression	-0.28	<0.001	-0.20	0.008
DAS Cohesion	0.25	<0.001	0.23	0.001

Table 5

Regression Results Predicting Measures at 2-month Interval- Comparison of Long- and Short-version of Demands of Illness Inventory (n=73)

Variables Predicted at Post-intervention		**DOII (123 items)**		**DOII-S (33 items)**
	β coeff.	**p-value**	**β coeff.**	**p-value**
CES-D	0.13	NS	0.02	NS
DAS Total	-0.05	NS	0.03	NS
Consensus subscale	0.06	NS	0.10	NS
Satisfaction subscale	-0.26	0.008	-0.13	NS
Cohesion	-0.04	NS	0.01	NS
Expression subscale	-0.19	NS	-0.13	NS
CASE Total Scale	-0.30	<0.001	-0.21	0.008
Self-Management subscale	-0.35	<0.001	-0.25	0.003
Family-Management subscale	-0.25	0.001	-0.17	0.017
MIS Total Scale	-0.28	0.003	-0.24	0.009
Open Communication subscale	-0.38	<0.001	-0.37	<0.001
Avoiding Bad Thoughts subscale	-0.20	NS	-0.18	NS