

# Linkages Among Empathic Behaviors, Physical Symptoms, and Psychological Distress in Patients With Ovarian Cancer: A Pilot Study

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**Purpose/Objectives:** To explore linkages among empathic responding by informal caregivers with the physical symptom experiences and psychological distress of patients with ovarian cancer.

**Design:** Preliminary, descriptive, correlational, and cross-sectional.

**Setting:** Psychosocial oncology support group in Canada.

**Sample:** Convenience sample of 13 women with stage I–IV ovarian cancer with the majority diagnosed with disease recurrence.

**Methods:** Data were collected on a single telephone call using the Hospital Anxiety and Depression Scale, the Empathic Responding Scale, the Memorial Symptom Assessment Scale, and the Dyadic Perspective-Taking Scale. Analysis included a correlation of variables.

**Main Research Variables:** Empathic responding, physical symptom experiences, and psychological distress.

**Findings:** Preliminary findings provided partial support for linkages among the perceived empathic behaviors of informal caregivers and the psychological distress and physical symptom experiences of patients with ovarian cancer. Patients who were more depressed reported elevated symptom experiences. Patients also reported more anxiety and depression when they perceived that their informal caregivers were engaging in less empathic behaviors toward them.

**Conclusions:** The empathic behavior of informal caregivers toward patients appeared to be related to lower levels of anxiety and depression in patients with end-stage ovarian cancer.

**Implications for Nursing:** Clinicians need to be aware that anxiety and depression in patients with ovarian cancer appear to be related to the patients' physical symptom experiences and the degree of empathic support the patients perceive from their informal caregivers. This has implications for clinical assessment of patients' anxiety and depression, physical symptoms, and available empathic social support.

## Key Points . . .

- Ovarian cancer is a leading cause of mortality for women, making those diagnosed vulnerable to psychological distress.
- Research indicates that the impact of physical symptom experiences on psychological distress varies among patients with ovarian cancer.
- Empathic responding of informal caregivers may be associated with the reactions of patients with ovarian cancer to psychological distress.

Despite evidence that women with ovarian cancer suffer from high levels of psychological distress (Kornblith et al., 1995; Norton et al., 2004, 2005; Portenoy, Kornblith, et al., 1994), the impact of ovarian cancer on psychological functioning is a neglected area of research. Although evidence of a relationship between psychological distress and physical symptoms exists, wide variability remains in psychological distress experienced among patients with ovarian cancer (Norton et al., 2005). This suggests that the relationship between psychological distress and symptom experience is influenced by other factors, namely available social support.

## Background

### Symptom Experiences and Illness

Although symptom experience has been studied widely within patients with cancer and other chronic illnesses, limited information was found involving symptom experiences of patients with ovarian cancer. Portenoy, Kornblith, et al. (1994) revealed that pain, fatigue, and psychological distress were prevalent symptoms in ovarian cancer. Apart from symptom

In the United States, ovarian cancer accounts for about 3% of all cancers in women and is the fifth-leading cause of cancer-related deaths among women (American Cancer Society, 2008). An estimated 21,650 new cases of ovarian cancer and 15,520 deaths resulting from the disease will occur in 2008 in the United States. In Canada, an estimated 2,500 new cases of ovarian cancer and 1,700 deaths resulting from this disease will be reported in 2008 (Canadian Cancer Society/National Cancer Institute of Canada [CCS/NCIC], 2008). Epithelial ovarian cancer is the most commonly diagnosed type with a peak incidence in women aged 50–60 years who are diagnosed at stage III or IV of the disease (Jemal et al., 2007; CCS/NCIC).

Women with ovarian cancer are vulnerable to psychological distress as a result of ablative surgery (which may harm body image), a high rate of disease recurrence, and low cure rates (Howell, Fitch, & Deane, 2003; Norton et al., 2005).

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experiences, a diagnosis of ovarian cancer also is characterized by unique and specific factors that can alter the quality of life of women. Patients with ovarian cancer often receive poor prognoses, feel that their femininity is threatened, and believe that they have a minority cancer because ovarian cancer frequently is overshadowed by breast and other cancers (Ferrell, Smith, Ervin, Itano, & Melancon, 2003). Howell et al. (2003) concluded that nurses must understand the associated meaning of illness and symptoms to patients with ovarian cancer, facilitate supportive communication, and identify resources for optimal management. In addition, nurses must be aware that families also construct meanings for symptoms based on the family's distinct socially derived perceptions that stem from a broader cultural and ethnic set of meanings. The family's shared meaning of illness often manifests in how families and patients experience illness psychologically or emotionally and behave within the context of the illness experience (Bokhari, 2007; Lobchuk & Stymeist, 1999; Luker, Beaver, Leinster, & Owens, 1996).

### Psychological Distress and Associated Factors

McCorkle, Pasacreta, and Tang (2003) concluded that psychiatric morbidity may be particularly significant in patients with ovarian cancer and that a need exists to clarify psychiatric phenomena with these patients. Psychological distress as a result of diagnosis, management, and prognosis has been well documented (Herschbach et al., 2004; Kelly, Ghazi, & Caldwell, 2002) and occurs with varying severity (Norton et al., 2004), leading researchers to explore patient and illness characteristics (e.g., symptoms) in association with psychological distress in patients with ovarian cancer. For instance, psychological distress has been associated with unrelieved pain and other symptoms (Kornblith et al., 1995; Portenoy, Thaler, et al., 1994; Zimmerman, Story, Gaston-Johansson, & Rowles, 1996). Other investigators reported that younger patients with ovarian cancer do not cope as effectively as older patients, likely as a result of different expectations of the illness and changing roles and responsibility within the family (Norton et al., 2004). Manne and Schnoll (2001) also found that older, more educated adults have a greater sense of control over their emotions and coping efficacy. A higher level of education is considered a personal resource that can enhance coping and was linked with lower distress (Ben-Zur, Gilbar, & Lev, 2001). Financial status also was associated with psychological health; patients with cancer who had higher incomes were better adjusted to their disease than those with lower incomes (Merluzzi & Martinez Sanchez, 1997), and distress was inversely related to income (Zabora, BrintzenhofeSzoc, Curbow, Hooker, & Piantadosi, 2001). In addition, patients with late-stage ovarian cancer had lower expectations resulting in less psychological distress (Howell et al., 2003). Cultural background and ethnicity also played a significant role in determining the prevalence of psychological distress (Chen, Chang, & Yeh, 2000; Zabora et al.). Religious practices have been associated with augmented social support and coping skills (Jarvis, Kirmayer, Weinfeld, & Lasry, 2005) and enhanced adjustment to the illness (Merluzzi & Martinez Sanchez). Hipkins, Whitworth, Tarrier, and Jayson (2004), Jefferies (2002), and Nordin, Berglund, Glimelius, and Sjoden (2001) recognized that emotional and social support have a positive effect on the quality of life and reduction of psychological distress in patients with ovarian cancer.

However, Norton et al. (2004) found that 20% of patients in their study reported high stress levels in response to ovarian cancer and its treatment, and that lack of support posed a risk for developing psychological distress.

### Social Support, Empathy, and Relational Coping

Social support has important implications for patients adjusting to chronic illness or stressful life events (Long, 1990; Pistrang, Barker, & Rutter, 1997; Symister & Friend, 2003). However, a fundamental weakness of social support research is that it essentially fails to recognize the social acts and reactions that transpire between people (e.g., empathic behaviors) (Pistrang et al.). Empathic responding from caregivers has been positively linked to coping with illness (Coyne & Bolger, 1990) and lower levels of psychological distress (Ell, 1996). Empathy has been defined as "the identification with and understanding of another's situation, feelings, and motives" (Soukhanov, 1996, p. 603), and an "objective awareness of and insight into the feelings, emotions, and behavior of another person and their meaning and significance" (Thomas, 1997, p. 629). According to O'Brien and Delongis (1996), positive relationship-focused coping strategies (e.g., empathic responding) are potentially important in the management and resolution of interpersonal stressors, and a lack of empathic responding may contribute to the maintenance of disturbed social relationships. Norton et al. (2005) found that empathic behavior from family members was positively correlated with patient self-esteem and perceived control, therefore affecting psychological distress. Hipkins et al. (2004) reported that a lack of emotional support from key supportive individuals inhibited the expression of concerns about physical disease and resulted in maintained or exacerbated psychological distress in patients.

### Theoretical Framework

Lazarus and Folkman's (1984) stress, appraisal, and coping model provided the theoretical underpinnings for research that links the social support or empathic responding of informal caregivers to the physical symptoms and psychological distress of women with ovarian cancer. When a stressful event occurs, the individual undergoes the process of primary appraisal and assesses the situation. For example, in the present study, the occurrence of physical symptoms might be perceived by the patient as either a threatening or benign situation. This appraisal is influenced by a variety of factors, including personal and environmental resources, that ultimately affect the patient's ability to cope effectively with a situation (e.g., the occurrence of psychological distress). In the present study, the personal and environmental factors explored were the patient's age, education, family income, and relationship with the caregiver.

Although the meditational logic of Lazarus and Folkman's (1984) model was not tested in the present study, the investigators' believed that aversive or unsupportive reactions and interactions (e.g., the lack of empathic responding by family and friends) might be associated with physical and psychological distress for individuals with ovarian cancer (Hipkins et al., 2004; Manne, Taylor, Dougherty, & Kemeny, 1997; Norton et al., 2004). Empathic responding involves efforts aimed at interpreting the psychological and physical states that underlie the other's

verbal and nonverbal communication and sensitively responding to another person out of concern or “expressing caring or understanding in an accepting, nonjudgmental, and emotionally validating manner” (O’Brien & Delongis, 1996, p. 783). For example, perceived empathic responding from informal caregivers might serve as a strong personal resource for patients and cause them to perceive their physical and psychological symptom to be less threatening. Conversely, a lack of perceived empathic responding from informal caregivers may cause patients to perceive physical symptoms to be more threatening and report more psychological distress. The overall purpose of the present study was to glean a preliminary understanding of the relationships among perceived social support or empathic behaviors of informal caregivers, patient psychological distress, and patient physical symptoms experiences.

## Methods

This pilot study used a descriptive correlational research design to explore relationships among psychological distress (i.e., anxiety and depression) and physical symptom experiences as reported by the patient and empathic behavior of patients as perceived by the informal caregiver. Patient age, educational status, annual family income, perception of caregiver knowledge of physical symptoms and emotions, degree of patient-caregiver contact, and length of time with caregiver also were explored in relation to physical symptom experiences and psychological distress.

### Sample

Written permission was obtained from the University of Manitoba’s education/nursing ethics board and the cancer agency access committee to recruit patients from a support group in the psychosocial oncology department in Winnipeg, Canada. Patients were medically diagnosed with ovarian cancer (regardless of stage and treatment); cognitively capable of responding to survey questions per clinical assessment; able to read, understand, and speak English; and able to identify a primary informal caregiver who assisted them in coping with their illness. Over the course of six months, 15 eligible patients received a written invitation from either the clinic clerk or the social worker to speak to the researchers about their interest in the study. Two of the 15 eligible patients refused for unknown reasons. The overall small number of eligible patients approached was in relation to busy clinic staff who were challenged to assist with the recruitment of patients. In addition, the nonfunded pilot study was conducted in partial fulfillment of a graduate program requirement that precluded ongoing time and effort to accrue a larger sample size for more rigorous statistical analyses. Thirteen patients agreed to participate in total. No power analysis was conducted, although statistical consultation was obtained for inferential analysis.

### Procedure and Measures

Eligible patients were provided with letters of invitation that had the consent form, questionnaire package, and postage-paid return envelope attached. If the patient agreed to speak to the research nurse, the patient was contacted by telephone, the study was explained, and the patient was invited to participate. If the patient agreed to participate, she was asked to sign and

mail the consent form. A telephone interview was scheduled at a date and time convenient to the patient. Prior to commencing the telephone interview, the research nurse verified that the patient would be responding to interview questions in a private area of the home where her verbal responses would not be overheard by family members, including the primary family caregiver. The research nurse read the questionnaire items to the patient and recorded the patient’s verbal response to each question. The patients had copies of the six questionnaires and could read along with the nurse. The questionnaires took approximately 60 minutes to complete.

A researcher-developed patient demographic questionnaire gathered information about the study sample’s demographic, illness-related, treatment-related, and caregiving relationship characteristics. The **Hospital Anxiety and Depression Scale (HADS)** was used to quantify psychological distress (Zigmond & Snaith, 1983). The HADS consists of a self-report format with 14 ordinal-level items on two subscales, anxiety and depression. Each subscale consists of seven items that were rated on a four-point Likert-type scale with scores ranging from 0 (no distress) to 21 (maximum distress). On either the anxiety or depression subscale, a score of 7 or less is considered to be normal, 8–10 indicates doubtful or borderline, and 11 or higher is clinically significant psychological distress. The HADS has been used widely in patients with cancer and has internal consistency and reliability estimates reported as high as 0.93 for anxiety and 0.90 for depression (Petersen & Quinlivan, 2002). In the present study, the HADS reliability consistency estimate was 0.77.

The empathic behavior by informal caregivers was captured on both the **Empathic Responding Scale** (O’Brien & Delongis, 1996) and the **Dyadic Perspective-Taking Scale (DPTS)** (Long, 1990). The Empathic Responding Scale consisted of 10 five-point Likert-type questions, ranging from 0 (does not describe caregiver well) to 4 (does describe caregiver well), that were developed to capture the empathic responding of undergraduate psychology students and evaluate the impact of social relationships on coping with stress situations. A Cronbach alpha coefficient of 0.93 was reported in the student sample. Kramer (1993) used this tool with 72 wives who were caring for patients with Alzheimer disease but did not report reliability estimates. With permission from the tool’s developer (A. DeLongis, personal communication, December 1, 2005), the tool was reworded to capture the patient’s perception of her informal caregiver’s empathic responding behavior. The Cronbach alpha estimate in the present study’s sample was 0.93, indicating high reliability. The DPTS was administered to capture patients’ perceptions of the empathic behaviors of their caregivers. The DPTS was comprised of 20 five-point Likert-type items, ranging from 0 (does not describe caregiver very well) to 4 (does describe caregiver very well). In a sample of 242 married couples, the reliability estimates were 0.93 for husbands and 0.95 for wives (Long). Lobchuk (2001) used the scale on patients with advanced-stage cancer and reported a reliability estimate of 0.93 on the DPTS. In the current study, the reliability estimate for this scale was 0.83.

The **Memorial Symptom Assessment Scale (MSAS)** (Portenoy, Thaler, et al., 1994) was used to quantify patient physical symptom experiences. The MSAS is a self-rating tool comprised of 32 four-point and five-point Likert-type items that captured the frequency (1 [rarely] to 4 [almost constant]),



severity (1 [slight] to 4 [very severe]), and distress (0 [not at all] to 4 [very much]) on physical and psychological subscales. In a sample of 246 patients with prostate, colon, ovarian, and breast cancers, the psychological symptom subscale had a high internal consistency reliability of 0.83, the physical high-symptom subscale had a reliability of 0.88, and the physical low-symptom subscale had a reliability of 0.58. In the present study, 26 items were used from the physical high-symptom and physical low-symptom subscales, including pain, lack of energy, cough, dry mouth, nausea, feeling drowsy, numbness or tingling in feet and hands, feeling bloated, issues with urination, vomiting, shortness of breath, diarrhea, issues with sexual interest or activity, itching, sweats, dizziness, difficulty swallowing, lack of appetite, changes in skin, mouth sores, changes in the way food tastes, weight loss, constipation, swelling in arms or legs, hair loss, and "I don't look like myself." Six psychological symptoms (worrying, feeling sad, feeling nervous, difficulty sleeping, feeling irritable, and difficulty concentrating) were not included as the HADS was used to capture psychological distress. The combined physical symptom subscales had a reliability coefficient estimate of 0.90. In the correlational analysis, the total MSAS score was calculated based on the average of symptom scores of all 26 physical symptoms in the MSAS instrument.

## Statistical Analysis

Associations among ordinal-level study variables were examined with nonparametric Spearman's rho to measure the relationship between ranked (ordinal) variables (Munro, 2001). Patient psychological distress was not regressed on patient physical symptoms and perceived caregiver empathic behaviors because of the small sample size.

## Results

Thirteen patients were recruited over a six-month period of time. Most were younger than age 59, either married or living with a common-law partner, of European descent, unemployed or on medical leave, and had a high school education (see Table 1). An equal number of responding patients had an annual family income of \$60,000 or less or \$61,000 or more. Twelve patients reported having recurrent epithelial ovarian cancer with most (77%) being diagnosed with stage III disease. About 38% of patients were being treated with chemotherapy at the time of interview, and past treatments consisted of surgery or chemotherapy.

The patients reported that their caregivers had cared for them more than 36 months, were in daily contact, and always or frequently helped them to cope with the physical (69%) and emotional (54%) aspects of their medical condition. Whereas 62% patients stated that they were able to speak openly with their caregivers about the physical aspects of the disease, only 40% of patients stated they could speak openly about the emotional aspects. Despite a lack of open communication with their caregivers, particularly about patient emotions, only 15% of patients stated that their caregivers did not understand physical aspects very well and 23% reported that their caregivers did not understand the emotional aspects very well or at all.

Patients reported a mean number of seven symptoms (range 0–22). Of a theoretical range of mean scores from 0 (lowest) to 4 (highest), the total MSAS score (based on an

**Table 1. Patient Demographic and Medical Characteristics**

Characteristic	n
<b>Age range (years)</b>	
43–59	7
60–73	6
<b>Type of cancer</b>	
Epithelial	12
Unknown	1
<b>Stage of cancer</b>	
I	1
II	1
III	10
IV	1
<b>Time since diagnosis (months)</b>	
0–18	3
19–36	6
> 36	4
<b>Current treatment</b>	
None	8
Chemotherapy	5
<b>Past treatment<sup>a</sup></b>	
None	1
Chemotherapy	11
Surgery	10
<b>Culture or ethnicity</b>	
Canadian	5
European	6
Middle Eastern	2
<b>Religion</b>	
No preference	1
Jewish	1
Lutheran	1
Catholic	4
United Church	3
Buddhist	3
<b>Level of education</b>	
Less than high school	1
High school	5
Partial college	2
College or university	3
Graduate or professional training	2
<b>Marital status</b>	
Married or common-law	11
Never married or separated	2
<b>Occupational status</b>	
Employed	5
Medical leave, unemployed, or retired	8
<b>Occupation</b>	
Laborer	1
Homemaker	1
Professional	3
Management	1
Other	7
<b>Annual family income (\$)</b>	
31,000–60,000	5
61,000–90,000	5
Did not respond	3
<b>Receiving nursing service</b>	
No	13

N = 13

<sup>a</sup> Some patients received multiple modes of treatment.

average of individual physical symptom scores) was 1.93 (SD = 0.58). Regarding the prevalence of empathic behaviors by informal caregivers as reported by patients, the average perspective-taking score on the DPTS was 2.46 (SD = 0.60) of a theoretical range of mean scores from 0 (lowest) to 4 (highest). Similarly, on the Empathic Responding Scale, the average score was 2.86 (SD = 0.90). On both scales, the patients reported a moderate degree of overall empathic activity by their caregivers. The correlation coefficient between the two empathic responding scales indicated a strong positive association ( $\rho = 0.66$ ,  $p = 0.014$ ).

The mean score for anxiety was 7.9 (SD = 4.2) and the mean score for depression was 4.2 (SD = 5.89). The mean global psychological distress score was 12.15 (SD = 5.89), with seven patients reporting scores of 11 or higher, indicating clinical anxiety or depression. Three patients had scores of 7 or less, and the remaining three had scores ranging from 8–10.

Relationships among study variables can be seen in Table 2. Patients who reported more depression also had significantly elevated symptom experiences. No significant correlation exists between physical symptoms and patient perception of caregiver empathic behaviors. Patients who reported more anxiety and depression also reported decreased perception of empathic behaviors by their informal caregivers. Supplemental analysis indicated that patients who reported increased perception of empathic behavior by informal caregivers were older ( $\rho = 0.69$ ,  $p = 0.009$ ). Also, patients who reported increased perceptions of empathic behavior by informal caregivers perceived informal caregivers to have greater knowledge of their physical symptoms ( $\rho = 0.66$ ,  $p = 0.015$  on the Empathic Responding Scale, and  $\rho = 0.77$ ,  $p = 0.002$  on the DPTS) and emotions ( $\rho = 0.74$ ,  $p = 0.004$  on the DPTS). Patients who reported less anxiety were older ( $\rho = -0.71$ ,  $p = 0.007$ ) and perceived their informal caregivers to possess greater knowledge of their physical symptoms ( $\rho = -0.58$ ,  $p = 0.04$ ).

Discussion

Limitations

The results of the present pilot study should be interpreted with caution because of the small sample size and the cross-sectional, correlation design. However, the study’s sample of patients appears to be a reasonable representation of patients with ovarian cancer. All patients were recruited from the psychosocial oncology support group and likely received support

within the group to cope with their illness. The prevalence of psychological distress in the sample is similar to the range of distress reported in other studies involving patients with ovarian cancer (23%–67%) (Bodurka-Bervers et al., 2000; Norton et al., 2005; Portenoy, Kornblith, et al., 1994). Whether the results can be generalized to patients who are not receiving psychosocial support is unknown. In addition, participant responses regarding psychosocial distress and perceptions of empathic responding behaviors by their informal caregivers might have been biased by patients’ experiences in the support group. Finally, patients may not have been totally forthcoming in their self-reports on emotions and physical symptoms. This possibility was observed in patients who freely admitted to withholding information about symptoms from caregivers as a protective mechanism toward loved ones who were in denial about the patient’s diagnosis. This observation was also reported by Kornblith et al. (2006) and Pistrang et al. (1997), suggesting that the experiences of the study’s sample may be a factor of caregiver denial and lack of patient disclosure at end-stage ovarian cancer.

The overall purpose of the present pilot study was to explore relationships as guided by the theoretical framework of Lazarus and Folkman (1984) among patient physical symptoms, psychological distress, and perceptions of informal caregiver empathic behaviors toward patients. Regarding the representativeness of the current study sample, the mean number of symptoms experienced by patients was 6.53, comparable with 10.2 symptoms as captured by Portenoy, Kornblith, et al. (1994) who also used the MSAS. Fitch, Gray, and Franssen (2001) similarly reported 5.2 symptoms since time of diagnosis in their sample of patients with ovarian cancer. The prevalence of moderate-to-severe psychological distress in the current study’s sample was 54%, falling within the range of distress previously reported as 23%–62% (Bodurka-Bervers et al., 2000; Hipkins et al., 2004; Kornblith et al., 1995; Norton et al., 2004, 2005). Any divergence in the number of symptoms experienced across the studies, including the current study, may have been related to differences in study sample sizes and characteristics in terms of age, cancer stage, type and amount of treatment, and type of symptom tools used by the investigators.

Although final conclusions cannot be drawn prematurely, several significant findings lend beginning support regarding relationships as postulated in the adapted version of Lazarus and Folkman’s (1984) coping theory. Bodurka-Bervers et al.

Table 2. Spearman’s Rank Correlations Among Study Variables

Variable	MSAS Total		Empathic Coping Behaviors <sup>a</sup>		Empathic Coping Behaviors <sup>b</sup>		Anxiety Total		Depression Total	
	r <sub>s</sub>	p	r <sub>s</sub>	p	r <sub>s</sub>	p	r <sub>s</sub>	p	r <sub>s</sub>	p
MSAS total	1.00	–	–0.45	0.121	–0.33	0.277	0.20	0.512	0.56	0.045
Empathic coping behaviors <sup>a</sup>	–	–	1.00	–	0.66	0.015	–0.69	0.009	–0.51	0.072
Empathic coping behaviors <sup>b</sup>	–	–	–	–	1.00	–	–0.59	0.035	–0.57	0.043
Anxiety total	–	–	–	–	–	–	1.00	–	0.23	0.450
Depression total	–	–	–	–	–	–	–	–	1.00	–

<sup>a</sup> From the Empathic Responding Scale

<sup>b</sup> From the Dyadic Perspective-Taking Scale

MSAS—Memorial Symptom Assessment Scale; r<sub>s</sub>—Spearman rho correlation

(2000) and Kornblith et al. (1995) found that when patients reported more physical symptom experiences they also experienced more psychological distress (e.g., depression). The finding that patients reported less psychological distress when they perceived greater empathy from informal caregivers supports previous studies (Hipkins et al., 2004; Jefferies, 2002; Manne et al., 1997; Norton et al., 2004). The social support or empathic responding of caregivers likely served as a personal resource that helped diminish a deleterious psychological state by helping patients cope with and derive positive meaning from their medical condition and garner the needed support to help them manage their distress before it escalated.

## Implications for Research and Clinical Practice

Replication of the present study with a larger sample is required to provide an unequivocal empirical foundation for future intervention studies that examine the influence of empathic, social support in ameliorating or buffering psychological concerns of women dealing with ovarian cancer, primarily with regard to stage III or recurrent disease. The finding that older patients reported increased empathic responding from their caregivers and decreased anxiety has implications for future research to explore the role of empathic responding in relation to psychological distress in younger patients and caregivers.

The present study's findings highlight a need for clinicians to pay greater attention to the interpersonal rather than individualistic processes of stress and coping in patients. For example, clinicians must support the empathic efforts

of informal caregivers that can buffer psychological distress when patients cope with end-stage ovarian cancer. One way clinicians can help is to have informal caregivers share their own needs for empathic responding. Similarly, clinicians can have patients list their informal caregivers' empathic behaviors and the behaviors they desire from their informal caregivers. Clinicians also can offer patients and their informal caregivers opportunities to talk openly about dealing with the cancer experience. Such opportunities allow informal caregivers to learn more about patients' coping process and then reflect on their empathic understanding of the patients' experiences. In light of patients' needs to protect informal caregivers by not disclosing coping experiences, clinicians should tend to this phenomenon in support groups. Informational sessions might be instrumental in helping patients realize the implications of their protective behavior on their relationships with informal caregivers. For instance, although patients may want to protect informal caregivers' needs for denial by using avoidant coping (e.g., avoiding a discussion on topics involving negative information), this behavior can alienate patients from their informal caregivers who, in turn, might avoid empathic discussion on important matters and aggravate patients' mental anxiety and depression.

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## References

- American Cancer Society. (2008). *Cancer facts and figures 2008*. Atlanta, GA: Author.
- Ben-Zur, H., Gilbar, O., & Lev, S. (2001). Coping with breast cancer: Patient, spouse, and dyad models. *Psychosomatic Medicine*, 63(1), 32–39.
- Bodurka-Bervers, D., Basen-Engquist, K., Carmack, C.L., Fitzgerald, M.A., Wolf, J.K., De Moor, C., et al. (2000). Depression, anxiety, and quality of life in patients with epithelial ovarian cancer. *Gynecologic Oncology*, 78(3, Pt. 1), 302–308.
- Bokhari, S.A. (2007). *Investigation of the linkage between empathic informal caregiver behaviors, physical symptom experiences, and psychological distress experienced by ovarian cancer patients*. Unpublished thesis, University of Manitoba, Winnipeg, Canada.
- Canadian Cancer Society/National Cancer Institute of Canada. (2008). *Canadian cancer statistics*. Toronto, Canada: Author.
- Chen, M.L., Chang, H.K., & Yeh, C.H. (2000). Anxiety and depression in Taiwanese cancer patients with and without pain. *Journal of Advanced Nursing*, 32(4), 944–951.
- Coyne, J.C., & Bolger, N. (1990). Doing without social support as an explanatory concept. *Journal of Social and Clinical Psychology*, 9(1), 148–158.
- Ell, K. (1996). Social networks, social support and coping with serious illness: The family connection. *Social Science and Medicine*, 42(2), 173–183.
- Ferrell, B.R., Smith, S.L., Ervin, K.S., Itano, J., & Melancon, C. (2003). A qualitative analysis of social concerns of women with ovarian cancer. *Psycho-Oncology*, 12(7), 647–663.
- Fitch, M.I., Gray, R.E., & Franssen, E. (2001). Perspectives on living with ovarian cancer: Older women's views. *Oncology Nursing Forum*, 28(9), 1433–1442.
- Herschbach, P., Keller, M., Knight, L., Brandl, T., Huber, B., Henrich, G., et al. (2004). Psychological problems of cancer patients: A cancer distress screening with a cancer-specific questionnaire. *British Journal of Cancer*, 91(3), 504–511.
- Hipkins, J., Whitworth, M., Tarrier, N., & Jayson, G. (2004). Social support, anxiety and depression after chemotherapy for ovarian cancer: A prospective study. *British Journal of Health Psychology*, 9(Pt. 4), 569–581.
- Howell, D., Fitch, M.I., & Deane, K.A. (2003). Women's experiences with recurrent ovarian cancer. *Cancer Nursing*, 26(1), 10–17.
- Jarvis, G.E., Kirmayer, L.J., Weinfeld, M., & Lasry, J.C. (2005). Religious practice and psychological distress: The importance of gender, ethnicity, and immigrant status. *Transcultural Psychiatry*, 42(4), 657–675.
- Jefferies, H. (2002). Ovarian cancer patients: Are their informational and emotional needs being met? *Journal of Clinical Nursing*, 11(1), 41–47.
- Jemal, A., Siegel, R., Ward, E., Murray, T., Xu, J., & Thun, M.J. (2007). Cancer statistics, 2007. *CA: A Cancer Journal for Clinicians*, 57(1), 43–66.
- Kelly, C., Ghazi, F., & Caldwell, K. (2002). Psychological distress of cancer and clinical trial participation: A review of the literature. *European Journal of Cancer Care*, 11(1), 6–15.
- Kornblith, A.B., Regan, M.M., Kim, Y., Greer, G., Parker, B., Bennett, S., et al. (2006). Cancer-related communication between female patients and male partners scale: A pilot study. *Psycho-Oncology*, 15(9), 780–794.
- Kornblith, A.B., Thaler, H.T., Wong, G., Vlamis, V., McCarthy-Lepore, J., Loseth, D.B., et al. (1995). Quality of life of women with ovarian cancer. *Gynecologic Oncology*, 59(2), 231–242.
- Kramer, B.J. (1993). Expanding the conceptualization of caregiver coping: The importance of relationship-focused coping strategies. *Family Relations*, 42(4), 383–391.
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer Publishing.

- Lobchuk, M.M. (2001). *Family caregiver "perspective-taking": A determinant of "empathic" accuracy on symptom experience in advanced stage cancer patients*. Unpublished doctoral dissertation, University of Manitoba, Winnipeg, Canada.
- Lobchuk, M.M., & Stymeister, D. (1999). Symptoms as meaningful "family culture" symbols in palliative care. *Journal of Palliative Care*, 15(4), 24–31.
- Long, E.C.J. (1990). Measuring dyadic perspective-taking: Two scales for assessing perspective-taking in marriage and similar dyads. *Educational and Psychological Measurement*, 50(1), 91–103.
- Luker, K.A., Beaver, K., Leinster, S.J., & Owens, R.G. (1996). Meaning of illness for women with breast cancer. *Journal of Advanced Nursing*, 23(6), 1194–1201.
- Manne, S.L., & Schnoll, R. (2001). Measuring cancer patients' psychological distress and well-being: A factor analytic assessment of the Mental Health Inventory. *Psychological Assessment*, 13(1), 99–109.
- Manne, S.L., Taylor, K.L., Dougherty, J., & Kemeny, J. (1997). Supportive and negative responses in the partner relationship: Their association with psychological adjustment among individuals with cancer. *Journal of Behavioral Medicine*, 20(2), 101–125.
- McCorkle, R., Pasacreta, J., & Tang, S.T. (2003). The silent killer: Psychological issues in ovarian cancer. *Holistic Nursing Practice*, 17(6), 300–308.
- Merluzzi, T.V., & Martinez Sanchez, M.A. (1997). Perceptions of coping behaviors by persons with cancer and health care providers. *Psycho-Oncology*, 6(3), 197–203.
- Munro, B.H. (2001). *Statistical methods for health care research* (4th ed.). Philadelphia: Lippincott Williams and Wilkins.
- Nordin, K., Berglund, G., Glimelius, B., & Sjoden, P.O. (2001). Predicting anxiety and depression among cancer patients: A clinical model. *European Journal of Cancer*, 37(3), 376–384.
- Norton, T.R., Manne, S.L., Rubin, S., Carlson, J., Hernandez, E., Edelson, M.I., et al. (2004). Prevalence and predictors of psychological distress among women with ovarian cancer. *Journal of Clinical Oncology*, 22(5), 919–926.
- Norton, T.R., Manne, S.L., Rubin, S., Hernandez, E., Carlson, J., Bergman, C., et al. (2005). Ovarian cancer patients' psychological distress: The role of physical impairment, perceived unsupportive family and friend behaviors, perceived control, and self-esteem. *Health Psychology*, 24(2), 143–152.
- O'Brien, T.B., & Delongis, A. (1996). The interactional context of problem-, emotion-, and relationship-focused coping: The role of the big five personality factors. *Journal of Personality*, 64(4), 775–813.
- Petersen, R.W., & Quinlivan, J.A. (2002). Preventing anxiety and depression in gynaecological cancer: A randomised controlled trial. *British Journal of Obstetrics and Gynaecology*, 109(4), 386–394.
- Pistrang, N., Barker, C., & Rutter, C. (1997). Social support as conversation: Analysing breast cancer patients' interactions with their partners. *Social Science and Medicine*, 45(5), 773–782.
- Portenoy, R.K., Kornblith, A.B., Wong, G., Vlamis, V., Lepore, J.M., Loseth, D.B., et al. (1994). Pain in ovarian cancer patients. Prevalence, characteristics, and associated symptoms. *Cancer*, 74(3), 907–915.
- Portenoy, R.K., Thaler, H.T., Kornblith, A.B., Lepore, J.M., Friedlander-Klar, H., Kiyasu, E., et al. (1994). The Memorial Symptom Assessment Scale: An instrument for the evaluation of symptom prevalence, characteristics, and distress. *European Journal of Cancer*, 30A(9), 1326–1336.
- Soukhanov, A. (Ed.). (1996). *The American heritage dictionary of the English language* (3rd ed.). Boston: Houghton Mifflin Publishing.
- Symister, P., & Friend, R. (2003). The influence of social support and problematic support on optimism and depression in chronic illness: A prospective study evaluating self-esteem as a mediator. *Health Psychology*, 22(2), 123–129.
- Thomas, C.L. (Ed.). (1997). *Taber's cyclopedic medical dictionary* (18th ed.). Philadelphia: F.A. Davis.
- Zabora, J., BrintzenhofeSzoc, K., Curbow, B., Hooker, C., & Piantadosi, S. (2001). The prevalence of psychological distress by cancer site. *Psycho-Oncology*, 10(1), 19–28.
- Zigmond, A.S., & Snaith, R.P. (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica*, 67(6), 361–370.
- Zimmerman, L., Story, K.T., Gaston-Johansson, F., & Rowles, J.R. (1996). Psychological variables and cancer pain. *Cancer Nursing*, 19(1), 44–53.