

Information Needs and Coping Styles of Primary Family Caregivers of Women Following Breast Cancer Surgery

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Purpose/Objectives: To determine the information needs and unmet needs of primary family caregivers of women with breast cancer, their informational coping styles, and the relationships among needs, coping styles, and caregiver and patient variables in the first three weeks after surgery.

Design: Descriptive, correlational survey.

Setting: Three surgical inpatient units at one private and two public hospitals in Perth, Western Australia.

Sample: 141 primary family caregivers of women having surgery for breast cancer.

Methods: Modified Family Inventory of Needs–Husbands and the Miller Behavioral Style Scale administered within one week after surgery and repeated one to two weeks later, after the postoperative visit with the surgeon.

Main Research Variables: Information needs, unmet needs, informational coping styles.

Findings: All 30 needs were rated as important by the majority of participants. A reduction in the median percentage of unmet needs occurred between time 1 (22%) and time 2 (10%) ($p = 0.00004$). Caregivers with children younger than 20 had a greater number of needs than the remaining sample ($p = 0.001$). Caregivers who received information from the breast nurse counselor and medical staff had the lowest percentage of unmet needs compared with those reporting any other source of information ($p = 0.007$). Caregivers of private patients had more unmet needs compared with public patients' caregivers ($p = 0.035$). Most caregivers displayed a high monitoring coping style, but further analysis of composite monitoring and blunting profiles revealed that 11%–16% were low monitors as well as low blunters and another 22%–26% displayed an apparently conflicting style of both high monitoring and high blunting.

Conclusions: Western Australian caregivers have a similar range and priority of needs as those previously reported internationally. Caregivers in the private system, where breast centers are not established, are at risk for not having their needs met. Further studies are needed to determine how informational coping styles may affect family caregivers' need for and response to education given by nurses.

Implications for Nursing: Breast nurse counselors and other nursing staff play an important role in caregiver support. Caregivers with young children need additional support. Caregivers' coping styles indicate the need for high levels of information, which, paradoxically, may lead to increased distress. Therefore, nurses should consider assessing caregivers' informational coping styles to balance the amount of information given with appropriate strategies for assisting caregivers to cope with stressful information.

Key Points . . .

- The Family Inventory of Needs–Primary Caregivers may be helpful to nurses as a means of discussing information needs with caregivers or assisting in prioritizing needs.
- Nurses should be alert to the possibility that caregivers may overlook their own needs in their concern for loved ones.
- Nurses should assess caregivers' informational coping styles to ensure that the amount of information given is matched to the coping style and that supportive interventions are offered to assist caregivers in dealing with stressful information according to their coping style.

The supportive role played by partners and other family caregivers of women with breast cancer is well documented (Carey, Oberst, McCubbins, & Hughes, 1991; Lichtman, Taylor, & Wood, 1987; Morse & Fife, 1998; Pistrang & Barker, 1995). One of the most important concerns for these family caregivers is the need for information (Hilton, 1993; Houts, Rusenas, Simmonds, & Hufford, 1991; Kristjanson & Ashcroft, 1994; Northouse & Peters-Golden, 1993). For many family caregivers, an important source of information is the

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healthcare professional (Rees & Bath, 2000a), although difficulties in obtaining information have been reported (Northouse, 1988; Rees, Bath, & Lloyd-Williams, 1998). Studies have begun to address the nature and extent of information required by partners and other family caregivers of patients with breast cancer (Hilton; Kilpatrick, Kristjanson, & Tataryn, 1998; Kilpatrick, Kristjanson, Tataryn, & Fraser, 1998; Northouse & Northouse, 1987; Rees & Bath, 2000a; Rees et al.). Little is known, however, about how to tailor the delivery of this information according to individual coping styles. A qualitative study by Rees et al. revealed that informational needs of partners of women with breast cancer are highly individualistic. Many partners reported that they actively sought information, whereas others coped better by avoiding information. This finding is consistent with the theoretical framework on informational coping styles developed by Miller and Mangan (1983) and tested in a variety of clinical and community settings (reviewed by Miller [1995]). These studies have shown that mismatches between the amount of information given and the individual's coping style can lead to increased distress. Therefore, nurses and other healthcare professionals must be aware of caregiver characteristics that are likely to influence their desire for information as well as their ability to cope with information relating to stressful events.

Literature Review and Theoretical Framework

In a Canadian study, Kilpatrick (1995); Kilpatrick, Kristjanson, and Tataryn (1998); and Kilpatrick, Kristjanson, Tataryn, et al. (1998) used the Family Inventory of Needs–Husbands (FIN–H) to identify information needs of 84 partners of women who had undergone surgery for breast cancer in the previous two months. Kilpatrick also studied the extent to which partners wanted to receive information, based on their informational coping style (monitoring or blunting), and the extent to which their informational needs were met. According to Miller and Mangan (1983), some individuals cope with stressful situations by seeking information (monitors), whereas others avoid information and prefer to be distracted from the stressor (blunters). Using the Miller Behavioral Style Scale (MBSS) (Miller & Mangan), Kilpatrick found, unexpectedly, that partners reported similar numbers and types of information needs whether they were monitors or blunters. However, blunters were at greater risk for not having their information needs met. This finding is inconsistent with those in medical patients with cancer (Steptoe, Sutcliffe, Allen, & Coombes, 1991) and patients undergoing gynecologic surgery (Steptoe & O'Sullivan, 1986), in which blunters showed the highest levels of satisfaction with information and were less anxious than monitors.

Although the work of investigators indicates that patients cope better when the amount of information received matches their coping style (Lerman et al., 1990; Miller & Mangan, 1983; Watkins, Weaver, & Odegaard, 1986), researchers also have suggested that, paradoxically, monitors may be affected adversely by large amounts of information because of their tendency to dwell on the threat-related aspects of the information (Miller, Rodolietz, Schroeder, Mangan, & Sedlacek, 1996; Schwartz, Lerman, Miller, Daly, & Masny, 1995). These studies have shown that, in some situations (particularly those that

are threatening, uncontrollable, and long-term), some monitors engage in a high degree of intrusive ideation about the stressor, leading to increased psychological distress. For these people, providing enough information to satisfy their needs must be balanced by offering emotional support to help them deal with the information and its implications (Miller, 1995). These findings have important implications for nurses who play a major role in providing information and emotional support to patients and their families. The research to date has focused on patients and little is known about the extent to which findings from patient-centered studies are relevant to caregivers in stressful situations. Furthermore, most studies have tended to oversimplify the interpretation of monitoring and blunting coping styles by focusing on the monitoring subscale alone (Miller et al., 1996; Miller, Leinback, & Brody, 1989). However, an individual may exhibit one of four possible composite profiles when data from both subscales are combined, namely, high monitor and high blunter, low monitor and low blunter, high monitor and low blunter, and low monitor and high blunter (Warburton, Fishman, & Perry, 1997). These profiles are based on the theoretical assumption that the coping style of each person is not "pure" but rather a mixture of monitoring and blunting, with a tendency for one or the other style to predominate.

The work of Kilpatrick (1995); Kilpatrick, Kristjanson, and Tataryn (1998); and Kilpatrick, Kristjanson, Tataryn, et al. (1998) provides a useful foundation for further investigation of the relationships between information needs and informational coping styles among partners of women with breast cancer. The purpose of the present study was to determine the extent to which the Canadian findings could be replicated in other healthcare settings and to address the need for further research on the four composite profiles of informational coping styles based on Miller's (1995) theoretical foundation. Specifically, the study aimed to determine the number and types of information needs of primary family caregivers in Western Australia; the extent to which these needs were perceived to be met; the relationship between the number of needs, unmet needs, and informational coping styles; and other caregiver and patient characteristics. The study was focused particularly on the immediate postsurgical period (within one to three weeks) because information needs at this highly stressful time have been underresearched. Knowledge of family caregivers' information needs and coping styles may assist healthcare providers to meet these needs more effectively and identify those who may cope differently depending on their degree of preference for information.

Methods

Sample

A convenience sample of 141 women and their primary family caregivers was recruited from three surgical inpatient units at one private and two public teaching hospitals in Perth, Western Australia, over a 19-month period. The primary family caregiver was either the male partner or the person designated by the woman as her primary support person. The majority of participants were recruited in almost equal numbers from the two public hospitals ($n = 129$, 91%), although a small number in this group ($n = 9$) had been admitted as private patients. Twelve participants (9%) were recruited from a private hospital.

Instruments

Three instruments were used for data collection. The first was a modified form of the 30-item FIN-H (Kilpatrick, 1995; Kilpatrick, Kristjanson, & Tataryn, 1998), known as the **Family Inventory of Needs-Primary Caregivers (FIN-PC)**. The only difference between the two instruments was the substitution of the words "significant other" for "wife" in the FIN-PC. The instrument consists of two subscales that can be completed in 15 minutes. The first measures the importance of each of 30 informational needs on a five-point Likert-type scale (1 = not important to 5 = extremely important). The second subscale measures the extent to which each need is perceived to have been met. Three response options were provided: met, partly met, or unmet. For data analysis, responses for both subscales were recoded. The importance of needs responses were dichotomized to 0 (not important) and 1 (at least somewhat important). The needs met responses were coded into three categories: 0 (not applicable because item was rated as not important), 1 (met or partly met), and 2 (unmet). This adjustment allowed the percentage of unmet needs to be prorated according to the number of needs rated as at least somewhat important. During preliminary testing of the FIN-H, the scale achieved an internal consistency reliability of 0.91 and 0.93 at two time points and a test-retest reliability estimate of 0.82 for the importance of needs subscale and 0.76 for the needs met subscale (Kilpatrick; Kilpatrick, Kristjanson, & Tataryn). The internal consistency reliability (Cronbach's alpha) of the FIN-PC measured in the present study was 0.91 at time 1 and 0.94 at time 2.

The second instrument used was the **MBSS**, which is designed to identify the informational coping style of respondents (Miller, 1987; Miller & Mangan, 1983) and can be completed in less than 15 minutes. The scale depicts four hypothetical stressful situations, each followed by four monitoring and four blunting statements that reflect possible reactions to the situations. For example, in one scenario, the respondent is asked to imagine being afraid to go to the dentist to have dental treatment. A monitoring statement would be "I would want the dentist to tell me when I would feel pain." A blunting statement would be "I would try to sleep." Participants were asked to check off all items that would apply to them, scoring one point for each item. Points for monitoring and blunting were added separately, with a possible range of 0–16 for each subscale. Thus, each person had two scores, one for the monitoring subscale and one for the blunting subscale. Scores on these two subscales were dichotomized into high or low monitors and high or low blunners using predetermined cutoff values. The cutoff values were based on the mean scores on the monitoring and blunting subscales from a random sample of 1,058 noninstitutionalized men and women older than 20 (Tataryn, 1999). High monitors were those with a monitoring score of greater than or equal to 6.9, and high blunners were those with a blunting score of greater than or equal to 4.7. Thus, at this level of analysis, each participant had a coping style defined by two distinct subscale scores: a monitoring score (either high or low) and a blunting score (either high or low). A composite monitoring-blunting profile then was identified for each participant, resulting in four possible profiles: high monitor and low blunter (dominant monitor); high blunter and low monitor (dominant blunter); high monitor and high blunter (mixed coping style) and low monitor and low blunter (neither coping style).

In previous studies, Cronbach's alpha coefficients for MBSS subscales have varied from 0.70–0.80 (monitoring) and 0.64 (blunting) in nonstudent samples (reviewed by Rees and Bath [2000b]). In a study of daughters of women with breast cancer, the alpha coefficients were 0.65 and 0.41 for the monitoring and blunting subscales, respectively (Rees & Bath, 2000b). In the present study, the alpha coefficients for the monitoring subscale were 0.76 and 0.79 at time 1 and 2, respectively. Corresponding values for the blunting subscale were 0.60 and 0.73.

The third instrument was a **participant information form** for recording data on demographic, disease, and treatment characteristics of caregivers and patients.

Data Collection Procedures and Ethical Approval

Potential participants were identified by senior nursing staff who approached eligible women within a few days of surgery for permission to be contacted by the research nurse. The research nurse contacted the women and their primary caregivers and gained written, informed consent prior to administering the instruments either in the hospital or at the caregiver's home (time 1). For the time 2 data collection, caregivers were given a precoded copy of the FIN-PC and MBSS and a stamped, addressed return envelope with instructions to complete the instruments within one week following the postoperative visit. This visit was scheduled routinely for one week after surgery. Thus, the second time point for data collection was approximately two weeks after surgery. Nonresponders received a reminder telephone call approximately one week later. This study was approved by the human research ethics committee at each participating hospital. Informed consent was obtained from all participants.

Data Analysis

Data analysis was conducted with SPSS® Version 10 (SPSS Inc., Chicago, IL). Nonparametric statistics were used for data analysis because of the non-normal distribution of scores that could not be corrected by statistical transformation procedures. All tests were two sided, using an alpha value of 0.05 unless otherwise indicated. Bivariate correlations between continuous variables were calculated using Kendall's tau. Relationships between categorical variables were analyzed with the chi-square test. The Wilcoxon signed ranked test and Friedman's test were used to compare FIN-PC scores and coping styles between time 1 (within one week of surgery) and time 2 (within one to two weeks later, after the first postoperative visit with the surgeon, at which time the results of the surgery and pathology tests were discussed).

Results

Characteristics of Respondents

During the study period, 339 women underwent surgery for breast cancer at the three hospitals and 264 (78%) met the eligibility criteria (aged 18 or older and able to read and write in English, with a partner or primary family caregiver meeting the same criteria). Of the 264 eligible women and caregivers, 146 (55%) agreed to participate. However, the number of usable data sets at time 1 was 138 for the needs analysis and 141 for analysis of coping styles. For time 2, the number of usable data sets was 129, which represents a loss of 7% and 9%, respectively.

Among the 118 eligible women and caregivers who did not participate, the reasons for nonparticipation were they were unable to be contacted ($n = 14$, 12%), patients declined at first approach without stating reason ($n = 52$, 44%), caregivers declined without stating reason ($n = 40$, 34%), and timing was too soon after surgery ($n = 12$, 10%).

Table 1 shows the characteristics of the caregivers and women with breast cancer. The majority of caregivers were male partners, followed by daughters and other relatives. Caregivers were 21–80 years of age, with a mean age of 51.8 ($SD = 13.1$). The demographic profile indicated that the caregivers tended to be of British descent, relatively well educated, and living in urban areas. More than a third had children younger than 20.

Women with breast cancer were 30–82 years of age, with a mean age of 55.5, slightly higher than that for caregivers (see Table 2). Most women had early-stage breast cancer, and a large percentage had breast-conserving surgery. The majority were public patients and attended the breast care centers in the teaching hospitals. Information about adjuvant radiotherapy and chemotherapy was obtained from medical notes several weeks after surgery.

Table 1. Primary Family Caregiver Demographics

Characteristic	n	%
Relationship		
Male partner	98	70
Daughter	27	19
Sister or mother	6	4
Son	5	3
Other	5	3
Age (years)		
$\bar{X} = 51.8$	—	—
$SD = 13.1$	—	—
< 40	28	20
40–59	66	47
60–69	37	26
≥ 70	9	6
Missing	1	1
Education level		
Completed high school or less	67	48
Completed trade or nondegree	37	26
Further education degree or higher	37	26
Occupation		
Retired	42	30
Professional	43	30
Laborer	26	18
Other	29	21
Missing	1	1
Ethnic group		
British Isles	111	79
European	23	16
Other	6	4
Missing	1	1
Residence		
Urban	126	89
Rural	15	11
Children younger than 20		
No	92	65
Yes	49	35

N = 141

Note. Because of rounding, not all percentages equal 100.

Table 2. Patient Demographics

Characteristic	n	%
Age (years)		
$\bar{X} = 55.6$	—	—
$SD = 11.3$	—	—
< 40	12	9
40–59	75	53
60–69	42	30
≥ 70	12	8
Number of surgeries		
First	114	81
Second or subsequent	27	19
Type of surgery		
Lumpectomy	84	60
Mastectomy	57	40
Stage of disease		
I	62	44
II	75	53
III	4	3
Admission status		
Public	120	85
Private	21	15
Patient attended breast clinic		
Yes	117	83
No	24	17
Previous treatment		
Radiotherapy	4	3
Chemotherapy	5	4
Current treatment		
Radiotherapy	66	47
Chemotherapy	56	40

N = 141

Information Needs of Primary Family Caregivers

Table 3 summarizes the results for the two subscales of the FIN-PC at time 1 and time 2. For the first subscale, the median number of needs rated as important is the maximum number possible, indicating that all 30 needs on the inventory were perceived to be at least somewhat important at both time points. No significant difference existed in the number of needs rated as important between the two time points. For the second subscale, the percentage of unmet needs was calculated after adjusting the denominator for each participant's ratings on the first subscale to include only the needs rated as important. The median value of 10% unmet needs at time 1 indicates that the majority of needs rated as important were perceived to be met. A significant decrease was found in the percentage of unmet needs between time 1 and time 2 ($Z = -4.097$, $p < 0.0001$).

Mean scores were calculated for all 30 items on both the importance of needs subscale and the needs met subscale. At time 1, the mean scores for the importance of needs subscale ranged from 3.16–4.98 ($SD = 0.15$ –1.59) out of a possible range of 1–5. At time 2, the mean scores for this subscale ranged from 3.06–4.86 ($SD = 0.42$ –1.52). The five highest- and lowest-ranked needs are shown in Tables 4 and 5, revealing notable consistency in rankings between the two time points. The highest-ranked responses reflect the need for honest, clear information and concerns about the quality of care, the patient's condition, and future outcomes. The lowest-ranked needs were related to caregivers' needs for help and concerns about physical intimacy and providing care to the

Table 3. Summary of Number and Percentage of Needs and Unmet Needs

Category	Time 1 (n = 138)	Time 2 (n = 129)	p
Number of needs rated as at least somewhat important			
\bar{X}	29	28	> 0.05
SD	2	2	
Median	30	30	
Range	17–30	17–30	
Number of unmet needs			
\bar{X}	7	4	< 0.0001
SD	8	6	
Median	3	1	
Range	0–30	0–28	
% of unmet needs^a			
\bar{X}	22	13	< 0.0001
SD	26	21	
Median	10	3	
Range	0–100	0–92	

^a Percentage is expressed as a proportion of the number of needs rated as at least somewhat important for each participant.

Note. The maximum number of needs and unmet needs is 30.

patient. When the analysis was repeated to include only participants with children younger than 20, the ranking of items was similar. Specifically, the ranking of the item “know what to say to the children” increased in importance only slightly, from sixth lowest to eighth lowest at time 1 and from fifth to sixth lowest at time 2. The high scores for the needs met subscale at time 1 and 2 indicate that needs were largely being met at both time points, even when ranked at the lowest level of importance. The five lowest-ranked needs in terms of importance also scored at the lower end of the needs met subscale.

Factors Affecting the Number of Needs

At time 1, caregivers with children younger than 20 had a greater number of needs than those without children in this age group ($Z = -3.219$, $p = 0.001$). This difference no longer was significant at time 2 ($Z = -1.759$, $p = 0.079$). Fewer needs were reported by caregivers with higher levels of education compared with lower levels of education, but this association was observed at time 1 only and the significance was borderline ($p = 0.046$). No significant relationships were observed between the number of caregiver needs and a range of other variables tested (age of caregiver, age of patient, relationship [male partner or other], residence [urban or rural], occupation, ethnicity, admission status [public or private], previous breast surgery, type of surgery, stage of disease, and adjuvant therapy).

Factors Affecting the Extent to Which Caregiver Needs Were Perceived as Met

Sources of information (time 1 only): Overall, 57 (40%) of the 141 caregivers reported receiving information from a breast nurse counselor (or equivalent) and the same number (although not necessarily the same individuals) reported receiving information from medical staff. In addition, caregivers reported receiving information from a variety of sources including nursing staff ($n = 26$, 18%), the Cancer Foundation of Western Australia ($n = 12$, 8%), other counselors ($n = 5$, 3%), support groups ($n = 5$, 3%) and other unspecified sources

($n = 11$, 7%). Table 6 summarizes the results of an analysis undertaken to identify the association between specific combinations of information sources and the mean percentage of unmet needs. **Kruskal-Wallis analysis** revealed significant differences in unmet needs according to the information resources ($H = 19.54$, $df = 7$, $p = 0.007$), with a greater percentage of unmet needs associated with medical staff alone, compared with the breast nurse counselor alone. However, the lowest percentage of unmet needs was found among caregivers who reported receiving information from both the breast nurse counselor and medical staff, excluding other sources.

Private versus public admission: At time 1 only, caregivers of women admitted as private patients ($n = 21$) had a significantly higher number of unmet needs compared with caregivers of women admitted as public patients ($n = 120$) ($Z = -2.106$, $p = 0.035$). Nine of these private patients were treated in public hospitals.

Stage of disease: Kruskal-Wallis analysis of the relationship between the stage of disease and caregivers' unmet needs revealed a significant association at time 2 only ($H = 8.19$, $df = 2$, $p = 0.017$). Pairwise comparisons using the Mann-Whitney U test (with the Bonferroni correction giving a revised significance level of $p = 0.017$) revealed that caregivers of women with stage II disease had a significantly greater percentage of unmet needs than those with stage I disease at time 2 ($Z = -2.483$, $p = 0.013$). This finding may reflect increased concerns of participants with stage II disease after being informed about the staging results at the postoperative visit. Participants at time 1 would not have known the stage of the disease. No significant associations were

Table 4. Highest- and Lowest-Ranked Caregiver Needs: Time 1

Needs	\bar{X} ^a	Degree to Which Needs Were Met ^b
Highest-Ranked Needs		
1. Have my questions answered honestly (1) ^c	4.98	2.52
2. Be assured that the best possible care is given to her (2)	4.91	2.74
3. Know the probable outcome of her illness (5)	4.88	2.13
4. Have explanations given in terms that are understandable (8)	4.87	2.63
5. Be informed of changes in her condition (3)	4.86	2.28
Lowest-Ranked Needs		
30. Have someone be concerned about my health (30)	3.16	2.11
29. Be told about people who could help with problems (e.g., financial, household) (28)	3.48	1.91
28. Know how to approach changes related to sexuality (29)	3.83	2.02
27. Help with her care while she is in hospital (27)	3.87	2.40
26. Know how to touch her (25)	4.13	2.09

^a Mean score for the importance of each need (range = 1–5, with 5 corresponding to highest importance)

^b Mean score for the extent to which each need was reported to be met (range = 1–3, with 3 corresponding to fully met)

^c Numbers in parentheses indicate the rank at time 2.

Table 5. Highest- and Lowest-Ranked Caregiver Needs: Time 2

Needs	\bar{x} ^a	Degree to Which Needs Were Met ^b
Highest-Ranked Needs		
1. Have my questions answered honestly (1) ^c	4.86	2.80
2. Be assured that the best possible care is given to her (2)	4.84	2.80
3. Be informed of changes in her condition (5)	4.82	2.66
4. Know specific facts concerning her future (8)	4.81	2.59
5. Know the probable outcome of her illness (3)	4.78	2.48
Lowest-Ranked Needs		
30. Have someone be concerned about my health (30)	3.06	1.61
29. Know how to approach changes related to sexuality (28)	3.57	1.78
28. Be told about people who could help with problems (e.g., financial, household) (29)	3.59	1.86
27. Help with her care while she is in hospital (27)	3.70	2.31
26. Know what to say to the children (25)	3.81 ^d	1.90 ^d

^a Mean score for the importance of each need (range = 1–5, with 5 corresponding to highest importance)

^b Mean score for the extent to which each need was reported to be met (range = 1–3, with 3 corresponding to fully met).

^c Numbers in parentheses indicate the rank at time 1.

^d The means for these items increased to 4.4 and 2.0, respectively, when the analysis was restricted to caregivers with children younger than 20.

detected for participants with stage III disease, but only four women fell into this category.

Informational Coping Styles

The MBSS scores were analyzed first by the conventional method of calculating a separate monitoring and blunting score for each participant. At both time points, analysis of scores on the monitoring subscale revealed that the majority of the caregivers (82% and 80%, respectively) displayed a high monitoring style (see Table 7). When scores for each participant were analyzed on the blunting subscale, the proportion of caregivers displaying a high blunting style decreased significantly across the two time points from 34% to 26% ($Z = -2.236$, $p = 0.025$). When all four combinations of high and low monitoring and blunting were analyzed, the most common composite coping style was found to be high monitor and low blunter, referred to hereafter as the dominant monitor style. This style was used by 55% and 58% of caregivers at time 1 and time 2, respectively. According to Miller (1995), such individuals would tend to want a large amount of information and would not seek distraction from the stressor. In contrast, the reciprocal combination of high blunter and low monitor (dominant blunter) was the least commonly used composite coping style (9% and 4% at time 1 and time 2, respectively). Participants with this profile would tend to avoid thinking about the stressor and would want mini-

mal information about it. Caregivers who used neither monitoring nor blunting styles were also in the minority (11% and 16%). This group, by definition, would want minimal information and would not seek distraction from the stressor. Their coping behavior remains undefined by the limited dimensions of the MBSS. Interestingly, about 25% of the caregivers used a combination of two apparently conflicting coping styles (high monitor and high blunter or mixed coping style) (26% and 22%). These caregivers would attempt to gather large amounts of information while trying to avoid thinking about it. Changes in these combined categories between time 1 and time 2 reflect the decreased number of people with a high blunter component to their composite profile. The net effect is a slight increase in the percentage of dominant monitors and those using neither coping style, and a decrease in the percentage of dominant blunters and those using the mixed coping style.

No significant relationships were observed between coping styles, demographic characteristics, use of information sources, number of needs, and unmet needs. However, an increase in the median percentage of unmet needs was reported by dominant blunters compared with other coping styles at both time points (see Table 8). This increase was two- to threefold (23% versus 7%–10%) at time 1 and about two- to fourfold at time 2 (7% versus 2%–4%). This higher level of unmet needs contrasts with the relatively low median percentage of unmet needs (7% and 3% at times 1 and 2, respectively) associated with the high blunter style on the blunting subscale. However, this finding may be explained by the observation that 75% of high blunters were also high monitors (mixed style), with the latter group reporting a lower level of unmet needs. This comparison demonstrates the potential value of considering composite profiles rather than individual monitoring or blunting subscales when interpreting data from the MBSS.

Discussion

The findings of this study reveal that primary family caregivers of women having breast cancer surgery in the two main referral centers in Western Australia have a range and priority of needs similar to those reported in Canada and the

Table 6. Relationship Between Sources of Information Reported by Caregivers and Percentage of Unmet Needs: Time 1

Information Source	n	Mean % of Unmet Needs
No one	55	36
Doctor only	17	21
Breast nurse counselor only	19	16
Nurses only	6	14
Breast nurse counselor and nurses	4	12
Doctor and nurses	4	11
Breast nurse counselor, doctor, and nurses	11	10
Breast nurse counselor and doctor	23	9

Note. Other sources of information were reported but not tabled because of small sample sizes in each category. These included Cancer Foundation ($n = 12$), support group ($n = 5$), other counselor ($n = 5$), and other sources not specified ($n = 11$). The Kruskal-Wallis analysis for independent groups tabled above revealed a significant difference in percentage of unmet needs among categories of information sources ($p = 0.007$).

Table 7. Frequency of Monitoring and Blunting Characteristics

Classification	Time 1 (N = 141)		Time 2 (N = 129)	
	n	%	n	%
Monitoring subscale				
Low monitor	26	18	26	20
High monitor	115	82	103	80
Blunting subscale				
Low blunter	93	66	96	74
High blunter	48	34	33	26
Combined subscales				
Low monitor and low blunter (neither style)	15	11	21	16
Low monitor and high blunter (dominant blunter)	12	9	5	4
High monitor and low blunter (dominant monitor)	78	55	75	58
High monitor and high blunter (mixed style)	36	26	28	22

Note. For each participant, responses on the Miller Behavioral Style Scale were analyzed separately on the monitoring subscale and the blunting subscale. The combined subscale classifications reflect the relative dominance of the monitoring and blunting styles within the composite profile of each individual.

Note. Because of rounding, percentages may not equal 100.

United Kingdom (Kilpatrick, Kristjanson, Tataryn, et al., 1998; Rees & Bath, 2000a). Furthermore, the priority ranking of needs remained consistent within the three-week time frame of the immediate postsurgical period. For the majority of caregivers, all 30 needs were rated as at least somewhat important, reflecting the broad range of concerns affecting caregivers who are supporting their loved ones and wider family. These concerns included having questions answered honestly, being informed about the patient's condition, being assured that the best possible care was being given, having explanations in lay terminology, and knowing the probable outcome of the illness. Caregivers also wanted to know about how best to communicate and care for patients. Needs that were ranked among the lowest in importance were related to caregivers' own needs for practical help and their own health, consistent with the findings of Kilpatrick, Kristjanson, Tataryn, et al. Nurses should, therefore, be alert to the possi-

bility that caregivers may overlook their own needs in their concern for loved ones and may benefit from supportive interventions that explicitly address these needs. For example, a list of resources for practical help and booklets or audiotapes about how caregivers can deal with their concerns and support their loved ones may be helpful at this time.

The percentage of unmet needs among caregivers was low, the least-met needs being those that also were ranked as the least important. This relationship between the two subscales may indicate that caregivers' needs were being addressed according to their priorities. However, the alternative explanation of a response bias cannot be excluded. The unmet needs were related to the caregivers' needs for practical help and their own health, as well as the need to help with patients' care, knowing how to touch patients, knowing how to approach sexuality changes, understanding how to provide emotional support, and knowing what to say to the children.

The low percentage of unmet needs compared with an earlier Canadian study (Kilpatrick, Kristjanson, Tataryn, et al., 1998) may reflect differences between the hospitals involved and the characteristics of the sample. In the present study, almost one-third of caregivers were not male partners, fewer caregivers were in the 70 or older age group (6% versus 21%), a higher percentage were professionals (30% versus 7%), and a higher percentage were of British origin (79% versus 35%). Among the patient factors, the present study had a higher percentage of breast-conserving surgery (60% versus 29%). Furthermore, the two public hospitals in the Western Australian study have well-established breast centers where the majority of women are admitted for diagnosis and subsequent treatment. Support in these centers is provided by a multidisciplinary team, including breast nurses and breast nurse counselors. Partners and other primary caregivers are encouraged to attend. The Canadian study was conducted several years earlier, prior to the establishment of similar facilities. Although the different settings may have accounted for much of the difference in the percentage of unmet needs, researchers must note that the two studies differed significantly in their response rates: The Canadian study achieved 85% compared with 55% in Western Australia. The low response rate in the latter study could have concealed problems in vulnerable groups, such as those in nonprofessional occupations, who chose not to participate.

Table 8. Percentage of Unmet Needs According to Coping Style

Coping Style	Time 1 (N = 138)				Time 2 (N = 126)			
	n	Mean %	Median %	SD	n	Mean %	Median %	SD
Monitoring subscale								
Low monitor	25	31	15	33.6	24	19	5	26.1
High monitor	113	20	8	23.4	102	12	3	20.0
Blunting subscale								
Low blunter	90	22	10	25.4	93	14	4	20.8
High blunter	48	21	7	26.7	33	13	3	23.0
Combined subscales								
Low monitor, low blunter	14	31	9	37.2	19	20	4	28.2
Low monitor, high blunter	12	30	23	30.0	5	12	7	16.6
High monitor, low blunter	76	21	10	22.6	74	12	4	18.3
High monitor, high blunter	36	19	7	25.4	28	13	2	24.2

Note. Discrepancies in sample sizes between Table 7 and Table 8 are the result of missing data. Differences in the mean and median reflect skewed data.

Analysis of the relationships among the number of needs rated as important, the number of unmet needs, and a range of predictor variables revealed several significant relationships. First, when caregivers were asked to state the source of the information they received, the lowest percentage of unmet needs was found to be associated with information received from the breast care nurses in combination with medical staff. The important role that all nurses play in providing information is reflected in the lower level of unmet needs reported by caregivers receiving information from sources that included nurses compared with the medical staff alone.

The second important finding relates to the increased number of unmet needs reported by caregivers of women admitted as private versus public patients. This finding could be explained by the fact that half of the private patients were drawn from a private hospital without a breast center and the majority of the remainder were admitted into a public hospital whose admission process for private patients bypassed a breast center. Given the small number of patients in this category in the present study, however, this interpretation is offered with caution and further studies are recommended to confirm this finding.

The third significant finding was that caregivers reported a greater number of information needs when the family had younger children compared to no children or children older than 20. This outcome is consistent with expectations based on a limited number of studies on the effect of a parent's cancer diagnosis on young children (Northouse, 1995; Northouse, Cracchiolo-Caraway, & Appel, 1991; Pederson & Valanis, 1988).

The fourth significant finding is that caregivers of women with stage II cancer reported a greater number of unmet needs compared with caregivers of patients with stage I cancer. This contrasts with results reported by Kilpatrick, Kristjanson, Tataryn, et al. (1998), whose profile of patients with stage I and II disease was similar to this study but showed no significant differences among partners of women with stage 0–IV breast cancer.

This study was guided by the premise that information provided by healthcare professionals should be tailored to the informational coping styles of family caregivers. The underlying theoretical foundation is based on the work of Miller and others, who have shown that mismatches between the amount of information given and the individual's coping style can lead to increased distress (Lerman et al., 1990; Miller & Mangan, 1983; Watkins et al., 1986). This study did not attempt to analyze the relationships among information giving, coping style, and distress. Rather, it sought to determine associations among informational coping style, needs, and unmet needs as a first step in identifying the potential value of assessing individual coping styles prior to information giving. Of particular interest was the extent to which blunting style occurred in the sample and the impact that this coping style might have on informational needs and unmet needs. Blunting style has the potential to not only limit the amount of potentially helpful information sought by the caregiver but also the extent to which the caregiver is perceived as supportive to the woman with breast cancer. Previous studies of partner interactions have suggested that partners' avoidance of open discussion about the cancer experience can be problematic for patients (Pistrang & Barker, 1995; Spiegel, Bloom, & Gottheil, 1983).

The present study revealed unexpected findings that warrant further investigation. First, a significant decrease was found in the proportion of high blunters over the two-week time period. This contrasts with previous reports that informational coping style is a stable characteristic, based on test-retest analyses (Miller, 1987; Rees & Bath, 2000b). Although other reports of the heterogeneity and unreliability of the blunting scale could be interpreted as a possible explanation for the study findings (Rees & Bath, 2000b; Ross & Maguire, 1995; Van Zuuren, 1994), most of this evidence is based on studies of students. The Cronbach alpha coefficients for the blunting subscale (0.60 and 0.73) at both time points in the current study were within, or just below, the recommended limits of 0.7–0.8 (Bland & Altman, 1997).

The second unexpected finding was the high proportion of monitors in the sample when compared with findings from a health survey of more than 1,000 community-dwelling Canadians aged 18–80 and older (Tataryn, 1999) that showed that older age groups were less likely to be monitors. Whether this association holds true over time or reflects a specific cohort effect for this generation remains to be determined. Recent studies have raised concerns about the adequacy of earlier psychometric evaluations of the MBSS but have not identified significant associations with demographic characteristics (Rees & Bath, 2000b; Ross & Maguire, 1995). Thus, conclusions about the psychometric properties of the MBSS and, particularly, the blunting subscale remain open to question.

The third unexpected finding was that monitors and blunters had similar numbers of needs rated as important and reported similar usage of information sources, contrary to the prediction that monitors would have a greater need for information (Rees & Bath, 2000b). This finding is consistent with that of Kilpatrick (1995) and may be explained partly by the ceiling effect of the instrument, which was designed to capture the 30 most important needs identified by partners of women with breast cancer. Another factor to consider is the relatively small number of blunters in the sample and the fact that the majority of high blunters were also high monitors.

Limitations

In the course of analyzing the MBSS data from this study and earlier Canadian studies (Kilpatrick, 1995; Tataryn, 1999), several limitations to the conventional scoring system were revealed. One limitation relates to different approaches used for scoring the MBSS. In most studies, the median or mean score for the sample is used as the cutoff point for classifying high and low monitors or high and low blunters on separate (Miller et al., 1989) or combined subscales (Lerman et al., 1996; Miller & Mangan, 1983; Steptoe et al., 1991). These approaches limit the extent to which different studies can be compared and have not allowed researchers to identify true population norms. The present study used cutoff points corresponding to the median scores for monitoring and blunting obtained from a large population study (Tataryn). Future studies should consider using these values as standards, at least until findings from further population studies become available.

Another limitation arising from the previously mentioned studies relates to the almost exclusive use of the dichotomous monitor and blunter classification, which results in participants being identified as either monitors or blunters, as if these were mutually exclusive characteristics. However, this

approach can mask more complex monitoring and blunting relationships that are revealed when the two subscales are combined to form composite profiles (Warburton et al., 1997). These composite profiles have not been reported previously in the literature, apart from a study on the relationship between coping styles and emotional distress in people being screened for HIV (Warburton et al.). Therefore, how these complex coping styles affect an individual's response to a health threat is not yet clear. For example, although the caregivers who used neither coping style (low monitor and low blunter) or a mixed style (high monitor and high blunter) appeared to have relatively few unmet needs in this study compared with the dominant monitors and the dominant blunters, the authors do not know how to interpret these coping styles in terms of actual behavior. Furthermore, the authors do not know how other aspects of these caregivers' psychosocial adjustment were affected (e.g., their emotional distress) or how their coping style affected the patients' adjustment and perceptions of support.

Other limitations of the current study relate to the low response rate, as previously discussed, and the demographic bias toward English-speaking, urban, and educated caregivers, whose needs may not reflect those of the wider population.

Implications for Clinical Practice

Providing timely and appropriate information to caregivers in acutely stressful situations remains a challenge for nurses. Assisting caregivers in prioritizing their need for information or helping them to initiate discussion about information needs can be achieved through the use of the FIN-PC, although this type of checklist should be viewed as an adjunct to, rather than a substitute for, personalized assessment within the immediate context of caregiving. The provision of information can be enhanced further by understanding the caregivers' informational coping style and tailoring the delivery of information accordingly. For example, caregivers who are dominant blunters may become distressed when having to deal with large amounts of information during the course of supporting their partners and families. In such cases, strategies to assist blunters to cope with stressful information and the overall situational stress may be helpful. Relaxation methods designed to assist people to cope with stress have been suggested to be more effective if they are compatible with the coping style (Lerman et al., 1990). Thus, blunters may respond better to distraction from the stressor through guided imagery and visualization, whereas monitors may do better with biofeedback techniques that allow them to focus on and deal with a problem rather than escape from it (Lerman et al., 1990).

Recommendations for Further Research

Despite the possible psychometric limitations of the MBSS, insights gained from this study should encourage further research to gain a more in-depth understanding of how informational coping styles may affect patients' and family members' need for and response to education from nurses and other healthcare professionals. Studies are needed to describe the actual behavior and psychosocial outcomes associated with each of the composite profiles and to determine the relative merits of using the monitoring and blunting subscales versus the composite profiles in different clinical situations.

Studies also are required to determine the stability of informational coping styles in relation to personal and situational characteristics. Although previous researchers have reported that informational coping styles are stable (traits rather than states) and unrelated to sociodemographic variables (Miller, 1995), these findings have been obtained incidentally rather than as outcomes of primary research questions and, therefore, require confirmatory studies. Ross and Maguire (1995) have suggested that more fundamental research into the psychometric properties of the MBSS is required, including refinement of the items and the scoring model of the tool.

From a clinical perspective, further research is needed to determine the extent to which information needs are met in the private healthcare system. Although the number of participants in the private healthcare subgroup was limited, findings suggested that information needs may not be met adequately. This problem may be related to the fact that private hospitals, unlike the public hospitals in this study, may not have sufficient numbers of patients with breast cancer to warrant the establishment of breast centers.

In conclusion, this study has confirmed the importance of addressing information concerns of primary family caregivers of women with breast cancer. The study also has drawn attention to the potential value of assessing informational coping styles prior to information giving. Further research is required to extend the understanding of these coping styles and to determine practical ways in which nurses can tailor the content and delivery of information to fully meet caregivers' needs as well as assist them to cope with the implications of stressful information.

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