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Partner support and anxiety in young women with breast cancer

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Abstract

***Objective*: Using a large prospective cohort of women age 40 or younger diagnosed with breast cancer, we examined the relationship between perceived partner support and anxiety.**

***Methods*: Six hundred seventy-five young women with breast cancer Stages I–III, median age 36, completed a self-report baseline questionnaire. Perceived partner support was assessed using items extracted from the marital subscale of the Cancer Rehabilitation Evaluation System; generalized social support was assessed with the Medical Outcomes Study–Social Support Survey. Anxiety was measured using the anxiety subscale of the Hospital Anxiety and Depression Scale. Multivariable logistic regression analyses evaluated the association between partner support, other sociodemographic factors, and anxiety.**

***Results*: Mean age at diagnosis was 35.4 years. Fourteen percent of the women were not partnered, and among those who were partnered or in a significant relationship, 20% were categorized as unsupported. In univariate and multivariable analysis adjusting for sociodemographic factors, women in an unsupported-partnered relationship had higher odds of anxiety symptoms compared with women in a supported-partnered relationship. Young age and being financially insecure were also both independently associated with anxiety.**

***Conclusions*: Our findings suggest that partner support may play a key role in a young woman's adjustment to a serious stressor such as breast cancer. In addition, younger age increases vulnerability to anxiety as does struggling with finances. Because supportive efforts of a partner have potential to protect against the impact of stress, interventions to enhance partner support and reduce anxiety might be beneficial to address challenges experienced as a couple in this setting.**

Background

A diagnosis of breast cancer has significant emotional impact, almost universally evoking fears about death, worries about treatment, and concerns about major disruptions in day-to-day life. Psychological distress is well documented during the first year following a diagnosis of breast cancer [1–3], with anxiety identified as one of the most prevalent psychological effects [4]. Reported rates of clinically significant anxiety in women with breast cancer range from 10 to 50%, depending on the patient population sampled and the diagnostic criteria utilized [4]. While some degree of distress is a common outcome of diagnosis, studies reporting the impact of breast cancer by age indicate that younger women report higher levels of distress than those who are older [5–8].

Young women with breast cancer face particular demands relative to their stage of life: balancing dependent children and work, concerns about fertility and potential for future child bearing, career and educational interruption, compromised finances, and worries about body image and sexuality [1,6,9–11]. Intimate relationships can be disrupted, and role functioning diminished, particularly for those receiving systemic chemotherapy [12,13]. Many young breast cancer survivors have also described parenting as a particularly important concern [14,15]. Having responsibility for dependent children under the age of 18 may heighten distress and diminish quality of life in this population [2].

Breast cancer also has consequences for a woman's family and social support network [4,16,17]. For women who are married or in a significant relationship,

their partners are also confronting a broad spectrum of stresses and challenges. Even in the setting of good precancer relationships, couples may struggle to manage through the difficulties imposed by the cancer diagnosis. Although individual adjustment may improve over the first year after a diagnosis of cancer, patients and their partners have reported concurrent decline in spousal support and communication [18,19]. Negative interactions such as partner avoidance or criticism have also been associated with heightened patient distress [9,10].

Social support can serve a buffering role and contribute to enhanced psychological well-being in patients with cancer [16,20]. Both emotional and practical forms of support are needed, but emotional support has been found to be most helpful in the setting of coping with cancer [21]. Partner support has the potential to be protective for women's emotional health; however, suboptimal partner support may be a source of dissatisfaction, distress, and discord [3,16,20]. Common issues that arise among couples coping with cancer include the tendency for partners to avoid or withdraw from discussion of concerns, fears, and other stressors [22]. A partner may criticize the patient's coping behavior or offer solutions when a feelings-based response is sought [10]. This behavior is often linked to a misplaced wish to protect the patient from another source of potential stress, to feel more in control and limit one's own emotional pain, or to a desire to avoid conflict [22].

Theoretical framework

Stress and coping theory has been a key framework for understanding the role of social support in adjustment to cancer in the family. According to the theory, stress arises when a situation is appraised as demanding; yet appropriate resources are not available to cope effectively [23]. From this theoretical perspective, the supportive efforts of others reduce the impact of stressful situations through activation or facilitation of more adaptive coping strategies such as open expression of feelings, engagement in problem-solving, and cognitive reframing [24].

Given the high value of social support among young women with breast cancer and the challenges that a cancer diagnosis presents, expanding our understanding of the role of partner support and the support needs of younger women would potentially foster the development of appropriately targeted psychosocial care. We therefore sought to (1) describe perceptions of partner support among young women with breast cancer and (2) assess the association between being partnered or not partnered on anxiety, and if partnered, the potential effect of a partner being perceived as supportive or unsupportive on the level of anxiety.

Methods

Study population

Helping Ourselves, Helping Others: The Young Women's Breast Cancer Study (YWS) is an ongoing multi-institutional prospective cohort study established to explore biological, medical, psychosocial, and quality of life (QOL) issues in young women with breast cancer. Eligibility requirements include diagnosis with breast cancer at or under 40 years of age and being English speaking. The institutional review boards of the participating sites have approved the YWS protocol. After enrollment and informed consent, women are mailed a baseline survey and then receive a survey every six months for the first three years following diagnosis and annually thereafter. Medical record and pathology review are used to determine stage and other tumor characteristics. The number of months between the first pathology report indicating cancer and the return date of the baseline survey is recorded as time since diagnosis.

Data and measures

The data utilized for this analysis were from the baseline survey returned between November 2006 and June 2014. A total of 675 women in the cohort were eligible, excluding women who were not Stages I–III, and those for whom any covariate included in the model had at least one missing value (Figure 1).

Sociodemographic and disease information included age at diagnosis in years, race/ethnicity (White non-Hispanic (WNH) vs. non-WNH), parity (live children delivered before diagnosis vs. none), tumor stage, and chemotherapy treatment (any vs. none). Perceived financial status was assessed through the question: How would you describe your household's financial situation right now (i.e., enough money for special things, little spare money for special things, money to pay bills only because cut back, difficulty paying bills) [25].

Perceived social support was assessed from responses to items from the 19-item Medical Outcomes Survey (MOS)–Social Support Survey [26]. The survey assessed 'how often is each of the following kinds of support available to you if you need it?' Items were rated from 0, 'none of the time', to 4, 'all of the time', across four domains of support: (1) emotional/informational, (2) tangible, (3) affectionate, and (4) positive social interaction.

Partner status was determined through the Cancer Rehabilitation Evaluation System (CARES) health-related QOL scale question: 'Are you married or in a significant relationship?' Perceived partner support was measured by two items extracted from the marital subscale of the CARES [27,28]: 'My partner and I have difficulty talking about our feelings', and 'My partner and I are not getting

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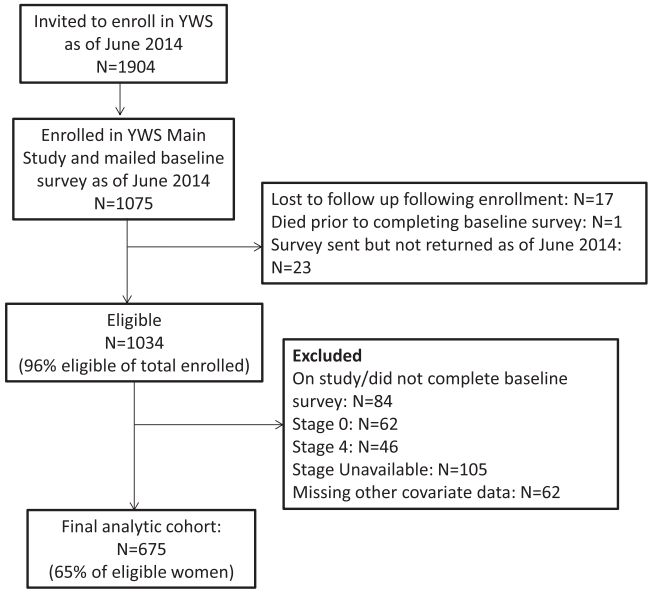

Figure 1. Study flow chart

along as well as we usually do'. Items were rated from 0, 'not at all', to 4, 'very much'. Responses for each item were dichotomized for this analysis into supported (0–1) or unsupported (2–4) and used to create a three-level partner support variable. If someone was considered 'unsupported' for either item, we categorized them as 'partnered-unsupported'; if someone was considered 'supported' for both items, we categorized them as 'partnered-supported'; a third category of women included those who were not married or in a significant relationship who were categorized as 'unpartnered'. Women who did not respond to the initial 'partner status' but subsequently answered the two partner support items were considered 'partnered'.

Anxiety was assessed from responses to seven anxiety subscale items of the 14-item Hospital Anxiety and Depression Scale (HADS) [29]. For each item, participants were asked to choose the response (variable four-point response scale) that best describes how she has been feeling in the past week. The anxiety subscale's score ranges from 0 to 21 and was dichotomized into 'anxious' if greater than or equal to 11 (cutoff for abnormal levels of anxiety) and 'not anxious' if less than 11.[29].

Statistical analysis

Frequencies, percentages, and means were reported for categorical and continuous covariates, respectively. Univariate logistic regression was used to assess the association between anxiety (dependent variable) and sociodemographic factors, stage of tumor, treatment, social support, partner support, having children, and perceived financial status. All variables were then entered into a multivariable logistic regression model. All analyses were conducted in SAS version 9.4 (SAS Institute, Cary, N.C.).

Results

Table 1 includes patient demographic and clinical characteristics. Mean age at diagnosis was 35.4 years (median = 36, range from 17 to 40). Median time between diagnosis and return of the baseline survey was 4.7 months (range from 1.4 to 20.7). Comfort with current financial status ranged from 51% of women reporting they had enough money to pay bills and buy special things to 31% who could pay bills, but with little spare money to purchase special things. Nineteen percent of women had money to pay bills only if they cut back on things or had difficulty paying bills no matter what they did. Fourteen percent of women were not partnered. Of those who were partnered or in a significant relationship ($n = 585$), 20% were categorized as unsupported and 80% as supported.

Table 2 shows the comparative results of mean MOS scores with mean HADS score across partner/support categories. While unpartnered and unsupported/partnered young women score similarly on the MOS, unsupported/partnered women have higher mean HADS scores (indicative of higher anxiety).

Results from the regression analyses are included in Table 3. In the univariate analysis, younger age at diagnosis (OR = 0.94, 95% CI = 0.90–0.98), non-WNH racial/ethnic background (OR = 0.61, 95% CI = 0.38–0.99), lower MOS-Social Support score (OR = 0.96, 95% CI = 0.95–0.97), financial insecurity (vs. financially comfortable) (OR = 2.61, 95% CI = 1.65–4.11), and partnered/unsupported (vs. partnered/supported) (OR = 2.09, 95% CI = 1.34–3.24) were all significantly associated with anxiety. In the multivariable analysis, we initially excluded the MOS-Social Support score because of concern about potential collinearity with the partner-support variable. In this analysis,

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Table 1. Patient demographic and clinical characteristics ($n = 675$)

Characteristic		
Mean/median age at diagnosis (range)	35.4/36 (17-40)	
Median time since diagnosis (range)	4.7 months (1.4-20.7)	
	Frequency	Percent
White non-Hispanic		
No	95	14
Yes	580	86
Partner status		
Unpartnered	90	14
Partnered/unsupported	118	17
Partnered/supported	467	69
Parity		
No	237	35
Yes	438	65
Cancer Stage		
1	267	40
2	313	46
3	95	14
Chemotherapy		
No	156	23
Yes	513	76
Missing	6	1
Surgery		
Lumpectomy	215	32
Unilateral mastectomy	142	21
Bilateral mastectomy	207	31
No surgery yet	81	12
Missing	30	4
Financial situation		
Enough money	343	51
Little spare money	206	31
Need to cut back/Difficulty paying bills	126	19
HADS anxiety		
Score < 11	517	77
Score > = 11	158	23

Table 2. Mean MOS and HADS scores by partner status

Partner status	Mean MOS score	$p < 0.0001$	Mean HADS anxiety score	$p < 0.0001$
Unpartnered	75.5		7.6	
Partnered/supported	89.6		7.2	
Partnered/unsupported	75.9		9.2	

partnered/unsupported (vs. partnered/supported), younger age at diagnosis, and financial insecurity remained significantly associated with anxiety. When we included the MOS-Social Support score in the multivariable model (data not shown), being an unsupported/partnered woman (vs. partnered/supported) was no longer independently associated with anxiety. Compared with partnered/supported women, unpartnered women did not have higher odds of anxiety in univariate or multivariable analyses. Stage and parity were not significantly associated with anxiety in either analysis. An analysis using a HADS score cutoff of 8 (borderline abnormal cutoff) for anxiety yielded similar results.

Table 3. Univariate and multivariable regression of factors associated with HADS anxiety score > =11

	Univariate OR (95% CI)	Multivariable Adjusted OR (95% CI)
Age at diagnosis (years)	0.94 (0.90–0.98)[b]	0.95 (0.91–1.00)[a]
Partner-support (reference = partnered/supported)		
Partnered/unsupported	2.09 (1.34–3.24)[b]	2.08 (1.32–3.27)[b]
Unpartnered	1.27 (0.75–2.15)	1.04 (0.59–1.84)
WNH (reference = non-WNH)	0.61 (0.38–0.99)[a]	0.69 (0.42–1.14)
Financial comfort (reference = enough for special things)		
Little spare money	1.45 (0.95–2.21)	1.35 (0.87–2.07)
Need to cut back/difficulty paying bills	2.61 (1.65–4.11)[b]	2.51 (1.56–4.02)[b]
Stage (reference = 1)		
2	1.23 (0.83–1.82)	1.12 (0.75–1.68)
3	1.35 (0.78–2.32)	1.32 (0.75–2.30)
Parous (reference = nulliparous)	0.77 (0.53–1.10)	0.84 (0.54–1.30)
MOS Social Support	0.96 (0.95–0.97)[b]	---

WNH, White non-Hispanic.
[a] $p \leq 0.05$.
[b] $p \leq 0.01$.

Discussion

While few studies have specifically set out to examine perceptions of partner support and their relationship to level of anxiety in young women with breast cancer, anxiety was identified as a prominent concern and source of distress in studies that did focus on health-related QOL assessment of younger women [2,5]. Married women with cancer consistently report partner support as essential, and this support has been associated with greater QOL and lower levels of depression and anxiety [21]. Not all partnerships are supportive, however. Our analysis found that women who were in an unsupported/partnered relationship had higher odds of exhibiting anxious symptoms compared with women who were in a supported/partnered relationship. This finding underscores the key role of support in adjustment to serious stressors: supportive efforts have potential to protect against or reduce the impact of stressful situations [24], but unsupportive behaviors can be detrimental to adaptive coping [16].

The transactional model of stress and coping provides some guidance on how younger partnered women's perception of support may affect emotional adjustment post breast cancer diagnosis [30]. In the transactional model, stress is a person–environment interaction and incorporates the role of perceptions and coping efforts in how individuals respond to stressful events. In this model, person–environment interplay (e.g., patients with breast cancer and partner's behavior) and the outcome (e.g., heightened anxiety) are based on subjective judgments and appraisals. Social support or interactions have powerful and diverse effects on how people adapt to stressful events [31]. A

nonsupportive environment can adversely affect one's ability to cope with a health threat [30,31]. Conversely, a woman's belief or perception that social support is positive and accessible affects her appraisal of a challenging situation as more manageable or less overwhelming, thus enhancing coping [32]. Under circumstances such as the diagnosis of breast cancer in younger women, exploration of perceptions about quality of social support, especially from a partner or significant other relationship, may be critical to distress screening, psychosocial assessment, and appropriately targeted interventions.

With a diagnosis of cancer, maladaptive patterns of communication may arise for a number of reasons including partners managing multiple competing demands such as work productivity, caregiving for spouse and children, and their own emotional distress [17]. In one study focused on younger women with breast cancer, communication issues related to the partner were identified as the greatest relationship concern [9]. Partners of younger patients with cancer, both young themselves and relatively early in their relationship, may have only limited experience in weathering life stress together as a couple or awareness of how to best provide support under challenging circumstances. Furthermore, a partner's behavior and emotional expression may not fit the patient's expectations. When needs are not met, especially during times of heightened emotional vulnerability, relationship dissatisfaction and conflict may follow. In other investigations focused on couples dealing with cancer, negative interactions such as avoidance or criticism by the partner were associated with increased distress, maladaptive coping, and intrusive thoughts about cancer [16,32–34]. If relationship stress develops, a partner may also withdraw as self-protection or believe that it is better to avoid discussion about the challenges of the current situation. This behavior can lead a patient to perceive that her partner is unsupportive or at a minimum, an uncertain or unreliable source of support. As a result, the patient may experience heightened distress[17].

As has been reported in prior studies, younger age at diagnosis of cancer was also an independent predictor of higher levels of anxiety [7]. This result lends credence to the importance of identifying young women's potential sources of stress that may be amenable to intervention. Social support domains that are typically included in QOL assessments may need to be explored to identify specific concerns that might otherwise be obscured in global assessments. In addition, there is value in assessing how young women weigh the relative impact of physical, social, and psychological stressors as they attempt to cope with cancer diagnosis and treatment both initially and over time. For example, the experience of physical symptoms at the start of treatment could have greater effect on a patient's level of anxiety than concerns about the relationship with a partner [18]. At another point in care, depending on the context and the relative contribution of treatment-related side effects, relationship stressors or other personal issues may be weighed more heavily than physical symptoms in the patient's assessment of QOL [18].

Not surprisingly, we found an independent association between financial insecurity and increased anxiety. Cancer can have a major impact on finances, including diminished income and increased out-of-pocket expenses. Managing these consequences can put additional strain on already taxed partners and patients. Others have also found that younger caregivers in particular, and especially those who are from socioeconomically disadvantaged backgrounds, may experience even greater levels of strain between work and caregiving roles [35]. These caregivers may not only have fewer potential supportive and practical resources to draw on for assistance, but also a higher likelihood of less flexibility to take time off from current work roles and responsibilities [35].

Limitations

These findings should be interpreted with an understanding of the potential limitations. Participants in this study were largely White and generally well educated, which limit generalizability. Although information on treatment was collected for the baseline survey, it was not possible to know if treatment was in process, not yet begun, or already completed. The results may have been different if women were categorized by treatment status. Sexual orientation was not reported, and it is important to consider that partnered and not partnered gay women might have different experiences of support.

The baseline survey did not ask about mental health issues that predated breast cancer diagnosis. Pre-existing anxiety or depression has the potential to affect both the perception of support and the level of satisfaction with a partner. The cross-sectional nature of this study also opens up interpretation of the results. It is possible that women who were more anxious may be more likely to perceive social support as less available or possibly not meeting their needs or expectations. It is important to emphasize the role of perception in relationship interactions. Others have found that high levels of anxiety and depression were associated with a mismatch in the level of support that patients with cancer perceived they were receiving versus the level of support they actually desired [32]. Those patients who desire more support than they believe are receiving may experience greater emotional distress. At the same time, it is also possible that more highly distressed patients with breast cancer are less able to reach out for support [4]. Greater use of avoidant coping (e.g., withdrawal) and lower emotional support have been found to be associated with higher patient-reported anxiety or depression [36].

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Partner-support was a two-item measure that was created by extracting these items from the CARES marital dysfunction subscale. Although there appears to be face validity, these items have not been psychometrically tested as a measure of 'partner support'. The baseline data of the YWS also did not include the perspective of the partner or significant other of the young women participants. In some cases, partners who are men may report greater levels of distress than the patients themselves [20,35,37]. While some stress may predate diagnosis, prior research indicates a high positive correlation after a cancer diagnosis between patient and partner distress that suggests the influence of one partner's distress on the other [4,37]. In several studies, the partner's level of psychological adaptation had a direct effect on the other partner's adaptation over time [34,36,38]. While attempting to manage their own individual distress, the quality of interactions between younger women and their partners may be a significant factor in how young women cope. Given that relationship functioning appears to influence adaptation, future studies would be helpful to capture partner distress levels and their potential vulnerability factors. It might also be important to consider the length of partnership and whether the patient and partner have any experience in working through challenges as a couple. Young relationships may be particularly vulnerable to stress, especially during the complex management of a breast cancer diagnosis and treatment. These couples may not yet have developed ways in which they can support each other effectively.

In conclusion, partnership is clearly an important source of support for the majority of young women coping with a diagnosis of breast cancer. Given the limited literature on young women with breast cancer and their partnered relationships, this study provides some evidence of a need for further research examining the potential impact of partner–patient interactions on young women's psychosocial well-being. In addition, these findings suggest that additional research on how to target interventions to enhance partner support and reduce anxiety following a breast cancer diagnosis would be beneficial to address challenges experienced as a couple. For young women who report relationship concerns early in the course of illness, couple-based interventions would be important to incorporate into psychosocial care planning to enhance adjustment in both the short run and the long run. Some studies have suggested psychoeducation and supportive counseling for partners to help with understanding common responses to serious illness, the impact of well-intentioned but unsupportive behaviors, and recommended approaches to enhance effective communication [3]. A number of studies have underscored the value of support addressing the needs of partners and the positive opportunities in couple-based intervention [4,10,34,36]. Some investigations have begun to identify innovative approaches to helping couples develop adaptive communication and coping skills along with strategies to incorporate these into practice to address couples' current needs [39]. These findings highlight the importance of understanding the extent to which young women with breast cancer feel supported by their partners and conversely, the degree to which their partners feel able to provide this support.

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