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Beyond convention: describing complementary therapy use by women living with breast cancer

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Abstract

Using a descriptive survey design, 52 women living with breast cancer were interviewed to explore their use of complementary therapy and the relationships between complementary therapy use and key demographic variables and health beliefs. Sixty-seven percent of the women reported complementary therapy use, with meditation/relaxation therapies, vitamins and spiritual healing being the three most frequently reported treatments. Women using complementary therapies were more likely to have completed post-secondary education than women using only conventional medical treatment ($\chi^2 = 7.1$, $P = 0.008$). Preferred decisional role was found to be significantly associated with the use of complementary therapies ($\chi^2 = 11.7$, $P = 0.003$); women using complementary therapies preferred a more active/collaborative role in treatment decisions than women using only conventional medical treatment. No significant associations were found between complementary therapy use and beliefs about cause of cancer, treatments, satisfaction with health care providers, and perceived quality of life. The findings point to the pervasiveness of complementary therapy use by women living with breast cancer and contradict past research which has supported a distinct demographic profile of complementary therapy users and associated belief system. © 1999 Elsevier Science Ireland Ltd. All rights reserved.

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1. Introduction

In recent years, there has been a remarkable increase in the number of individuals in the developed world seeking treatments that are complementary or alternative to conventional medical care [1]. As the prevalence of complementary

therapy use has increased, so too have concerns about the efficacy and safety of these treatments and the motivations of individuals who use complementary therapies [2–4]. The question of why people use complementary therapies has been of particular interest to health professionals who are concerned that individuals may remove themselves from conventional treatment or inappropriately delay seeking medical care and thus do not receive benefits of conventional treatment [5,6]. Studies of complemen-

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tary therapy use may also provide insights into the beliefs of people who are taking an active, participatory approach to their health care and well-being [7]. In addition, the proposition that individuals use complementary therapies as a reflection of dissatisfaction with conventional medical care suggests that there is much to be learned from exploring the predictors and predisposing factors of complementary therapy use [8].

One population that has been vocal in its support of complementary therapies has been women living with breast cancer [9]. Past research has revealed complementary therapies to be an integral part of women's experiences with this life-threatening and chronic disease [10–12]. Accurate documentation, however, as to the number of women with breast cancer using complementary therapies either alone or in conjunction with conventional medical treatment does not exist. Without an adequate description of the treatment practices of women with breast cancer, health professionals are faced with unknown treatment entities that may directly or indirectly impact conventional treatment and clinical outcomes. Exploration of the beliefs and predisposing factors associated with use of complementary therapies by women with breast cancer is needed to enhance communication between women and their health care providers and to inform appropriate counseling and decision-making strategies related to complementary therapies. The purpose of this study was to provide a preliminary description of complementary therapy use by women living with breast cancer and the predisposing factors associated with the decision to use complementary therapies.

2. Review of the literature

Previous epidemiological research has revealed that between 15 to 42% of the general population in North America and Europe have used at least one type of complementary therapy [1,13,14]. Greater divergence in usage rates has been found in people living with cancer, with estimates ranging between 9 to 81% of individuals [15–19]. Differences in usage rates in this population can be attributed to variations in sampling methods, sample demographics, incon-

sistent conceptualizations of complementary therapies and measurement issues. Notwithstanding these differences, the use of complementary therapies by people living with cancer appears to be widespread and of clinical significance for health professionals. With breast cancer representing a large proportion of female cancers worldwide, the exploration of complementary therapy use within this population is timely and warranted.

Past empirical research has provided a fairly consistent profile of complementary therapy consumers. Sociodemographic factors found to be associated with complementary therapy use include age, gender, level of education, income and health status [14,20–22]. The typical consumer of complementary therapies within the general population is female, under the age of 65 years, has a high socioeconomic status, and suffers from a chronic health condition. A similar profile of complementary therapy use has been revealed in cancer populations [16–18]. The development of a profile of complementary therapy users has provided direction to health professionals in identifying potential users of complementary therapies and initiating discussions about treatment choice. However, further research is needed to elucidate if this sociodemographic profile of complementary therapy use is evident within specific populations, in particular, women living with breast cancer.

A variety of beliefs and attitudes have been implicated as mediating variables in the decision to use complementary therapies within both general and cancer populations. Much emphasis has been placed on dissatisfaction with conventional medicine as being a powerful force in “pushing” individuals towards therapies that offer an alternative to conventional care. This broad category of beliefs includes: frustration over the failure of conventional treatment to address chronic health issues, concern over adverse side effects, and scepticism of the tenets of conventional medicine [3,8,16,23]. Such signs of dissatisfaction offer health professionals valuable insights into the limitations of conventional care and the unmet needs of health consumers. However, little is known about whether this disenchantment with care influences complementary therapy use by women living with breast cancer.

Desire for control has also been identified as a key variable in motivating individuals to use complementary therapies, particularly when faced with a life-threatening illness such as cancer [7,18,24]. Through the use of complementary therapies, it has been hypothesized that individuals gain an “illusion” of control over uncontrollable events (i.e., illness) and the opportunity to assert one’s personal responsibility for health [3,7,24]. Montbriand [19] has further suggested that complementary therapy use can be considered a release of control through the deferment of care to complementary practitioners. Despite the lack of consensus within the literature on how complementary therapy use manifests control, Hack et al.’s [25] research on women with breast cancer offered further evidence of a conceptual link between control and a search for treatment alternatives.

Complementary therapy use has been further regarded as indicative of a treatment ideology grounded in the tenets of holism, personal responsibility and prevention [7,26]. According to Gray et al. [11], cancer survivors who hold such a philosophy about treatment do not consider their use of complementary therapies “unconventional”, but a reflection of their personal belief system. Additional support for the existence of an alternative treatment ideology has been provided by research that has identified associations between complementary therapy use and beliefs about disease causation and treatment efficacy [4,18,27]. Further research is necessary, however, to examine if women with breast cancer who use complementary therapies hold a common treatment ideology.

Although not considered within the current literature as being a predictor of complementary therapy use, the association between quality of life (QOL) and complementary therapies has been of interest within cancer populations [28]. In a matched cohort study, Cassileth et al. [28] found cancer patients who used complementary therapies and conventional medicine reported lower QOL than patients who used only conventional medicine. While limited by sampling and data collection issues, this study raises questions regarding the nature of the relationship between complementary therapies and QOL and whether QOL functions as a motivator or outcome of complementary therapy use.

3. Methods

3.1. Sample and setting

A convenience sample of 64 women with breast cancer was recruited from three outpatient oncology clinics (two tertiary and one community hospital) in a central Canadian city. Selection criteria included being diagnosed with breast cancer through tissue biopsy, being able to speak and read English, and being 18 years or older. Women with all stages of breast cancer were recruited to elicit a more comprehensive understanding of the use of complementary therapies across the cancer illness trajectory. Both women using complementary therapies and women using only conventional treatments were recruited to facilitate comparisons between these two populations. A response rate of 81% was achieved, with 52 women completing the study instruments. Reasons for not participating included living in a rural region (33%), disease-related complications (25%), lack of interest (25%), and unavailability (16%). In light of the descriptive nature of the study, the sample size was considered sufficient to capture a range of complementary therapy use and to conduct preliminary and descriptive quantitative analyses.

3.2. Instruments

3.2.1. BTPS-BC

The Belief and Treatment Practices Survey – Breast Cancer (BTPS-BC) originated from an Australian questionnaire piloted by Yates [29] that explored the beliefs and treatment practices of people living with advanced cancer. Minor revisions were necessary to reflect the perspectives of Canadian women and to improve the reliability, validity and readability of the instrument. These revisions were guided by comments from a panel of women with breast cancer who assessed the appropriateness, clarity, internal consistency and validity of the BTPS-BC. Further piloting of the BTPS-BC was not undertaken in view of the minor nature of the revisions. The resulting questionnaire contains nine-scales derived from 128-items. The scales measure a variety of constructs, including beliefs about causes of breast cancer, beliefs about conventional and

complementary treatment, and satisfaction with health care professionals. The BTPS-BC also assesses participants' use of medical and complementary therapies, level of adherence to complementary therapy use, financial impact of complementary therapy use, and future intentions related to complementary therapy use. In keeping with the descriptive nature of the study, participants were encouraged to identify those therapies they considered to be alternative or complementary to conventional medicine rather than relying on a pre-existing list of therapies.

3.2.2. EORTC QLQ-C30

The European Organization for Research and Treatment of Cancer (EORTC) QLQ-C30 is a multi-dimensional quality of life instrument designed to be cancer-specific, self-administered, and applicable across cultural settings [30,31]. The 30-item questionnaire has demonstrated acceptable psychometric properties, with Cronbach's α coefficients for the multi-item scales ranging from 0.52 to 0.89 [30].

3.2.3. Preferred treatment decisional role card sort

A card sort developed by Degner and Sloan [32] was used to elicit participants' preferred and actual role in treatment decision making. This methodology has been used extensively with cancer populations and has demonstrated high reliability in measuring decisional role preference [32–34]. The card-sort technique consists of five cards which depict varying degrees of treatment decision-making control. The cards are divided into three types of control: active (cards A and B); collaborative (card C); and passive (cards D and E). The cards are presented in pairs, with participants indicating which of the two cards they prefer. This process is continued until all cards are ranked. Following the ordering of cards by preference, all five cards are presented and participants are asked to choose the card that best described the actual role they played in their treatment decision making.

3.2.4. Demographic form

The participants completed a short demographic questionnaire. A chart audit was also conducted to determine conventional treatment history and disease information.

3.3. Data collection

Following ethical approval, clinic nurses at two tertiary hospitals and a community oncology clinic identified women who met the sampling criteria and expressed interest in the research study. Potential participants were approached either in person or by telephone by the principal investigator and were provided with an explanation of the study. Appointments were then made with interested women to complete the study instruments at a place of convenience. All women provided written informed consent prior to participating in the study. The majority of interviews (80.7%) were conducted in the women's homes, with a limited number (5.8%) choosing to be interviewed in a public setting. Some interviews (13.5%) were conducted in the clinical setting at the request of participants. Study instruments were administered face-to-face to all participants. Participants required between 45 min and 3 h to complete the instruments. Several women used the interview as an opportunity to share their experiences with breast cancer and detail their search for, and use of, complementary therapies.

3.4. Data analysis

3.4.1. Psychometric properties

The psychometric properties of the BTPS-BC and the EORTC QLQ-C30 were assessed statistically using Cronbach's α coefficient (criteria of 0.70 [35]). Inter-item and item-to-total correlations were also obtained on the BTPS-BC to further examine the reliability of the instrument. Factor analyses, using principal axes factoring with varimax rotation, were conducted to examine the factor structure of the BTPS-BC and further refine the instrument.

3.4.2. BTPS-BC

Descriptive statistics were used to summarize data from the BTPS-BC. Comparisons were made between the beliefs of women with breast cancer who used only conventional treatments and women who used complementary therapies in conjunction with conventional therapy. Sample distributions were also examined for normalcy, using Shapiro–Wilks statistics. Data that approximated a normal distribution

were analyzed using parametric statistics to explore the associations among study variables and the use of complementary therapies. Wilcoxon Ranked-Sum Tests were used to analyze data in which a non-normal distribution was found.

3.4.3. Preferred treatment decisional role card-sort

Card-sort data was analyzed using unfolding theory, a scaling method that determines the extent to which subjects' ordering of cards is consistent with the hypothetical rank order of the treatment decisional roles [32]. A three-level rating was used to describe the three types of preferred treatment decisional control (i.e., active, collaborative, and passive). Chi-squares were used to analyze the data and to compare distributions of preference between the two subsamples of women using conventional treatments only and women using both conventional treatments and complementary therapies.

3.4.4. EORTC QLQ-C30

Descriptive statistics were calculated for the EORTC QLQ-C30, and, where appropriate, parametric and non-parametric statistics were employed to explore the associations between the use of complementary therapies and the instrument's specific sub-scales.

4. Findings

A total of 52 women with breast cancer participated in the study. Table 1 presents the sociodemographic characteristics of the sample. The majority of the women were between 41 to 65 years old. The sample was well educated, with the majority having achieved high school education or greater. Most women were married, employed, and had a family income over \$20 000 CDN/year. The majority had

Table 1
Sociodemographic characteristics of the sample (total $N = 52$)

Variable	<i>N</i>	(%)	Variable	<i>N</i>	(%)
<i>Age</i> ^a			<i>Stage of breast cancer</i>		
< 50 yr	26	(50.0)	Stage 1 or 2	26	(50.0)
> 50 yr	25	(48.1)	Stage 3 or 4	26	(50.0)
<i>Marital status</i> ^a			<i>Time since diagnosis</i>		
Married	41	(78.8)	< 12 months	21	(40.4)
Divorced	2	(3.8)	13 to 24 months	11	(21.2)
Never married	6	(11.5)	25 to 60 months	5	(9.6)
Widowed	2	(3.8)	> 61 months	15	(28.8)
<i>Education</i>			<i>Recurrence</i>		
< High school	7	(13.5)	Yes	18	(34.6)
High school	16	(30.8)	No	34	(65.4)
> High school	29	(55.8)			
<i>Employment status</i>			<i>Conventional treatment</i>		
Retired	6	(11.5)	Surgery	48	(92.3)
Employed	39	(75.0)	Chemotherapy	42	(80.8)
Homemaker	7	(13.5)	Radiotherapy	29	(55.7)
			Hormone	26	(50.0)
<i>Family income</i> ^b (CDN Funds)					
< \$20 000	4	(7.7)			
\$21 000–50 000	26	(50.0)			
> \$50 000	19	(36.5)			

^a One missing value.

^b Three missing values.

undergone surgery and had received adjuvant conventional treatment.

4.1. Types and use of complementary therapies

Sixty-seven percent of the sample ($N = 35$) reported using at least one complementary therapy during their illness. As shown on Table 2, the three most frequently reported complementary therapies were meditation/relaxation therapies, vitamins/tonics, and spiritual/faith healing. Participants used detoxification treatments (e.g., coffee enemas) least frequently. Immune therapies and special foods or diets were also used infrequently by the women.

Of the women who reported using complementary therapies, 56% ($N = 29$) sought assistance from a complementary therapist at least once during their illness experience. Spiritual/faith practitioners, massage therapists, and nutritionists were the three most prevalent complementary practitioners that were consulted (Table 2). Nutritionists were categorized as being alternative or complementary based on the comments of participants, who perceived nutritional advice to be beyond the scope or practice of conven-

tional medicine. Several women anecdotally expressed their disappointment at the lack of nutritional information they received during their conventional cancer care.

Participants varied in their reported adherence to complementary therapies. Of the 35 women who reported complementary therapy use, 77% “completely adhered” or “almost adhered” to the complementary treatment regimen. About half of the women identified as users of complementary therapies reported using complementary therapies or visiting a practitioner for more than one year. Cost of complementary therapy use ranged from no cost to over \$2500 per month. Among the most expensive complementary therapies were biological therapies, such as vitamins and herbal supplements, and visits to complementary practitioners, including massage therapists and nutritionists.

Closer examination of the women ($N = 17$) who considered themselves to be “non-users” of complementary therapies revealed 13 participants who had used therapies identified by other women as being complementary therapies. From field notes taken during the interviews, these individuals indicated that they did not perceive their use of interventions, such as special foods, relaxation techniques, and use of prayer, to be representative of complementary therapy use. Instead, they considered these treatments to be characteristic of their lifestyle or religious practices. For the purposes of the remaining analyses, these women were classified as non-users of complementary therapies.

4.2. Sociodemographic and disease variables

A significant association was found between education status and women’s complementary therapy use ($\chi^2 = 7.1$, $P < 0.008$). The majority of women (68.6%) who reported using complementary therapies had obtained an education beyond high school. In contrast, the majority of participants (70.6%) who used only conventional medical treatments had not pursued post-secondary education. No other significant relationships were found between sociodemographic variables and complementary therapy use.

No significant relationships were found between disease variables and the use of complementary

Table 2
Distribution of complementary therapies and practitioners use (total $N = 52$)

Therapy/practitioner	<i>N</i>	%
<i>Practitioner</i>		
Spiritual/faith healer	19	36.5
Massage therapist	11	40.4
Nutritionist	6	11.5
Chiropractor	5	9.6
Naturopath/homeopath	5	9.6
Counselor	4	7.7
Bodyworker	3	5.8
Herbalist	3	5.8
Reflexology	3	5.8
Acupuncturist	1	1.9
<i>Therapies</i>		
Meditation/relaxation therapies	33	63.5
Vitamin/tonics	30	57.7
Spiritual/faith healing	28	53.8
Herbal remedies	26	50.0
Special food/diets	14	26.9
Immune therapies	12	23.1
Massage therapy	10	19.2
Detoxification	9	17.3
Shark cartilage	4	7.7

therapies. Stage of disease (stages 1 and 2 versus stages 3 and 4), recurrence of breast cancer, and time since diagnosis were not associated with the women's use of complementary therapies.

4.3. Cause of breast cancer and treatment beliefs

No significant association was found between beliefs about causes of cancer and women's use of complementary therapies. Irrespective of treatment choice, the highest ranked beliefs about causes of breast cancer were found to be those associated with uncontrollable or stress-related causes of cancer.

No significant associations ($P < 0.05$) were also found between women's use of complementary therapies and their beliefs related to treatment mechanisms and outcomes (conventional and complementary therapies). However, the association between complementary therapy use and beliefs concerning the outcomes of complementary therapies approached significance ($P = 0.06$). Women who expressed positive belief in the potential curative outcomes of complementary therapies were more likely to be users of complementary therapies.

Across the two study groups of complementary therapy use and conventional treatment use only, the majority of women were found to hold positive beliefs about the outcomes of conventional medical therapies (90%) and the supportive nature of complementary therapies (77%). For example, 77% of participants agreed or strongly agreed with the BTPS-BC item "Complementary therapies assist the body's natural forces to heal". Notwithstanding this positive belief in the adjuvant value of complementary therapies, the majority of respondents (63%) were sceptical of the curative potential of complementary therapies.

4.4. Satisfaction with health care professionals

No significant association was found between level of satisfaction with health care providers and the use of complementary therapies by women with breast cancer. Irrespective of treatment choice, participants reported being highly satisfied with their health care providers. This satisfaction, however, did not appear to encourage open communication between women using complementary therapies and

their conventional health care providers. Forty-three percent of these women indicated that they had chosen not to discuss their use of complementary therapies with their conventional care providers. Women reported that they felt "silly" or "embarrassed" about using certain types of complementary therapies or cited the disinterest of their doctors as discouraging them from sharing their treatment choice.

4.5. Preferred treatment decisional role

A highly significant relationship was found between the use of complementary therapies and preferred role in treatment decision making ($\chi^2 = 11.72$, $P < 0.003$). The majority of women (94%) who had used complementary therapies were found to prefer an active or collaborative role in treatment decision making. Only 56% of women using only conventional medical treatments were found to prefer an active or collaborative role in treatment decision making. No significant relationship was found between congruence of actual and preferred decisional role and the use of complementary therapies by women with breast cancer. The majority of women (55%) reported that they played an active or collaborative role in making treatment decisions with their physician.

4.6. Quality of life

Participants across treatment groups and stage of disease reported a high quality of life, with an average global quality of life of 72 out of 100 (SD = 20.3). No significant relationships were found between complementary therapy use and physical, cognitive, emotional, social and role functioning, symptom distress, financial impact or global quality of life.

5. Discussion

The aim of this study was to provide a preliminary description of complementary therapy use by women living with breast cancer and an understanding of the social and attitudinal factors associated with the decision to use therapies beyond the scope of

conventional care. Sixty-seven percent of the women in this study reported using complementary therapies, which is within the range reported in previous research of 16 to 81% of cancer patients using complementary therapies [15,16,18,19]. This disparity may be attributed to several factors, including differences in therapy definitions, instrument design, sampling design and sample demographics. In particular, the lack of consistency in defining complementary or alternative has beleaguered past epidemiological research on complementary therapy use and restricted comparisons across studies. Although a standard by which the “alternativeness” of a therapy is measured must be established to allow comparisons of complementary therapy use between clinical and social groups, this effort will be challenged by the ever-shifting boundary between conventional medicine and complementary care [13].

Previous research on the use of complementary therapies by women living with breast cancer has revealed a preference for biological or physical therapies, including vitamin therapy, homeopathy and herbalism [15,19]. Many women in this study also discussed using vitamins and herbal remedies as part of their complementary therapy regimen. Meditation/relaxation therapies and spiritual healing, however, comprised a large majority of complementary therapies reported. Despite the lack of an agreed upon definition for complementary therapies, this difference may reflect recent empirical support for the benefits of mind-body therapies [36,37], increased public interest in spirituality, and regional patterns of complementary therapies use [13]. The use of psychological and spiritual complementary therapies by this group of women may also point to needs that are not being met by conventional medical care. Given the fact that the majority of women report believing in the supportive nature of complementary therapies, these therapies may play an integral role in helping women with breast cancer cope with their disease and medical treatment.

Of the sociodemographic factors previously identified as being associated with complementary therapies use in cancer and general populations [1,13,15–17], only level of education was significantly related to women’s use of complementary therapies. Although the findings may have been limited by a restricted sample size and Type II errors

resulting from truncated ranges (i.e., sample unrepresentative of the breast cancer population), the lack of a distinct profile of complementary therapy users may reflect the increasing salience, availability and acceptance of complementary therapies that crosses over age, social class and disease status. The association between level of education and complementary therapy use found in this study, however, may be indicative of opportunities available to women with advanced education who wish to explore treatment options not offered through conventional care. Further research with a larger sample of women living with breast cancer is needed to confirm this relationship and explore how advanced education facilitates complementary therapy use.

The non-significant associations between women’s beliefs about causes of cancer and treatment and use of complementary therapies repudiates the presence of an alternative treatment ideology proposed by some scholars [2,7,18]. Irrespective of treatment choice, women perceived breast cancer as being a disease of unknown or uncontrollable origin. These beliefs mirror past research that has revealed individuals’ ambiguity in ascribing meaning and cause to cancer [29,38,39]. For health professionals, this sense of uncertainty holds implications for how women understand breast cancer, and, in turn, select health behaviors that will minimize harm [38,40]. Further, while not predictive of use in this study, women’s beliefs about the cause of breast cancer may allude to psychosocial and support needs held by women living with breast cancer [38].

Women across study groups also held similar beliefs about conventional care and complementary therapies. Rather than perceiving conventional medicine and complementary therapies as being on opposite ends of the treatment spectrum, the majority of women held positive beliefs related to the outcomes of conventional care and the supportive nature of complementary therapies. Although these beliefs did not appear to influence treatment decisions, their co-existence highlights the open-mindedness and flexibility with which women living with breast cancer consider multiple treatment options and choose those most relevant to their health care and support needs [7,11]. Further, women’s mistrust of the curative promises of complementary therapies contrasts previous literature that has explained com-

plementary therapy use as being motivated by the desire for a cure [5,6]. Women with breast cancer in this study appear cognizant of the limited scientific evidence supporting the ability of complementary therapies to “cure” cancer and use complementary therapies as adjuvants, rather than as replacements, to conventional care. This finding provides direction to future complementary therapy research with regards to a broader set of biopsychosocial outcomes that might be employed to measure therapeutic aims of treatment.

The suggestion that some individuals may be motivated to use complementary therapies as a consequence of discontentment with conventional care was not substantiated in this study [4,7]. Women using both complementary therapies and conventional treatments were found to be highly satisfied with their relationships with conventional health professionals and expressed confidence in the care that they received. This finding, however, is not surprising given that recruitment was limited to conventional oncology clinics. In contrast, Montbriand’s [41] study of oncology patients who have removed themselves from biomedicine would suggest that dissatisfaction with care remains a powerful motivator of complementary therapy use in select populations.

Despite women’s satisfaction with conventional care, nearly half (43%) of the women who used complementary therapies did not discuss their treatment practices with their physician or other health professionals. Similar findings have been reported within general and cancer population [1,11], highlighting the pervasive silence that surrounds complementary therapy use. In this study, barriers to communication about complementary therapy use included both personal embarrassment and professional disinterest. Innovative strategies are thus needed that encourage consumers of complementary therapies and health care providers to share in open, respectful, and informed dialogues about treatment choice.

Of the numerous factors associated with the decision to use complementary therapies, desire for control has been the variable most consistently linked to complementary therapy use [4,7,18,19,24]. Differences in study design and instrumentation, however, have limited inferences on what aspect of control (i.e., responsibility for health, control over

treatment decision, internal/external locus of control) influences the decision to use complementary therapies. In this study, preference for an active or collaborative role in treatment decision making was found to be significantly associated with women’s use of complementary therapies. Although prospective research is needed to determine the nature of the relationship (i.e., causal, directional, reciprocal) between preferred decisional role and complementary therapy use, this finding suggests that many women with breast cancer feel empowered and want responsibility for their treatment decisions, including use of complementary therapies. Hack et al.’s [25] research, together with this study’s findings, suggest that health professionals can expect women who use complementary therapies to be pro-active in their search for illness and treatment information. Complementary therapy use may be one way women can gain control, knowledge and responsibility over an illness that appears, at times, uncontrollable. Understanding the point within the cancer illness trajectory when women seek an active role in their health care, including the use of complementary therapies, is imperative if health professionals are to provide appropriate and timely counseling in relation to complementary therapy use.

The sample of women recruited was slightly younger, more educated, and living with more advanced disease than the larger population of women with breast cancer [42]. As such, the generalizability of the study findings to all women with breast cancer is limited. In addition, the sample was restricted to women with breast cancer who were able to speak and read English and were willing to participate in face-to-face interviews. Notwithstanding these limitations, the present study provided evidence of the widespread interest in complementary therapies within the breast cancer community.

A final aspect of the study that warrants discussion was the in-person administration of study instruments. The personal and intimate nature of the face-to-face interviews facilitated rapport between the interviewer and study participants and may have, as a consequence, influenced women’s willingness to report complementary therapies use. Several women reported that the non-judgmental tone of the interview encouraged them to share experiences with complementary therapies that they had been hesitant

Table 3
Study implications for practice

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1. Education for health professionals about complementary therapies
 2. Determination of women's decision making preferences (i.e., active/collaborative/passive)
 3. Education for women related to complementary therapies
 4. Communication between health care professionals about complementary therapy use
 5. Enhance communication between health care professionals and women about complementary therapy use through development of rapport and trust
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to discuss with their conventional health care providers. These comments raise questions about the accuracy of previous survey research that have been conducted largely through telephone or mailed surveys [1,13,17] and whether rates of complementary therapy use have been under-estimated. Careful consideration of data collection methodology is thus needed in future research to address the hesitancy to disclose complementary therapy use and to increase trust and rapport between study participants and researchers. Table 3 summarizes the study implications for practice.

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