

RESEARCH ARTICLE

Use of Complementary and Alternative Medicine Among Breast Cancer Survivors in Taiwan

Hsiu-Ho Wang¹, Ue-Lin Chung^{2*}

Abstract

Aims: The purpose of this study was to investigate complementary and alternative medicine use among breast cancer survivors in Taiwan. **Materials and Methods:** This study employed a descriptive research design approach to detail the CAM use among the target population. Convenience sampling was used along with a structured questionnaire. **Results:** A total of 230 breast cancer survivors completed the use CAM scale. Prayer, reading books, taking antioxidants, eating various grains, and maintaining a vegetarian diet proved to be the five most frequently used CAM practices among patients in our study. More than 50.0% of the participants reported praying occasionally. More than 40.0% of participants read books occasionally, and 38.7% stated that they occasionally take antioxidants. **Conclusions:** These results provide more insight into CAM use for nurses who care for breast cancer patients.

Keywords: Breast cancer survivors - CAM use - Taiwan

Asian Pacific J Cancer Prev, **13** (9), 4789-4792

Introduction

Each year, about 1.38 million people are diagnosed with breast cancer global (Jemal et al., 2011). Breast cancer is the most common cancer in females worldwide. However, it has been estimated that 6.6% to 20% of the population uses complementary and alternative medicine (CAM) therapies (Thomas et al., 2001). Studies have also reported that CAM use ranges from 47.0% to 83% among cancer patients (Richardson et al., 2004; Molassiotis et al., 2005; Helyer et al., 2006). Therefore, many breast cancer survivors use CAM therapies to enhance their health and feel more comfortable. According to the National Center for Complementary and Alternative Medicine, CAM is classified into five domains: whole medical systems, mind-body medicine, biologically based practices, manipulative and body-based practices, energy medicine (NCCAM, 2011).

About the CAM studies were as follows. Donatelle (2004) conducted interviews with 551 breast cancer survivors. Research showed that 66% of women had used at least one CAM therapy during the previous 12 months. Relaxation/meditation, herbs, spiritual healing, and megavitamins were used most often. Demark-Wahnefried et al. (2000) reported routine supplement use, including the use of multivitamins vitamins and minerals (52%), and antioxidants (31%). In a study by Lengacher et al. (2002), 64% of participants regularly used vitamins and mineral supplements, and 33% regularly used antioxidants. Lengacher et al. (2002) also observed that 49% of patients regularly used prayer and spiritual healing, and 27% used

massage at least once following diagnosis. Patients also reported the use of support groups (37%) and humor or laughter therapy (21%). Moran et al. (2012) reported CAM use in 54% of their study cohort, among whom 71% reported participation in activity-based CAM, 26% used topical CAM therapies, and 45% used oral CAM therapies. Only 16% received advice or counseling from a naturopathic practitioner before initiating the use of a CAM therapy. Multiple studies have observed that a higher level of education is significantly associated with CAM use (Lengacher et al., 2002; Xue et al., 2007; Wanchai et al., 2010; Hamilton et al., 2012; Moran et al., 2012). The most common characteristics of CAM users were: female; employed; and higher-than-average incomes (Xue et al., 2007). Shaharudin (2011) showed that 64% of patients were CAM users, and dietary supplements were the most common form of CAM used, followed by prayer and Malay traditional medicine. However, Nazik et al. (2012) reported that herbal therapy (90.2%) was the most frequently used CAM practice, and prayer (41.5%) was the second most frequently used form of CAM. In a study by Helyer et al. (2006), breast cancer patients reported using CAM to aid healing (75%), to boost immunity (56%), and to obtain a feeling of control regarding their treatment (56%).

During interviews with 39 cancer patients conducted by Correa-Velez et al. (2005), patients reported using CAM to prolong their survival, palliate their symptoms, detoxify their bodies, enhance immunity, and improve their overall quality of life. In another study, breast cancer patients reported using CAM to promote healing and

¹School of Nursing, Yuanpei University & National Taipei University of Nursing and Health Sciences, ²the Graduate Institute of Integration of Traditional Chinese Medicine with Western Nursing, National Taipei University of Nursing and Health Sciences, Taipei, Taiwan *For correspondence: uelin@ntuhs.edu.tw

emotional health and to cure their cancer (Wanchai et al., 2010). These studies show that cancer patients want to improve the balance of both body and spirit through the use of CAM. Previous studies have discussed that cancer patients used CAM (Lengacher et al., 2002; Helyer et al., 2006; Xue et al., 2007; Shaharudin, 2011; Moran et al., 2012). Studies on CAM use among Asian breast cancer survivors are scant. The purpose of this study was to investigate complementary and alternative medicine use among breast cancer survivors in Taiwan. Our findings can serve as a foundation for future patient education and to promote them live healthy.

Materials and Methods

Design

This study used a descriptive research design approach to detail the CAM use among breast cancer survivors in Taiwan. A convenience sampling was used. A structured questionnaire was used to conduct face-to-face interviews with the participants. The five interviewers were nursing students. Before executing the interviews, interviewers were trained.

Subjects

The study participants were recruited from supportive groups of breast cancer patients from nine hospitals in Taiwan. The inclusion criteria were (a) age greater than 18 years, (b) able to communicate in Chinese. The research proposal was approved by the ethics committee of the Institutional Review Board (IRB). A total of 230 participants were interviewed based on the Gorsuch recommendation (Gorsuch, 1983).

Instruments

The participants were demanded to complete the CAM use scale, as well as general demographic information. Most items for the questionnaire were obtained from literature and existing questionnaires. We conducted a content validity assessment with professional experts. We invited five experts to complete professional-expert content validity review of the items by using a content validity index (CVI) (Lynn, 1986).

Demographic (e.g. age, education, marital status, religion, employment status, income, family history of cancer, menopausal status, childbirth experience, breastfeeding experience) and clinical information (e.g. cancer stage, years since initial diagnosis, BMI) was collected.

CAM use Scale

There are 38 items that are rated on a scale of 1 to 5 (1=never, 2=rarely, 3=sometimes, 4=often, 5=always) to evaluate the frequency of CAM use. The frequency of use is detailed as "always" (more than 5 times per wk), "frequently" (2 to 4 times per wk), "occasionally" (once per wk), and "rarely" (less than once per wk). Total scores range from 38 to 190. The Cronbach's alpha of the CAM use scale is 0.88.

Analysis

SPSS 20.0 (SPSS, Inc., Chicago, IL, USA) for

Windows software analyzed data to decide demographic characteristic percentages, means, standard deviations (SD), and percentage (%).

Results

Demographic Characteristics, and CAM use

Our study evaluated 230 breast cancer survivors in Taiwan using a statistical approach. The average participant age was 56 years (SD=9.1years), and the survival time after the initial diagnosis was 8.1years. The average BMI was 23.0. Approximately 41.3% of participants reported having Stage II cancer. Among these participants, 43.0% reported that junior high school education is their highest completed level of education and 77.4% were married. Approximately 97.8% participants had experienced childbirth. About 43.5% had breastfeeding experienced, and 82.6% were in the menopausal status (Table 1).

This CAM use scale includes 38 items. According to the average scores for level of use, the top ten items are: prayer, reading, taking antioxidant supplements, eating various grains, maintaining a vegetarian diet, laughter, travel, gardening, listening to music, and meditation. Prayer was the most frequently used CAM. The mean of prayer was 2.88 (SD=1.47). Prayer, reading books, taking

Table 1. Demographic Characteristics of Breast Cancer Survivors (n=230)

Variables	Mean (SD)	N(%)
Age (years)	56.2(9.1)	
Years since initial diagnosis (years)	8.1(4.7)	
BMI	23.0(3.2)	
Senior education		
Junior high school		77 (33.5%)
Senior high school		99 (43.0%)
College and above		54 (23.5%)
Marital Status		
Married		178(77.4%)
Others		52(22.6%)
Employment Status		
Unemployed		168(73.0%)
Employed		62(27.0%)
Religious		
No		35(15.2%)
Have		195(84.8%)
family history of cancer		
Yes		93(40.4%)
No		137(59.6%)
Childbirth experience		
Yes		202(87.8%)
No		28(12.2%)
Breastfeeding experience		
Yes		100(43.5%)
No		130(56.5%)
Menopausal status		
Yes		190(82.6%)
No		40(17.4%)
Cancer stage		
0		18(7.8%)
I		86(37.4%)
II	95(41.3%)	
III	27(11.7%)	
IV	4(1.7%)	

Table 2. The Top Ten Items (n=230)

variables	Mean±SD
21. prayer	2.88±1.47
36. reading	2.30±1.32
15. antioxidants	2.30±1.40
18. various grains	2.24±1.38
17. vegetarian	2.01±1.25
22. laughter	1.91±1.27
35. travel	1.90±1.05
37. gardening	1.81±1.30
26. music	1.81±1.24
10. meditation	1.73±1.15

Table 3. The CAM Use Frequency (n=230)

Variables	N(%)
21.prayer	
never	54(23.5%)
rarely	53(23.0%)
sometimes	38(16.5%)
often	36(15.7%)
always	49(21.3%)
36.reading	
never	89(38.7%)
rarely	48(20.9%)
sometimes	44(19.1%)
often	31(13.5%)
always	18(7.8%)
15.antioxidants	
never	100(43.5%)
rarely	41(17.8%)
sometimes	31(13.5%)
often	37(16.1%)
always	21(9.1%)
18.various grains	
never	107(46.5%)
rarely	33(14.3%)
sometimes	35(15.2%)
often	38(16.5%)
always	17(7.4%)
17.vegetarian	
never	118(51.3%)
rarely	41(17.8%)
sometimes	31(13.5%)
often	30(13.0%)
always	10(4.3%)

antioxidants, eating various grains, and maintaining a vegetarian diet are the five most frequently used CAM practices among patients in our study (Table 2).

More than 50.0% of the participants reported praying occasionally, whereas 21.3% stated that they always prayed. More than 40.0% of participants read books occasionally, and 38.7% stated that they occasionally take antioxidants (Table 3).

Discussion

In our study, 37.0% of patients reported often or always use of prayer. Many cancer patients by prayer let their body to heal (Helyer et al., 2006). Our results are supported by those of other studies (Lengacher et al., 2002; Helyer et al., 2006; Shaharudin, 2011; Nazik et al., 2012), in which cancer patients chose prayer to help their body to heal. Thus, prayer is an important practice for breast

cancer survivors. Furthermore, 25.2% of participants often or always take antioxidants, such as glutathione, vitamin C, vitamin E and enzymes. These results were consistent with many studies (Demark-Wahnefried et al., 2000; Lengacher et al., 2002; Henderson and Donatelle, 2004). Many breast cancer survivors in our study reported using biologically based CAM practices, such as herbal medicines, antioxidants, vitamins, and various grains. These results were consistent with the study (Xue et al., 2007). Subjects also reported the use of mind-body CAM therapies, such as massage, guided imagery, hypnotherapy, qi gong, and tai chi, following which our subjects reported feeling more comfortable and relaxed.

The study showed more than 40% of the participants reading some books once a week. Reading aids the cancer survivors' spiritual adjustment and healing (Eide and Pederson, 2009). Our observation that reading some books, the result was consistent with some studies (Lengacher et al., 2002; Xue et al., 2007; Wanchai et al., 2010; Moran et al., 2012).

Furthermore, 17.3% of participants reported that they frequently or always maintained a vegetarian diet. The result was consistent with many studies (Norman et al., 2007; Demark-Wahnefried et al., 2008; Weiner et al., 2010; Magné et al., 2011; Wang and Chung, 2012). Participants were aided in their cancer survival efforts by eating a high intake of vegetables. These participants also use laughter, traveling, gardening, listening to the music, and meditation. These CAMs allowed participants to relax and reduce their stress levels.

This study had limitation. The cancer survivors should be listed in the ranking the CAM use, and to facilitate the ranking analysis. Future research can consider ranking the CAM use.

In conclusion, More than 50.0% of the participants reported praying occasionally. More than 40.0% of participants read books occasionally, and 38.7% stated that they occasionally take antioxidants

These results provide more insight into CAM use for nurses who care for breast cancer patients. Our findings can serve as a basis for future patient education and to promote them survive well.

References

- Correa-Velez I, Clavarino A, Eastwood H (2005). Surviving, relieving, repairing, and boosting up: reasons for using complementary/alternative medicine among patients with advanced cancer: a thematic analysis. *J Palliat Med*, **8**, 953-61.
- Demark-Wahnefried W, Peterson B, McBride C, et al (2000). Current health behaviors and readiness to pursue life-style changes among men and women diagnosed with early stage prostate and breast carcinomas. *Cancer*, **88**, 674-84.
- Eide M, Pederson AM (2009). God, disease, and spiritual dilemmas: reading the lives of women with breast cancer. *Zygon: J Religion Sci*, **44**, 85-96.
- Gorsuch R (1983). Factor Analysis (2nd. Ed). Hillsdale, NJ: Erlbaum.
- Hamilton AS, Miller MF, Arora NK, et al (2012). Predictors of use of complementary and alternative medicine by non-hodgkin lymphoma survivors and relationship to quality of life. *Integr*

- Cancer Ther*, **12**. doi: 10.1177/1534735412449733
- Helyer LK, Chin S, Chui BK, et al (2006). The use of complementary and alternative medicines among patients with locally advanced breast cancer--a descriptive study. *BMC Cancer*, **6**, 39.
- Henderson JW and Donatelle RJ (2004). Complementary and alternative medicine use by women after completion of allopathic treatment for breast cancer. *Altern Ther Health Med*, **10**, 52-7.
- Jemal A, Bray F, Center MM, et al (2011). Global cancer statistics. *CA: A Cancer J Clin*, **61**, 69-90.
- Lengacher CA, Bennett MP, Kip KE, et al (2002). Frequency of use of complementary and alternative medicine in women with breast cancer. *Oncol Nurs Forum*, **29**, 1445-52.
- Lynn M (1986). Determination and quantification of content validity. *Nurs Res*, **35**, 382-5.
- Magné N, Melis A, Chargari C, et al (2011). Recommendations for a lifestyle which could prevent breast cancer and its relapse: Physical activity and dietetic aspects. *Critical Rev Oncol / Hemat*, **80**, 450-9.
- Molassiotis A, Fernandez-Ortega P, Pud D, et al (2005). Use of complementary and alternative medicine in cancer patients: a European survey. *Ann Oncol*, **16**, 655-63.
- Moran MS, Ma S, Jagsi R, et al (2012). A Prospective, Multicenter Study of Complementary/ Alternative Medicine (CAM) Utilization During Definitive Radiation for Breast Cancer. *Int J Radiat Oncol Biol Phys*, Jun 1. (Articles in print)
- National Center for Complementary and Alternative Medicine (2011). Available on-line at: <http://nccam.nih.gov/health/whatiscam/> (2012, 08-04).
- Nazik E, Nazik H, Api M, et al (2012). Complementary and alternative medicine use by gynecologic oncology patients in Turkey. *Asian Pac J Cancer Prev*, **13**, 21-5.
- Richardson MA, Mâsse LC, Nanny K, et al (2004). Discrepant views of oncologists and cancer patients on complementary/ alternative medicine. *Support Care Cancer*, **12**, 797-804.
- Shaharudin SH, Sulaiman S, Emran NA, et al (2011). The use of complementary and alternative medicine among Malay breast cancer survivors. *Altern Ther Health Med*, **17**, 50-6.
- Thomas KJ, Nicholl JP, Coleman P (2001). Use and expenditure on complementary medicine in England: a population based survey. *Complement Ther Med*, **9**, 2-11.
- Wang HH, Chung UL (2012). Breast cancer survivors' efforts to renew and preserve their health in Taiwan. *Asian Pac J Cancer Prev*, **13**, 3195-201.
- Wanchai A, Armer JM, Stewart BR (2010). Complementary and alternative medicine use among women with breast cancer: a systematic review. *Clin J Oncol Nurs*, **14**, 45-55.
- Xue CCL, Zhang AL, Lin V, et al (2007). Complementary and alternative medicine use in Australia: a national population-based survey. *J Altern Complement Med*, **13**, 643-50.