

Knowledge, Attitudes and Practices of Oncology Nurses towards Complementary and Alternative Medicine for Cancer Care in Qatar

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Abstract

Aim and objectives: The aim of this study is to investigate the knowledge, attitudes and practices of oncology nurses towards CAM in cancer care in Qatar.

Background: CAM is widely used by patients with cancer worldwide. Given the wide use of CAM in cancer treatment, cancer authorities have called for an increased awareness of CAM modalities among healthcare professionals with a focus on safety and efficacy. Among healthcare professionals, nurses play a vital role in the integration of CAM into cancer care. Few studies have explored the attitudes, practice and knowledge of nurses towards CAM in cancer care.

Design: Descriptive cross-sectional study.

Research variables: CAM attitude; knowledge and professional practice.

Methods: An anonymous survey of a sample of 156 random oncological nurses was conducted at the National Center for Cancer Care and Research (NCCCR) in Doha, Qatar. A semi-structured novel 17-item questionnaire was

administered to 156 participating oncology nurses. The questionnaire collected information on: respondents' knowledge of complementary therapy; perceived benefits and harm of complementary therapy; history of CAM recommendation to patients; and finally, interest in complementary therapy educational opportunities.

Results: Our study showed that 11% of respondent oncological nurses had never heard about CAM therapy. Most nurses had a positive attitude towards CAM and were interested in CAM education opportunities.

Conclusion: There is a need for increased knowledge about CAM by oncology nurses; given their vital role in the overall management of cancer patients. This can be achieved through structured and comprehensive education/training programs as well as through the integration of CAM therapy into cancer care guidelines.

Relevance to clinical practice: To ensure safe, efficacious and holistic cancer treatment, it is important for nurses to be knowledgeable of complementary therapy; to candidly discuss this topic with patients; and when possible, to offer CAM resources to patients.

Keywords: Complementary medicine, Alternative medicine, Cancer care, Palliative care, Oncology nurses

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Introduction

Complementary and Alternative Medicine (CAM) is defined as a diverse group of medical systems, practices, and products that are not presently considered part of conventional medicine [1]. More precisely, complementary medicine (in Arabic: al tibt al-mukamel) is used as an adjunct to conventional treatment, while alternative medicine (in Arabic: al tibt al-badil) is used in lieu of conventional medicine [2]. The definition in the study can be divided into five main categories: 1) biologically based practices; 2) energy medicine; 3) manipulative and body-based practices; 4) mind-body medicine; and 5) whole medical systems [3]. Among these therapies include interventions such as acupuncture, nutritional therapy, mind-body-spiritual modalities, traditional Islamic medicine, homeopathy, herbal medicine and healing therapies.

CAM is widely used by cancer patients globally and the popularity of CAM use is ever increasing. Numerous studies of CAM practices in Middle Eastern countries report between 35% to over 90% CAM use among cancer patients [4, 5]. Similarly, about 40% to 90% of cancer patients in America and Europe have used at least one form of CAM therapy [6-8]. In an era of information and technological advancement, there is an increasing demand for more individualized health care which the current health care system struggles to provide. Patients look towards CAM to fill the gap left by conventional medicine [9]. In the Tover & Broom study, patients perceived that CAM was a “natural progression” of cancer treatment for nurses to integrate into professional practice [10].

Studies show that the most common reasons given by cancer patients for using CAM are: cure of disease; control of symptoms; boosting immunity; or prolongation of life [11, 12]. Other reasons why cancer patients seek CAM therapies include: failure of medical therapies to meet patients’ expectations; chemotherapy side effects and patient distrust of conventional medicine [5, 13]. CAM is commonly used by patient with cancer diagnosis at a younger age (less than 50 years old); higher level of education; higher income; female gender; advanced disease or metastatic disease [14, 15]. Other factors influencing CAM use include palliative treatment and long duration of disease [14, 15]. Most cancer patients who used CAM were recommended to do so by: family, friends, other cancer patients, and even local media but rarely by healthcare professionals [15].

Given the wide use of CAM by cancer patients, oncology authorities have called for an increased awareness of CAM modalities among healthcare professionals with a focus on safety and efficacy [16]. In 2002, the White House Commission on Complementary and Alternative Medicine Policy recognized the need for increased education and training of health practitioners in CAM [17]. Unfortunately, the current healthcare system provides limited assistance to cancer patients when they seek CAM resources. This is especially true in the gulf region where there is still lack of information, limited access and limited experience with CAM.

The last two decades has seen a slow and reluctant acceptance of CAM by conventional medicine. Despite significant evidence supporting the integration of CAM into professional nursing practice, gaps exist regarding nurses’ baseline knowledge, beliefs of efficacy, and learning needs to facilitate the integration of CAM into nursing practice [3]. Lack of fluency with CAM terminology impairs effective communication between patients and healthcare providers [18]. This knowledge deficit is likely to prevent nurses from accurately accessing CAM use. Moreover, they will be ill equipped to educate patients regarding CAM or to reasonably advocate for CAM opportunities [3].

Various studies examining CAM use among cancer patients have demonstrated that CAM is beneficial to patients [19-22]. CAM is particularly important in the improvement of patients' overall sense of wellbeing and quality of life during cancer treatment [19-21]. CAM helps address aspects of patient care which western medicine often ignores such as spirituality [9]. In addition, it offers patients more options for symptom and disease management. Given this essential role, there are now palliative care guidelines for CAM use in the certain institutions in Europe and the United States [23]. The National Institute for Health and Care Excellence (NICE) has developed guidelines on supportive and palliative care for adults with cancer which include specific guidelines on CAM [24]. Despite these great strides, many healthcare professionals continue to struggle with this issue. Among healthcare professionals, nurses play a vital role in the integration of CAM into cancer care. Nurses can be instrumental in eliciting patients' history of CAM use; however, nursing response to CAM therapy is inconsistent. This inconsistency has been attributed to limited knowledge and insufficient training [25]. Integration of complementary therapies into nursing practice, offer nurses the opportunity to act as totally autonomous therapists [9]. Complementary therapies also offer nurses the opportunity to provide holistic care and to empower patients to actively participate in their care [9]. Knowledge of the relevance, benefits and risks associated with CAM will enable nurses to provide safer, more comprehensive and holistic care.

Few studies have explored the attitudes, practice and knowledge of nurses towards CAM in cancer care. Initial studies discovered significant knowledge gap among nurses with regards to CAM therapies. These studies also reported positive nursing attitudes and increased interest towards CAM [3, 25]. To our knowledge, no study has explored the attitudes, practices and knowledge of oncology nurses towards CAM in Qatar or the Middle East. This paper investigates the attitudes, practices and knowledge of oncology nurses regarding the use of CAM in Qatar.

Method

This study involves a descriptive cross-sectional survey of a random sample of oncology nurses in Qatar during the months of January to April 2013.

Setting: The study was performed at the National Center for Cancer Care and Research (NCCCR) in Doha, Qatar. The NCCCR is one of many specialty centers incorporated in Hamad Medical Corporation (HMC) which provides most of the care to the region. The NCCCR is the only tertiary cancer care center in Qatar and includes fifty-four combined beds for oncology and hematology as well as a 10-bed palliative care unit.

Instrument: A novel semi-structured 17-item questionnaire was constructed to explore the attitudes, practices, interest, self-reported knowledge towards CAM in cancer care. The questionnaire was developed from clinical experience and discussions with local experts in the field of palliative care and oncology. Some questions were adapted from literature review and made more contextual or relevant for the study's purposes. The questionnaire was composed of two sections: Section One provided information on demographics and other characteristics of respondents such as gender, years of nursing practice, country of origin, religion and culture. Section Two explored respondents' knowledge of CAM; perceived efficacy and harmfulness of CAM; and interest in further CAM education. Most of the survey questions were closed-ended.

Sample: Sample was composed of randomly selected oncology nurses at the National Center for Cancer Care and Research (NCCCR) in Doha, Qatar (n=156).

Ethics: The study proposal was approved by the Institutional Review Board of Hamad Medical Research Center. All nurses were assured of the confidentiality of their responses. Respondents also gave informed consent to participate in this study. All surveys were completed anonymously and took no more than five minutes. Completed surveys were de-identified and entered into a secure data collection program.

Data analysis: Descriptive statistics were applied to the collected data. Survey responses were aggregated in frequencies and percentages.

Results

Oncology nurses’ knowledge of complementary therapy; perceived benefits and harmfulness of CAM; history of CAM recommendation to patients; interest in CAM educational opportunities; and demographics were compared (Tables 1 & 2; Figures 1-3).

Demographics and Characteristics

From the one hundred fifty six (n=156) randomly selected oncology nurses, there was a 100% response rate. Most of the nurses were female (85.5%). The majority of nurses had less than 20 years of experience with only 10.4% indicating more than 20 years of nursing experience. The largest proportion of the nurses (64.1%) originated from India, Pakistan or Nepal and the second largest group was from the Philippines (20.3%). Most nurses reported a belief in only one religion (83.9%) with Christianity being the most common religion (56.8%). In terms of culture, the Asian culture was the most predominant (71.2%) followed by the Arabic culture (28.8%).

CAM Knowledge, Interest and Clinical practices

Knowledge of CAM therapies was assessed by two questions. Participants were asked if they had heard about complementary therapy and where directed to select specific therapies they were

aware of from a list of 14 modalities. In the latter question, respondents were given the option of adding other known. Of the 156 participating nurses, 88.8% reported knowledge of CAM. Attitudes towards CAM were assessed by eliciting nurses’ perception of the benefits and harmfulness of CAM. The majority of nurses believed that complementary therapy was helpful to the patients’ condition (93.5%), and 85.6% of nurses thought that CAM was safe. With regards to the effects of CAM, most nurses believed that CAM improves the psychological and emotional wellbeing of the patients (44%) and only 3% thought that CAM was curative (Figure 3). Despite these beliefs, only 17.8% of nurses had ever recommended complementary therapy.

Figure 1 shows the CAM modalities the respondent nurses had heard about. The most commonly known modality was herbal medicine (12%), closely followed by yoga and music therapy (10% both). Other modalities which the nurses had heard about were: nutritional therapy, spiritual healing, homeopathy, meditations, aromatherapy, reflexology and massage. The most commonly recommended CAM modality by oncology nurses was music therapy (15%) followed by spiritual healing (13%) and yoga (12%) [See Figure 2].

The vast majority of the respondents expressed interest in learning more about CAM (95.5%). 91% of nurses specifically expressed an interest in CAM education and training opportunities. See Table 2 for further details on the survey results.

Table 1: Self-reported demographics of the participating nurses

PARAMETER (NO. OF RESPONSES)	CHARACTERISTICS	FREQUENCY N (%)
GENDER (n=152)	Male	22 (14.5)
	Female	130 (85.5)
YEARS OF PRACTICE (n=154)	0-5 years	36 (23.3)
	6-10 years	51 (33.1)

	11-20 years	51 (33.1)
	>20 years	16 (10.4)
ORIGIN (n=153)	MENA	22 (14.4)
	India/Pakistan/Nepal	98 (64.1)
	Philippines	31(20.3)
	Others (Canada/Ireland)	2 (1.3)
RELIGIOUS INFLUENCES (n=155)	Single religion	130 (83.9)
	Two or more religions	17 (10.9)
	All religions	5 (3.2)
	Islam	48 (31)
	Christianity	88 (56.8)
	Hinduism	18 (11.6)
	None	3 (1.9)
	Others	3 (1.9)
CULTURAL INFLUENCES (n=156)	Single culture	115 (73.7)
	Two or more cultures	41 (26.3)
	Arabic	45 (28.8)
	Asian	111 (71.2)
	African	3 (1.9)
	American	14 (8.9)
	Other western	17 (10.9)
	All	8 (5.1)
	Others	2 (1.2)

MENA= Middle East and North Africa

Table 2: Results of the survey by the participating nurses

PARAMETER (NO. OF RESPONSES)	RESPONSE	FREQUENCY N(%)
Have you heard about complementary therapy? (n=152)	Yes	135 (88.8)
	No	17 (11.2)
How often do you recommend complementary therapy to patients? (n=152)	Often	37 (24.3)

	Sometimes	44 (28.9)
	Occasionally	44 (29)
	Never	27 (17.8)
Do you think complementary therapy would help the patient’s condition? (n=153)	Yes	143 (93.5)
	No	10 (6.5)
Do you think complementary therapy is safe? (n=153)	Yes	131 (85.6)
	No	16 (10.5)
	Sometimes	6 (3.9)
Would you like to know more about complementary therapies? (n=155)	Yes	148 (95.5)
	No	7 (4.5)
How would you rate your interest in education and training in CAM use? (n=156)	Very interested	63 (40.4)
	Interested	79 (50.6)
	Equivocal	13 (8.3)
	Uninterested	1 (0.64)
Do you advise that leaders in your institute introduce complementary therapy as an essential component for cancer care? (n=152)	Yes	129 (84.9)
	No	23 (15.13)

Figure: 1

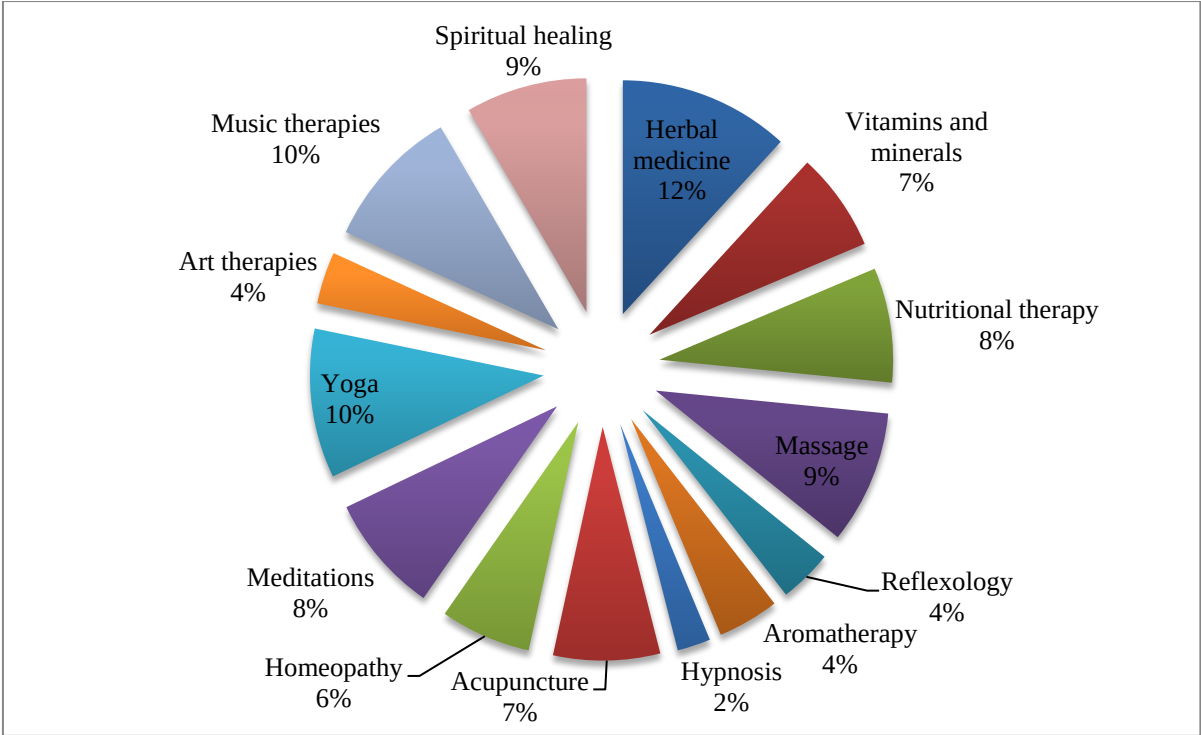


Figure 1. CAM therapies nurses have heard about. In response to question “Which complementary therapies have you heard about?” (n=155)

Figure: 2

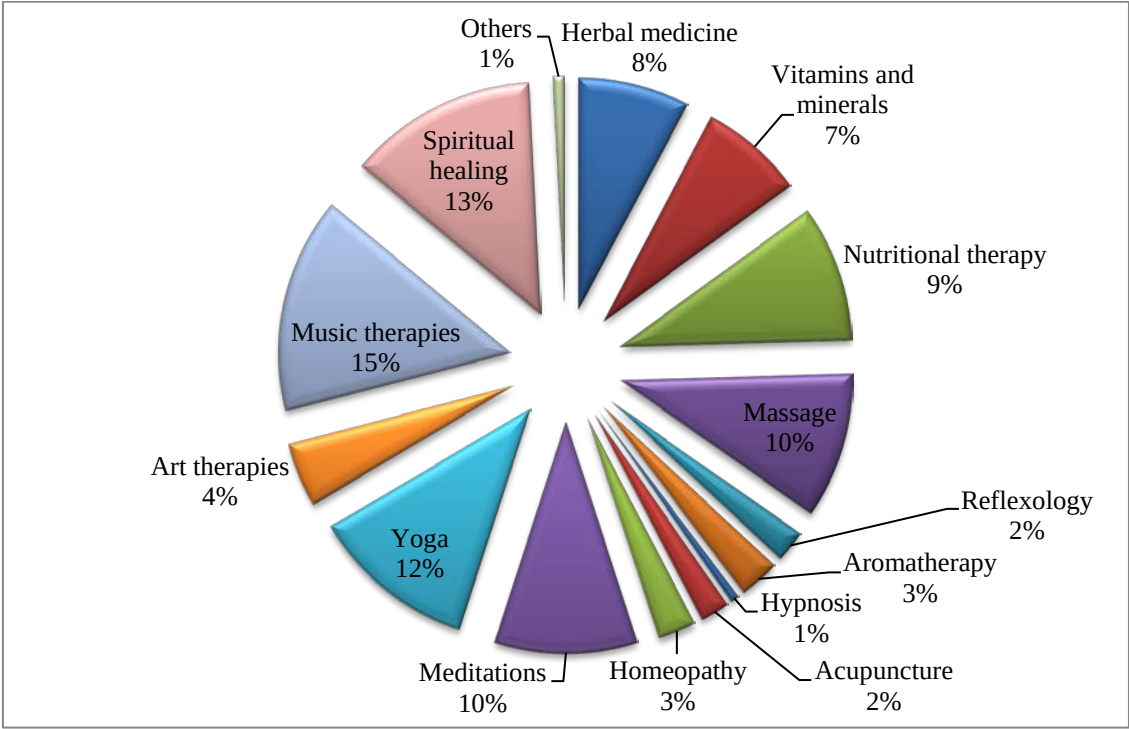


Figure 2. CAM therapies nurses have advised their patients. In response to question “Which complementary therapies have you advised your patients?” (n=132)

Figure: 3

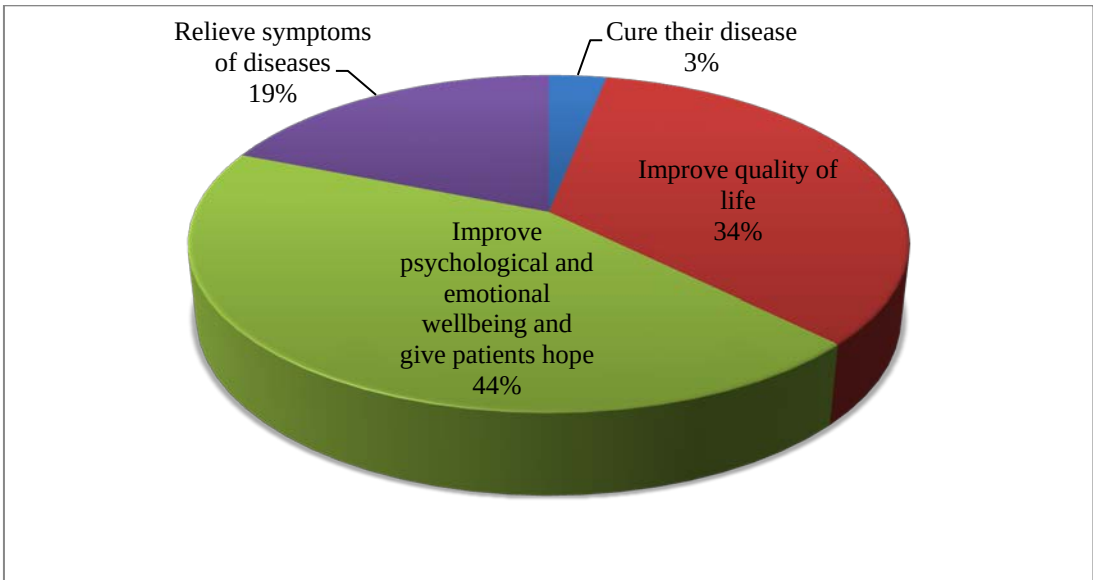


Figure 3. How do you think CAM helps patients? (n=153)

Study:

Despite the significant evidence for the integration of complimentary and alternative medicine (CAM) into professional practice, gaps exist regarding baseline knowledge, beliefs of efficacy and learning needs for further education to facilitate the integration of CAM into practice.

This survey is to explore the attitudes and knowledge of Health Care Professionals (HCP) regarding CAM use at NCCCR.

SECTION 1: Demographic Data

1. Gender? 1 ☐ Male

2 ☐ Female

2. Are you:

1 ☐ Physician 2 ☐ Clinical Pharmacist

3 ☐ Nurse 4 ☐ Physical Therapist

5 ☐ Psychologist 6 ☐ Social Worker

7 ☐ Nutritionist

8 ☐ Others (Specify) _____

3. Number of Years in Practice: 1 ☐ 0 – 5 years

2 ☐ 6 -10 years

3 ☐ 11 -20 years

4 ☐ > 20 years

4. Country of Origin: _____

5. What religious traditions influence your decisions about health care (Check all that apply):

1 ☐ Muslim 2 ☐ Christian

3 ☐ Hinduism 4 ☐ Buddhism

5 ☐ Others (Specify) _____

6. What culture traditions influence your decisions about health care (Check all that apply):

1 ☐ Arabic 4 ☐ Western

2 ☐ Asian 5 ☐ American

3 ☐ African 6 ☐ Others (Specify) _____

SECTION 2: Complimentary Therapy

Complementary therapy is defined as a group of diverse medical and healthcare systems, practices and products that are not presently considered to be part of conventional medicine.

7. Have you heard about complementary therapy?

1 ☐ Yes

2 ☐ No

8. Which complementary therapy are you familiar with? (Check all that apply):

1 ☐ herbal medicine

2 ☐ Vitamins and minerals

3 ☐ nutritional therapy (incl. natural products)

4 ☐ massage 5 ☐ reflexology

6 ☐ aromatherapy 7 ☐ hypnosis

8 ☐ acupuncture 9 ☐ homeopathy

10 ☐ meditations 11 ☐ yoga

12 ☐ art therapies 13 ☐ music therapies

14 ☐ spiritual healing

15 ☐ others (specify) _____

9. Have you advised your patients to use Complementary therapy?

1 ☐ Yes

2 ☐ No

10. If Yes, which kind of CAM therapy mentioned in question no. 8 would you advise to be used? (Check all that apply):

1 ☐ 2 ☐ 3 ☐ 4 ☐

5 ☐ 6 ☐ 7 ☐ 8 ☐

9 ☐ 10 ☐ 11 ☐ 12 ☐

13 ☐ 14 ☐ 15 ☐

11. How often do you recommend complementary therapy to patients?

1 ☐ often

2 ☐ sometimes

3 ☐ occasionally

4 ☐ never

12. Would you think complementary therapy would help the patient's condition?

1 ☐ Yes

2 ☐ No

13. How do you think complementary therapy would help patients with diseases? (Check all that apply)

1 ☐ cure their disease

2 ☐ improve patients' quality of life

3 ☐ improve patients psychological /emotional

4 ☐ relieve symptoms of diseaseswell being and give patients hope

14. Do you think complementary therapy is safe?

1 ☐ Yes

2 ☐ No

15. Would you like to know more about complementary therapies?

1 ☐ Yes

2 ☐ No

16. How would you rate your interest in education and training in CAM use?

1 ☐ Very interested

2 ☐ Interested

3 ☐ Equivocal

4 ☐ Uninterested

17. Do you advise that leaders in your institute introduce complementary therapy as an essential component for cancer care?

1 ☐ Yes

2 ☐ No

Discussion and Conclusion

Given the high prevalence of CAM therapy use among cancer patients, determining oncology nurses' knowledge and attitudes towards CAM is critical to the successful integration of CAM into cancer care. It is necessary to first establish nurses' baseline knowledge and beliefs so that relevant educational programs can be initiated. Assessing nursing knowledge is also important because knowledge plays a causal role in attitude or behavioral consistency [26].

A study of nursing students and faculty revealed that many nurses lack basic knowledge regarding CAM and feel ill equipped to educate and serve as a resource to their patients regarding these therapies [3, 27]. Smith et al. conducted a qualitative study in Taiwan to explore nurses' beliefs, experiences and practices [28]. They concluded that Taiwanese nurses had little experience using CAM in clinical settings because nurses lacked knowledge about CAM [28]. Another study assessing Israeli nurses' CAM knowledge and attitudes discovered that nurses had little knowledge of CAM and that few had used CAM in their nursing practice [29]. A similar study was conducted in Karachi, Pakistan [25]. Among the 132 oncology nurses surveyed more than half of nurses had never heard about many of the CAM therapies used in Pakistan [25]. These findings differ from the present study which showed that only 11% of oncological nurses had never heard about CAM therapy. Nevertheless, across all studies there is a single commonality which is that nurses have positive attitudes towards CAM and express interest in learning more about it [3, 25, 30]. Nurses believe that CAM is beneficial to patients. In the present study, the majority of nurses thought CAM helped improve psychological and emotional well-being as well as overall quality of life. Nurses agree that patients have the right to integrate CAM into their conventional medical plan of care [3]. Over 80% of nurses in the present study recommended that healthcare leaders should introduce CAM as an essential component for cancer care.

Still nurses remain uncertain of their role in the integration of CAM into patients' plan of care. In a 2013 study of CAM attitudes and beliefs among 153 acute care nurses in California, the majority of nurses did not think that nurses were accountable for educating patients about CAM, nor were they comfortable assessing patients for CAM use or answering patients questions related to CAM [3]. It is important that nurses are made aware of their responsibility for educating patients about CAM. CAM-related teaching is necessary so that nurses can competently advise patients about comprehensive care options [31]. Lack of fluency with CAM terminology impairs effective communication between patients and healthcare providers [18]. Various studies have shown that very few patients disclose CAM their use to healthcare providers [32, 33]. Patients often fail to divulge CAM use for fear of physician disapproval [32]. If undisclosed by patients who use them, CAM use could potentially cause delay in diagnosis and also severe adverse effects [3, 30]. For instance, herbal therapies carry a risk of toxicities, herb-drug or herb-chemotherapy interaction and even non-compliance with conventional medical therapy [9, 14, 34-36]. It is imperative that nurses take an active role in assessing their patient's CAM use [3]. Insufficient knowledge of CAM impedes nurses' abilities to accurately assess and advice patient regarding CAM use. Ignorance of this topic may also have litigious consequences for clinicians [37]. Consequently, the implementation of CAM education initiatives is one of the biggest steps towards achieving integrative cancer care.

A recent study was conducted across sixteen Middle Eastern countries examining physicians' perspectives on barriers to the integration of CAM into supportive cancer care [4]. 63% of respondents perceived their patients' use of CAM was primarily for cancer cure, while 57% thought that it was for improvement in quality of life [4]. These findings differ from the present study where 78% of oncology nurses believed that the main benefit of CAM was to improve quality of life of patients as well as psychological and emotional well-being. Only 3% of nurses thought that CAM was used for cancer cure.

This indicates that a discrepancy may exist between nurses' and physicians' perspectives on benefits of CAM. With further education, nurses can serve as CAM resources not only to their patients but also to their physician colleagues. Subsequently, nurses can also effectively collaborate with other healthcare professionals to ensure safer and more optimal patient care when CAM is used with traditional therapies [3].

Similarly, discrepancies may exist between patients' expectations and the healthcare system' objectives. This can cause inadequate or inappropriate implementation of CAM therapies and resulting in patient dissatisfaction. Unlike conventional medicine, nursing and complementary medicine share a common belief in holism. The foundation of nursing practice focuses on providing comprehensive, compassionate, holistic nursing care, and many CAM practices embody the ideals of holism and offer patients' additional options for healing and nurturing the mind, body and spirit [3]. Equipped with a better knowledge of CAM, nurses can better assess patients' CAM needs, correct patients' misconceptions and effectively advocate for appropriate CAM therapies. In so doing, nurses can help facilitate shared decision making between patients' and their healthcare providers.

Yet another impediment to the integration of CAM therapies is skepticism regarding the benefits of complementary therapies among healthcare professionals. Such skepticism may be attributed to insufficient knowledge and can be addressed by evidenced-based teaching. Numerous studies have shown that complementary therapies are beneficial to patients with cancer. Using the Edmonton Symptom Assessment Scale (ESAS), investigators demonstrated improvement in the quality of life of patients with advanced cancer diagnosis through the use of complementary and traditional medicine [19-21]. In this study, statistically significant improvements were noted in fatigue, nausea, depression, anxiety, appetite and general well-being [19-21]. Another study based on the use of CAM therapy among oncology patients showed that CAM use was associated with higher spiritual quest in the form of improved daily functioning, coping with disease, lessening chemotherapy side effects and

emotionally supporting the patient and family [19-21]. In a 2004 study of the effects of nursing-led CAM interventions, consultants observed that fewer laxative and sedative use and overall, less prescribing on a geriatric ward [38, 39]. Interventions used in the study included: aromatherapy, nutritional therapies, massage, visualization and herbal medicine [38, 39]. Integration of CAM into patient care provides a greater variety of treatment options for patients. Patients who are empowered to make decisions about their health that better reflect personal preferences often experience more favorable health outcomes such as decreased anxiety and increased patient compliance [40]. To ensure that patients are able to make an informed decision about CAM, nurses should be well prepared to educate patients about CAM.

In conclusion, this study demonstrates the need for increased complementary therapy education among oncology nurses given their vital role in the overall management of cancer patients [41]. This can be achieved through comprehensive education programs such as integration of CAM into nursing school curriculums and continuing education programs in hospitals. We also recommend the incorporation of complementary therapy into institutional cancer care guidelines or nursing care protocols. These initiatives will allow oncology nurses to achieve their goals of increasing their knowledge base and skills set; thus, facilitating the provision of safer and holistic cancer cares [41].

Strengths and Limitations

To our knowledge, no other study has explored the attitudes, practices and knowledge of oncology nurses towards CAM in either Qatar or the Middle East. Our study was also strengthened by a high response rate to distributed surveys. However, the present study was limited by the use of a novel, non-validated tool and reliance on self-reported knowledge.

Future Research Directions

Given the importance of CAM use to patients and the lessons learned from the present study, we hope to explore the

knowledge, attitudes and perceptions of National Center for Cancer Care and Research staff-physicians towards complementary and alternative therapies.

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