

**ORIGINAL RESEARCH:
EMPIRICAL RESEARCH - MIXED METHODS**

Nurses' attitudes and behaviour towards patients' use of complementary therapies: A mixed methods study

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Abstract

Aim: To explore Registered Nurses' attitudes and behaviour towards patients' use of complementary therapies.

Background: Despite high rates of use of complementary therapies by the general population, little is known of how nurses respond to patients' use of these therapies.

Design: A two-phase sequential exploratory mixed methods design.

Methods: Nineteen Registered Nurses working in Australia participated in a semi-structured interview in 2015–2016 and emerging themes informed the development of a quantitative survey instrument administered online nationwide in 2016.

Findings: Emerging key themes "Promoting safe care"; "Seeking complementary therapies knowledge"; "Supporting holistic health care"; and "Integrating complementary therapies in practice" were reflected in survey results. Survey responses ($N = 614$) revealed >90% agreement that complementary therapies align with a holistic view of health and that patients have the right to use them. Most nurses (77.5%) discussed complementary therapies with patients and 91.8% believed nurses should have some understanding of the area. One-third did not recommend complementary therapies and there was a lack of overall consensus as to whether these therapies should be integrated into nursing practice. Nurses with training in complementary therapies held more positive views than those without.

Conclusion: Nurses were generally supportive of patients' interest in complementary therapies, although their primary concern was safety of the patient. Despite broad acceptance that nurses should have a basic understanding of complementary therapies, there was a lack of consensus about recommendation, integration into nursing practice and referral. Further research should explore how nurses can maintain safe, patient-centred care in the evolving pluralistic healthcare system.

KEYWORDS

complementary therapies, education, nursing, nurse–patient interaction, nurses' role

1 | INTRODUCTION

Complementary therapies (CT) represent a heterogeneous group of therapies and practices that are not considered a core component of

conventional medicine (Leach, 2016). Captured in this field are a range of mind-body practices (e.g. meditation, yoga), manipulation methods (e.g. chiropractic, massage), biologically based therapies (e.g. herbal medicines, nutritional supplements), energy therapies (e.g.

therapeutic touch, reiki) and whole medical systems (e.g. naturopathy, ayurveda; Koithan, 2009). This diverse group of therapies is used by a variable proportion of the general international population, with 12-month CT use rates ranging from 9.8% to 76% (Harris, Cooper, Relton, & Thomas, 2012). The highest prevalence rates were reported in Singapore (76%), Japan (76%), South Korea (75%) and Australia (69%).

Several factors are believed to contribute to the popularity of CT; these can be broadly classified as “push” and “pull” factors. Among the pull factors (i.e. features that attract people to CT) are holistic health-care beliefs, preference for active healthcare participation, positive past experience with a CT practitioner, desire for an egalitarian health-care provider and perceived safety and effectiveness of CT (Busato, Donges, Herren, Widmer, & Marian, 2006; Shaw, Thompson, & Sharp, 2006; Sirois & Purc-Stephenson, 2008). By contrast, push factors represent elements that drive people away from conventional health care; these include concerns about adverse events, poor previous experience with a conventional healthcare provider and ineffectiveness of conventional medicines (Busato et al., 2006; Robinson, Chesters, & Cooper, 2007; Shaw et al., 2006; Sirois & Purc-Stephenson, 2008). While dissatisfaction with conventional medicine is an important driver of CT use, this does not necessarily equate with reduced conventional healthcare use. Evidence indicates that many people use CT in addition to, rather than instead of conventional health care (Leach, 2016; Lin, Canaway, & Carter, 2014; Sirois & Purc-Stephenson, 2008). Importantly, conventional healthcare providers may not be aware that patients are using CT owing to communication barriers (Bahall, 2017; Ducrest et al., 2017; Teo, Yap, Shen, & Yeo, 2016).

2 | BACKGROUND

Nursing represents the largest group of conventional health professionals worldwide (World Health Organisation, 2016) and nurses have the highest level of face-to-face patient interaction (DeLucia, Ott, & Palmieri, 2009). It is through their patient exposure and a commitment to person-centred care (Hall & Glew, 2017) that nurses are in an opportune position to develop strong therapeutic relationships with patients and to establish trust; this may in turn help to facilitate communication of important health information. However, these factors alone may not be enough and other influences may also play an important role. Evidence suggests that provider attitude (Flickinger et al., 2016) and patient satisfaction with care (Liu et al., 2009) can have an impact on a patient's willingness to disclose information, including CT use. Accordingly, provider attitudes may have a notable effect on quality of care (Street, Gordon, & Haidet, 2007). However, these findings draw largely from a body of work focussing on the relationship between physician attitude and patient disclosure of information; whether they translate to other health professional groups is not yet clear.

As a first step towards addressing the knowledge gap, this study seeks to understand Registered Nurses' attitudes and behaviour towards patients' use of CT. The findings related to communication

Why is this research or review needed?

- Patients commonly use complementary therapies.
- There is limited understanding of the safety and effectiveness of many complementary therapies.
- Nurses commonly interact with patients who may be using complementary therapies.

What are the key findings?

- Nurses' primary concern was with patient safety.
- Nurses often support a patient's interest in complementary therapies as part of holistic, person-centred care.

How should the findings be used to influence policy/practice/research/education?

- Clear guidelines should be developed about complementary therapies and nursing scope of practice.
- Nurses should be provided with access to evidence-based information related to complementary therapies.

patterns have been presented previously (Hall, Brosnan, et al., 2017); the objective of this paper was to provide an overview of nurses' attitudes and behaviour towards the use of CT by patients and offers an interpretation to inform future understanding.

3 | METHODS

3.1 | Aim

This study aimed to explore Registered Nurses' (RN) attitudes and behaviour towards patients' use of CT.

3.2 | Design

A two-phase exploratory sequential mixed methods design was used (Cresswell & Plano Clark, 2007). In this sequence, qualitative data were collected first via semi-structured interviews (Phase 1), with the findings used to inform Phase 2 (a quantitative online survey).

3.3 | Participants

Participants were RNs who were currently working in Australia. In Phase 1, purposive sampling was used to recruit participants from a variety of clinical situations for interview.

In Phase 2, RNs Australia-wide were eligible and were invited to complete an online survey. A power calculation revealed that at least 384 nurses (from a target population of 264,238 Registered Nurses) would be required to achieve valid results based on a 5% margin of error with 95% confidence, for any individual item on the questionnaire and this proportion was exceeded.

3.4 | Phase 1: Interviews

Participants were recruited through advertising with a professional association and via snowballing.

3.4.1 | Data collection

Two researchers (HH and MC), independently conducted 19 interviews, with the aid of an interview schedule. Participants were asked to discuss their experiences and perceptions about patients' use of CT. They were asked to describe their communication patterns about CT, where they accessed information and the challenges they face when working with patients who are interested in CT.

The interviews lasted approximately 50 min, were audio recorded and later transcribed. The interview process was ceased when data saturation became apparent ($N = 19$ interviews).

3.4.2 | Qualitative data analysis

The qualitative data underwent inductive thematic analysis using the phases recommended by Braun and Clarke (2006). This involved two of the researchers reading and re-reading the narratives and clustering, re-arranging and prioritizing the extracts to identify patterns across the data set. To confirm authenticity, two participants (who had offered further contact) were recontacted to discuss the findings to ensure that the researchers' interpretations resonated with their experience; no changes were made.

3.5 | Phase 2: National online survey

Phase two of the study consisted of a quantitative online survey using a newly developed questionnaire.

3.5.1 | Validity and reliability

A questionnaire was developed based on the literature and findings from the Phase 1 interviews. Research team members who have expertise in the areas of nursing, complementary medicine and survey design, refined the question set for the preliminary instrument. This was piloted by seven RNs who were independent of the project who were asked to assess the usability, clarity, flow and completeness of questions and the answer options. Feedback from the pilot resulted in editorial changes only. The questionnaire was then uploaded to an online survey platform (Qualtrics™) and trialled by members of the research team to test the question flow and accuracy of the response options before being distributed. The final survey comprised 30 open and closed questions in four sections: (1) Communication about complementary therapies; (2) Attitude towards complementary therapies; (3) Knowledge about complementary therapies; and (4) Demographic information (see Supporting information). The response options for most items were 5-point scales on agreement or on frequency; a small number of items used multiple-choice, open-ended and dichotomous (yes/no)

response options. Section (2) that comprised a 15-item scale on agreement about "attitude towards CT" formed a reliable scale, with a Cronbach alpha of 0.72.

3.5.2 | Quantitative data collection

Participants were recruited through professional nursing associations and special interest groups. The online survey was open between October 2016 and April 2017 to enable time for various invited groups of nurses to participate.

3.5.3 | Survey data analysis

Data were analysed using SPSS V.23 (IBM Corporation, 2013). Categorical data were descriptively analysed using frequency distributions and percentages. Measures of central tendency and variability were used to describe data where values were normally distributed; medians and the interquartile range were used for data that were not normally distributed. Correlations and inferential statistics were used to test associations between variables using Independent Samples *t* test, or chi square, as appropriate. Mann–Whitney test and Wilcoxon signed ranks test were used to test associations within subgroups. $p < .05$ was regarded as statistically significant.

3.5.4 | Triangulation

The design incorporated methodological triangulation, whereby interview findings were used to inform the questions asked of RNs in the national survey. In a final phase, this paper offers an overall interpretation of the sequential phases (qualitative–quantitative) to explore findings in more depth and to measure the prevalence of their occurrence (Cresswell & Plano Clark, 2007; Sandelowski, 2000).

3.5.5 | Ethics approval

The research was approved by the Monash University Human Research Ethics Committee [CF15/33361-2015001431] and Endeavour College of Natural Health Human Research Ethics Committee [2015113]. Interview participants provided signed research consent; the consent of survey respondents was assumed by return of survey.

4 | RESULTS

4.1 | Phase 1: Registered Nurse interviews

Nineteen RNs were interviewed. The nurses ranged in age from 27 to 66 years and all but one was female. Most had more than 10 years of clinical experience and three were formally qualified as complementary therapists. The nurses worked in a wide variety of clinical environments across five states of Australia, including medical-surgical/acute hospital care and outpatient clinics, aged care, palliative care, emergency care and primary care.

Four themes were identified from the interview data that described nurses' attitudes and behaviour related to CT. These themes were: Promoting safe care; Seeking CT knowledge; Supporting holistic health care; and Integrating CT with nursing practice. These themes are further described below. Participants' names have been altered to maintain confidentiality.

4.1.1 | Theme 1: Promoting safe care

Promoting safe care emerged as a dominant theme across many interviews. As all participants were RNs working in the mainstream health system, best care typically comprised of conventional medicine, with CT delivered as an adjunct. Nurses were usually comfortable to support patients' use of CT, on the condition that they believed it would not cause harm:

You'll have people who have a permanent supply of apple-cider vinegar... What does it do? I don't know... it probably won't do any harm... You know, there's a fair bit of pragmatism in the approach to things. So long as they're safe. (Renee)

Some participants wanted scientific evidence to show that a specific CT would be both effective and safe, before they would endorse its use:

I probably do go on fairly evidence-based stuff as well, yeah, I don't just go for the airy fairy stuff, I go for the stuff that is a little bit more evidence-based. (Brenda)

However, for several nurses, some forms of subjective evidence were considered acceptable. Typically, this related to their personal experience with a particular therapy:

If you have an experience that a therapy or taking something that has worked for you, then that is a lived experience that can't be denied. ... To base everything on scientific fact, I think, is being very blinkered. (Penny)

In addition to the specific therapies, nurses also considered safety in terms of CT practitioners. While participants varied in their level of trust of CT practitioners, many were concerned by the lack of regulation:

Because some things aren't well regulated. ...there's no real measure of competence... (Katie).

Old people are sitting ducks for charlatans. So, it's really important that ...the credentials, if any, are sorted out. (Renee)

For the most part, even if nurses did not hold a positive view towards CT, many accepted patients' use of the treatments on the proviso that they believed the therapy was safe.

4.1.2 | Theme 2: Seeking CT knowledge

While some participants had additional training, most recognized the limits of their CT knowledge and described the need to *seek out CT knowledge*. Nurses frequently commented that their understanding of CT was inadequate to respond appropriately to a patient's interest in CT:

To be honest, I don't know the questions to ask. ... when you tell me you take evening primrose, well, I don't know what to ask... [I] know nothing about them... (John)

Many participants were conscious of their limited knowledge and encouraged patients to do their homework before using a CT. In the workplace, nurses were mostly concerned about oral supplements (and their potential for interactions with pharmaceuticals) and often relied on a pharmacist rather than a doctor for information:

... [I] don't know if the doctors would necessarily know that much ... I ask the pharmacist (Sarah)

Several RNs described how they struggled to identify reputable CT information sources and all interviewees agreed that nurses need access to reliable information on CT:

You know, a lot of nurses have to do their own homework on it [CT] and they might get evidenced based stuff, or they might not. (Debbie)

I think it would be very beneficial for the nurses to have, you know, to have some insight to ...the purpose of those therapies and the benefits that the patient receives and whether there's any interactions or with anything else and so on. (Amie)

4.1.3 | Theme 3: Supporting holistic health care

Most nurses were open to use of CT as adjunct to conventional medicine to provide holistic health care. Various therapies were seen as a mechanism to address the limitations of biomedicine and to provide further therapeutic options:

A lot of people have that view that the doctor, just, you know, treats the symptoms not the actual cause of their problems. So I think a lot of people are turning towards complementary medicine treatments. (Amie)

I would like to see Western medicine and CT working side by side together ... they've both got a lot to offer. There are things that Western medicine doesn't do well ... that's where the CT comes into play and can be a great support. (Penny)

Even if they did not think it was effective, several RNs believed CT enabled patients to be proactive and to maintain hope when conventional medicine was not effective. Hence, CT was promoted by some nurses as beneficial for certain patients because these therapies were perceived as addressing the psychosocial aspects of a person's health:

And sometimes they're really sick and normal medicine isn't working so they look for alternative therapies. I think that's understandable, it gives them some control and some hope, if they have more options they can hold onto hope and I think that is really important. We shouldn't take that from people. (Kathy)

Participants also reported that CT provided additional options that enabled patients to receive health care that was tailored to their individual needs.

4.1.4 | Theme 4: Integrating complementary therapies

Although participants were often supportive, or at least tolerant, of the patient's interest in CT, the *integration of complementary therapies* alongside conventional medicine usually required careful negotiation on the part of the nurse. Some participants believed that certain CTs should be integrated into mainstream care:

... it would be really good if it was accepted widely across the nursing profession. That some hospitals don't allow it to be used (aromatherapy) which is a shame I think because they're missing out on the benefits of it for their patients. (Claire)

However, many nurses considered integration beyond their scope of practice:

I think it's (discussing CT with patients) within the nurse's role as far as ... being sure that it's safe. That's it. I don't think the nurse should be prescribing complementary therapies. (Renee)

Of the broad range of therapies available, some, such as mindfulness and massage, were often supported as an adjunct while others were not seen as compatible with medical treatments. For example, certain herbal supplements were not considered appropriate if the patient was on chemotherapy, or was scheduled for surgery.

Furthermore, engaging with patients about the use of CT was seen by some nurses as treading a subtle boundary about the scope of nursing practice. While a few interviewees would like certain CTs (typically massage and aromatherapy) to be embedded in nurses' scope of practice, a number highlighted that such integration would challenge the status quo. As such, there was a perceived need to

protect themselves from trouble or litigation should they recommend a non-conventional treatment:

and if there was an adverse reaction to whatever it was, my, well, certainly my professional standing would be on the line. ... (Debbie)

4.2 | Phase 2: National online survey

The responses of 614 RNs who completed the survey were analysed. Almost all were female (94%) and born in Australia (82.7%) and over half (57.2%) were aged 50 or more. Most (60.7%) had graduated as a RN over 20 years ago and over half (55.2%) held a post-graduate qualification. The majority worked in a public facility (71.3%), with more than half (54.9%) working in a metropolitan area. Respondents were employed in a broad variety of work settings in all Australian States and Territories (Table 1). Over one-third (38.7%) of participants had studied CT and many (88.8%) reported personal use of some form of CT.

4.2.1 | RNs' attitudes towards complementary therapies (Table 2)

As seen in Table 2, there was strong agreement among respondents that "Patients have the right to use complementary therapies" and that "Nurses should have a basic understanding of these therapies". There was also strong overall agreement that "Complementary therapies align with a holistic view of health". Nearly all respondents believed that RNs should have access to basic education about CT. Only moderate support was evident for the statement, "Nurses should integrate appropriate complementary therapies within their practice" and there was a lack of consensus on whether "Complementary therapies are outside the scope of nursing practice".

We explored the impact of CT education/training on RNs' attitudes towards CT using independent samples *t* tests. RNs with CT training were found to have a more positive view of CTs, with RNs undertaking any level of training in CT demonstrating significantly different perceptions of and attitudes to the use of CT, compared with RNs without such training for 11 of 15 items ($p < .05$).

Response ratings for the 15 attitude questions were summed to provide a Total Attitude Score (out of a possible 75 points). (One negatively posed item on placebo effect was reverse-coded to be positive.) The median Total Attitude Score was 53 points (71%) with a range of 27–75. Receiving any level of CT education significantly increased attitude scores ($p < .001$) as did personal CT use ($p < .001$). Females had a significantly higher mean Total Attitude Score (51.6) than males (47.7) ($p < .001$). There was no statistically significant association between age range, level of qualification, years since graduating as a nurse, or work category and Total Attitude Score. The 15-point scale was found to be a reliable measure of attitude for this cohort, with a Cronbach alpha of 0.78 and an intraclass correlation coefficient of .784 (CI: .76–.81; Pallant, 2013).

TABLE 1 State of employment and work category of Registered Nurses (N = 614)

		Registered nurses n (%)
Working category In the last 12 months (limited to a single category)	Acute hospital	211 (34.6%)
	Primary care	87 (14.3)
	Aged care/rehabilitation	85 (13.9)
	Oncology/cancer care	65 (10.7)
	Education/research/policy	53 (8.7)
	Accident and emergency	50 (8.2)
	Mental health	38 (6.2)
	Palliative care	21 (3.4)
In which Australian state/territory do you primarily work as a Registered Nurse?	Queensland	201 (32.8)
	Victoria	114 (18.6)
	New South Wales	112 (18.3)
	South Australia	108 (17.6)
	West Australia	44 (7.2)
	Tasmania	17 (2.8)
	Australian Capital Territory	12 (2.0)
	Northern Territory	4 (0.7)

4.2.2 | RNs' reported behaviour towards complementary therapies

The majority of RNs (77.5%) reported that they had *discussed* the use of CT with patients at their request (sometimes, almost always or always). There were, however, divergent responses about the *recommendation* of CT use (32.5% almost never/never; 55.5% sometimes; 12% almost always/always), *integration* of CT into nursing practice (49.7% almost never/never; 40.5% sometimes; 10.0% almost always/always) and *referral* to a CT practitioner (48.9% almost never/never 44.1% sometimes; 7.0% almost always/always).

Nurses recommended a range of CT (Figure 1), with the most common modality integrated into practice being massage (49%) followed by meditation (46%). For those participants who recommended that the patient should consult a CT practitioner, the practitioners most commonly recommended were massage therapists (69%), acupuncturists (34%), naturopath (27%) and chiropractor (20%).

The proportion of RNs who recommended CT to patients did so for various health issues, with the most common reason identified as general well-being (53.6%). Other conditions (listed in decreasing order) included anxiety or depression (52.9%), stress management (48.0%), pain management (40.7%), musculoskeletal problems (30.8%), palliative care (25.6%) and digestive disorders (24.8%).

Education and training in CT emerged as having a key impact on nurses' behaviour. Mann-Whitney tests of independence revealed that CT-trained RNs were significantly more likely to recommend CT ($p < .001$), more likely to integrate CT in nursing practice ($p < .001$) and more likely to recommend/refer to a CT practitioner ($p < .001$) than those not trained in CT.

4.3 | Interview themes were supported in survey results

The theme of "Promoting safe care" that emerged from the qualitative data was consistent with the findings of the survey, with respondents also expressing concerns about the safety and effectiveness of CT. There was a strong consensus from surveyed RNs that "Complementary therapies should only be recommended if there is strong scientific evidence of their effectiveness". Many nurses were not confident that "Practitioners who offer complementary therapies are safe". Furthermore, most did not agree that herbal and dietary supplements are harmless, while there was uncertainty about mind and body practices. Although there were diverse views between interviewed RNs and surveyed RNs, there was an overall consensus that patient safety is a primary focus of nursing practice.

The second qualitative theme, "Seeking CT knowledge", was echoed by the survey findings, with 92% of respondents agreeing that "Nurses should have a basic understanding of complementary therapies". The third theme, "Supporting holistic health care", was also strongly supported, with 81% of surveyed RNs agreeing that "Complementary therapies align with a holistic view of health" and the large majority (93.4%) advocating for the patients' right to use CT as part of their health care.

The opinions of interviewees and survey respondents about the fourth theme, "Integrating CT", were less consistent than the other themes. While more than half (58%) of surveyed RNs felt "Nurses should integrate appropriate complementary therapies within their practice", only 37.7% disagreed that CTs were outside the scope of nursing practice.

5 | DISCUSSION

The findings of this study shed light on the overarching attitudes of nurses towards CT and highlight factors that may have an impact on their behaviour in practice. Emerging strongly from the data was the nurses' primary concern for patient safety. Nurses placed great importance on adhering to an evidence-based approach to health care, although some argued for a broader definition of "evidence", including the incorporation of "lived experience". The preponderance of university-degree qualified RNs (85%) in the survey sample may explain the emphasis on safety and evidence. In university settings, the focus on evidence-based practice is increasing in relation to the use of CT (Brosnan, 2016) and through such education, nurses may develop critical perspectives of the evidence-base and safety of CT. The RNs' focus may also reflect a general increase in public awareness of CT safety concerns, with noteworthy critical media coverage of CT seen in recent years (Brosnan, 2015; Wardle, 2016). Currently, the Australian Government is considering removing subsidies to private health insurers for rebates relating to Natural Therapies that do not have strong evidence of clinical efficacy, cost effectiveness, safety and quality (Australian Government Department of Health, 2015) and this may have an impact on the integration and acceptance of CT in the future.

TABLE 2 RN attitudes towards complementary therapies

	All cases (N = 614)		Any training in complementary therapy		Difference between trained and untrained		
	Strongly agree/agree N (%)	Disagree/ strongly disagree (%)	Trained (N = 216) mean (SD)	Not trained (N = 345) mean (SD)	t	p-value	Confidence interval
(1) Most natural products (herbal and dietary supplements) are harmless	65 (11.6)	379 (67.5)	2.34 (0.94)	2.20 (0.91)	2.075	.038 ^a	.009, .330
(2) Most mind and body practices (acupuncture, chiropractic, massage, meditation, yoga, etc.) are harmless	206 (36.7)	202 (34.2)	3.05 (1.01)	2.98 (1.02)	1.150	.251	-.073, .280
(3) Most natural products (herbal medicine, dietary supplements) are effective	114 (19.8)	221 (39.2)	2.84 (0.95)	2.66 (0.99)	2.076	.038 ^a	.001, .346
(4) Most mind and body practices (acupuncture, chiropractic, massage, meditation, yoga, etc.) are effective	335 (59.7)	72 (12.8)	3.63 (0.95)	3.48 (0.92)	1.811	.071	.013, .312
(5) Patients have a right to use complementary therapies	526 (93.4)	8 (1.4)	4.51 (0.65)	4.37 (0.72)	2.285	.023 ^a	.020, .264
(6) Complementary therapies should be offered to patients as a treatment option in standard medical practice	358 (63.6)	75 (13.4)	3.96 (0.98)	3.48 (1.10)	5.506	<.001 ^a	.320, .676
(7) Nurses should have a basic understanding of complementary therapies	516 (91.8)	13 (2.3)	4.41 (0.61)	4.17 (0.74)	4.594	<.001 ^a	.159, .396
(8) Complementary therapies only should be recommended if there is strong scientific evidence of their effectiveness	389 (69.1)	63 (9.4)	3.75 (1.08)	3.96 (0.93)	-2.544	.011 ^a	-.411, -.037
(9) The effect of complementary therapies is primarily due to a placebo effect	58 (10.3)	313 (55.5)	2.22 (0.90)	2.55 (0.96)	-3.776	<.001 ^a	-.479, -.151
(10) Complementary therapies align with a holistic view of health	454 (80.8)	291 (5.1)	4.27 (0.85)	3.96 (0.90)	4.095	<.001 ^a	.165, .470
(11) Nurses should integrate appropriate complementary therapies within their practice	325 (57.6)	75 (13.3)	3.83 (0.93)	3.40 (1.06)	5.236	<.001 ^a	.276, .608
(12) Anecdotal evidence suggests that complementary therapies are helpful for patients	364 (64.7)	32 (5.7)	3.92 (0.78)	3.60 (0.83)	4.861	<.001 ^a	.204, .480
(13) Complementary therapies are outside the scope of nursing practice	160 (28.7)	210 (37.7)	2.56 (0.98)	3.11 (1.08)	-5.732	<.001 ^a	-.708, -.347
(14) Practitioners who offer complementary therapies are safe	74 (13.3)	155 (27.9)	2.90 (0.80)	2.75 (0.83)	1.785	.075	-.013, .264
(15) Patients interested in complementary therapies should be referred to qualified complementary therapy practitioners	458 (81.6)	37 (6.6)	4.16 (0.95)	4.03 (0.97)	1.881	.061	.007, .322

^aSignificant difference, based on ratings of (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree.

Nurses were also concerned by the lack of regulation of many CT therapists, suggesting unregulated practitioners may lack appropriate credentials or experience. In Australia, legislation requires Osteopaths, Chiropractors and Chinese Medicine practitioners to be nationally registered (Australian Health Practitioner Regulation Agency, 2017), which provides some assurance of these disciplines; however, other CT disciplines have varying degrees of governance including state based regulation, self-regulated in the specific practice group or no regulation at all. The training and competence of CT practitioners therefore appeared to form a second basis of concern for RNs who were committed to patient safety.

The completion of training in CT and the ensuing acquisition of CT knowledge, had a significant influence on a nurse's intent to discuss, integrate and/or recommend complementary therapies. In fact, respondents completing CT training not only engaged in these activities more frequently, but held more positive views generally. Most survey respondents asserted that nurses need a basic understanding of CT. This was corroborated by the interview data, which revealed that many participants felt they lacked adequate knowledge. Other studies have also identified that nurses want CT education (Cooke, Mitchell, Tiralongo, & Murfield, 2012; Holroyd, Zhang, Suen, & Xue, 2008). Interviewees described how these knowledge gaps required nurses to try and seek more information

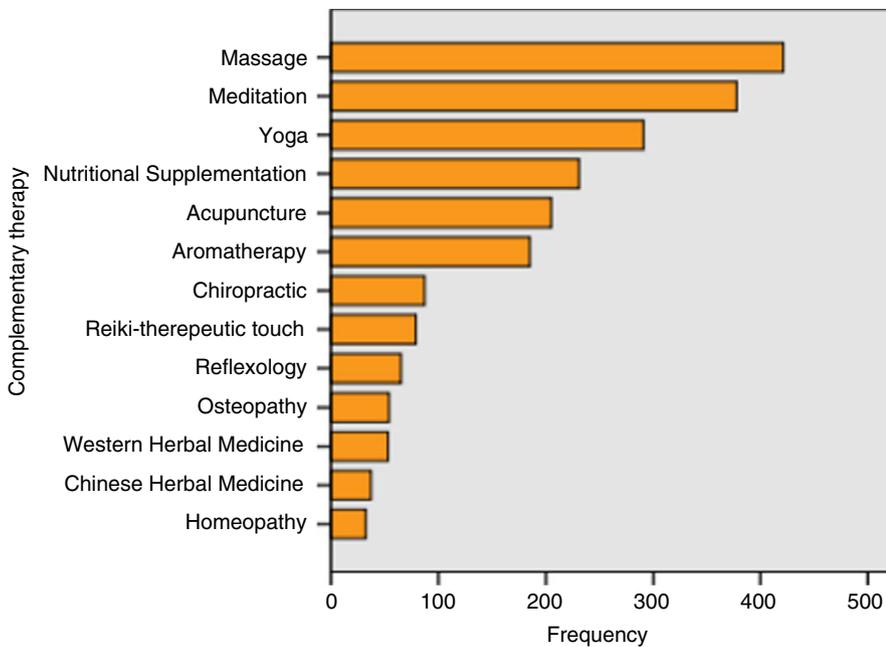


FIGURE 1 Complementary therapies recommended by RNs [Colour figure can be viewed at wileyonlinelibrary.com]

when faced with an enquiry from a patient—or otherwise, to suggest patients do their own research. However, in the context of a busy clinical environment, nurses may struggle to find adequate time to search for reliable resources (Brown, Wickline, Ecoff, & Glaser, 2009).

When it came to the place of CT in health care, the survey revealed strong support among nurses for the patients' right to use CT as part of a holistic healthcare approach which concurs with findings from Shorofi and Arbon's (2010) survey of Australian RNs in Adelaide. Our interview participants were also generally supportive of CT being used alongside conventional medicine, or to address the psychological aspects of health to enable more individualized care. These views align with current practice, where conventional medicine remains the frontline treatment for nurses and CT is used as an adjunct to address its limitations (Hunt et al., 2010); this is particularly evident in cancer care (Molassiotis et al., 2005). However, nurses' attitudes were mixed with regard to whether CT actually fell within the scope of nursing practice.

Nurses were largely restrained in terms of integrating CT into their own practice, but were also conflicted. In particular, they were cautious about recommending oral supplements and were wary of challenging the medical treatment model, while also trying to remain supportive of patients. This tension reflects nurses' position as advocates for patients and as typically valuing holistic care, while also working in an interdisciplinary team led by doctors who may have different views towards CT (Leach, 2004). Where interview participants voiced positive attitudes to CT integration, this was generally in relation to certain types of therapies, such as massage and mindfulness. Consistent with previous Australian research (Shorofi & Arbon, 2010), the survey showed that nurses held significantly more positive attitudes towards "mind and body" practices than herbal and dietary supplements.

5.1 | Implications for practice

Nurses were conflicted about the role of CT in the conventional medical context in Australia. While their scope of practice and organizational policies may constrain CT use, many were supportive of patients' interest in these therapies. However, most nurses had limited knowledge and the deficiency of scientific evidence and absence of clear national guidelines compounds the challenges they face when working with patients who are integrating these therapies. The implications for practice are clear. Almost all surveyed RNs (92%) agreed that nurses should have a basic understanding of CT and this factor should be flagged as a requirement for nursing competence. As 8 of every 10 RNs had studied some form of CT, there appears to be a willingness to engage with further education around the topic. Furthermore, the development of evidence-based CT guidelines, that provide a basic framework to assist healthcare professionals working in the conventional medical settings, should be investigated. An increase in nurses' CT knowledge is likely to promote informed decision-making and therefore improve patient safety.

5.2 | Limitations

Limitations of this study are recognized. Although our survey sample exceeded the required sample size, a convenience survey sample recruited through professional organizations may not represent the geographical or clinical characteristics of the whole RN population nationwide. We noted a relatively high proportion of survey respondents had studied CT or used CT themselves. This also suggests that the study may have attracted participants with a particular interest in CT, who may not be representative of the broader nursing profession. However, the risk of self-selection bias is not atypical for most

survey research. An added strength of our study is that the mixed methods design used allowed justification of the evidence through triangulated quantitative and qualitative data, to enhance the findings.

6 | CONCLUSION

This study has provided insights into the attitudes and behaviour of nurses towards patients' use of CT. The findings suggest that nurses generally support a patient's right to use CT as part of a holistic model of health care, on the proviso that the therapy is evidence-based and does not compromise patient safety. There was also universal acceptance that nurses should have a basic understanding of CT, though mixed support on whether it was appropriate to integrate CTs within the scope of nursing practice. Further research is needed to understand the implications of these research findings for the delivery of safe, patient-centred care.

CONFLICT OF INTEREST

No conflict of interest has been declared by the authors.

AUTHOR CONTRIBUTIONS

All authors have agreed on the final version and meet at least one of the following criteria [recommended by the ICMJE (<http://www.icmje.org/recommendations/>)]:

- substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- drafting the article or revising it critically for important intellectual content.

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