New Zealand and Canadian midwives’ use of complementary and alternative medicine

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ABSTRACT:

Background: Complementary and alternative medicine (CAM) is widely used by women and midwives in maternity care despite the lack of strong evidence for safety or efficacy. The purpose of this research was to investigate how midwives in primary midwifery care practice in two countries use CAM.

Methods: A pre-tested survey was administered to all registered midwives (265) in two provinces of Canada (British Columbia and Ontario) and a sample (383) of midwives in primary care practice in New Zealand. The two part survey consisted of 40 items including Likert scale, yes/no and open ended questions. Part one collected midwives’ demographics and information regarding the use of CAM by midwives and women, the types of CAM therapies, referral patterns and midwives’ opinions regarding the role of CAM in midwifery practice. Part two examined the use of evening primrose oil, chosen as an exemplar to discuss CAM with every client indicated they would discuss CAM options in circumstances such as breech presentation or postdates pregnancy. A qualitative analysis interpreted four main reasons for the use of CAM, identified in this study as ‘Resistance’ to the dominant medical paradigm, ‘Efficacy’ since CAM is perceived to make a difference, supporting ‘Women’s Choice’ and as a way of ‘Keeping Birth Normal’.

Conclusions: This study demonstrates that midwives regard CAM as an essential and traditional part of midwifery practice, supporting normal birth. However, midwives also regard the traditional and empirical basis of CAM as problematic since contemporary midwifery care requires midwives to base their practice on robust evidence of efficacy.

Keywords
Alternative therapies, midwifery, Canada, New Zealand

INTRODUCTION

Complementary and alternative medicine (CAM) is a term used to delineate forms of health care that are separate and distinct from conventional western medicine. The Cochrane Collaboration Complementary Medicine Field carries a broad definition of CAM noting that these practices are defined by their users as “preventing or treating illness, promoting health and well-being” and “complement mainstream medicine by 1) contributing to a common whole, 2) satisfying a demand not met by conventional practices and 3) diversifying the conceptual framework of medicine” (Cochrane Library, 2000).

Complementary and alternative medicine in some midwifery communities is an essential part of midwifery practice and in others it is utilised only as a personal health care choice of the midwifery clients. It may be applied as an adjunctive measure to support normalcy, or as an alternative option to resolve complications in the childbearing process. For many midwives and women, CAM is a preferred option to reduce medical interventions in childbirth. However, most CAM therapies are not well regarded by orthodox medicine (Relman & Weil, 1999) and with the current focus on evidence-based practice it is important to develop a greater understanding of the interface of CAM and midwifery practice.

Although there is a scarcity of clinical evidence and published information in regard to the efficacy of CAM in pregnancy, birth and postpartum there has been a marked increase in the amount and variety of information concerning CAM in the midwifery literature over the last 15 years. Despite this proliferation on CAM in relation to midwifery practice, very few publications are what would be regarded as “evidence on which to base practice” if using the accepted definition of evidence-based practice which is “…integrating clinical expertise with the best external clinical evidence from systematic research” (Sackett, Strauss, Richardson, & Rosenberg, 1997).

Research regarding midwives’ use of CAM

There are few systematic studies of midwives’ use of CAM. A systematic review by Hundley, Coon and Ernst (2004) also noted the paucity of evidence and published research regarding complementary therapies used during labour. A literature search using the terms complementary and alternative medicine/ complementary therapies in midwifery practice, pregnancy and birth indicated one national survey of herbal preparation use for labour stimulation by nurse-midwives in the US (McFarlin, Gibson, O’Rear, & Harman, 1999), a survey of complementary therapy use in pregnancy by nurse-midwives in North Carolina (Allaire, Moos & Wells, 2000) and a retrospective chart audit of evening primrose oil to aid in cervical ripening (Dove & Johnson, 1999).
There are a small number of randomized controlled trials that investigated the effects of specific therapies in pregnancy, labour and postpartum, for example, raspberry leaf capsules during pregnancy (Parsons, Simpson, & Ponton, 1999; Simpson, Parsons, Greenwood, & Wade, 2001), castor oil to induce labour (Harris & Nye, 1994), cabbage leaves on breast engorgement (Nikodem, Danziger, Gekka, Gutmezoglu, & Hofmeyr, 1993), lavender oil in the bath water to relieve perineal discomfort (Dale and Cronwell, 1994), ginger for nausea and vomiting in pregnancy (Vyatyanich, Krasairin, & Huangtsi, 2001), acupuncture to treat nausea and vomiting in pregnancy (Smith, Crowther, & Beilby, 2002) and massage on pain and anxiety during labour (Chang, Chen, 2002). More recently, a study has been conducted on women's views on moxibustion for cephalic version in breech presentation (Mitchell & Allen, 2008) and a randomized controlled trial investigated the effects of yoga during pregnancy on maternal comfort, labour pain and birth outcomes (Chunharapat, Petpichetchan, & Harthakit, 2008). Method
This descriptive study investigated the relationship of CAM to midwifery practice. Complementary and Alternative Medicine in this survey are considered as health care modalities that include but are not limited to herbal medicine, homeopathy, acupuncture, and aromatherapy. A postal survey was sent to 648 midwives in two countries, New Zealand and Canada. The survey was intended to elicit information regarding midwives' and clients' usage of complementary therapies in midwifery, including the kinds of alternative therapies utilized, referral patterns and midwives' opinions regarding the role and relationship of complementary therapies in midwifery practice. It was designed to take 15-30 minutes to complete, in order to accommodate midwives' usually busy schedules and was comprised of 40 items including Likert type, yes/no, and open-ended questions. The survey was divided into two parts; the first consisted of 34 questions about a participant's general use of complementary therapies in midwifery practice and the second part asked 16 specific questions regarding the use of Evening Primrose Oil.

An open-ended question provided the opportunity for midwives to report the primary reason they included the use of CAM in their midwifery practice. The respondents (N=333) provided varied and multiple responses. Some described the various situations CAM was employed and others provided an explanation of their personal philosophy and experience of CAM. Four composite and connected themes emerged from the thematic analysis of this question (Table 4). Statements with common threads were grouped into sub-themes and then placed into four broad themes that expressed the collective intent (Granheim & Lindeman 2003).

Study Population and Sample
The participants in the study comprised of registered midwives in two countries, New Zealand and Canada who were currently practising in a model of full scope (i.e. prenatal, labour, birth and postpartum) community based, primary midwifery care. The rationale for setting these criteria was that midwives in autonomous or independent practice, having primary care responsibility for childbearing women are most likely to have the opportunity to prescribe or offer options for alternative therapies to their clients. Registered midwives were accessed throughout New Zealand and from two provinces in Canada, British Columbia and Ontario. These two countries were chosen because the practice situation for the midwives is very similar in that they receive public funding, have independent access to hospitals, prescribing rights and self-referral for clients. Excluded from the study were those provinces in Canada that differed markedly in terms of the nature and scope of practice as well as funding arrangements.

The New Zealand sample was obtained by sending surveys to every second midwife on the New Zealand Nursing Council database (2002) identified as carrying a caseload (n=383). Since the population of midwives in Canada is much smaller than in New Zealand the Canadian sample was generated by sending surveys to every midwife registered with the Midwives Association in the provinces of British Columbia and Ontario (n=265). Membership in these organisations is mandatory for practising registered midwives. Approval was received from both associations to use their membership lists. Follow-up letters were sent to midwives in both countries to enhance response rates. Ethical approval for the study was obtained from the Victoria University of Wellington, Human Ethics Committee.

FINDINGS
A total of 171 valid completed surveys were received from New Zealand midwives indicating a response rate of 44.6%. A total of 172 valid surveys were received from Canadian midwives indicating a response rate of 42.8%. The overall combined response rate of the two countries was 343 or 52.9%. The denominator varies throughout the presentation of the results as not all midwives answered all questions.

Combined New Zealand and Canadian results are presented in most tables unless statistically significant differences between the two groups were identified. The demographic profile of midwives in the two countries was similar, the exceptions occurring in years of experience, and the location of births attended. Care was provided in home and hospital settings. Home births ranged from 1 to 40 annually (Mean 11.34 SD 7.6) with four midwives (4%) doing no home births. Hospital births was from 1 to 100 (Mean 34.54 SD 18.11) and two (1%) midwives indicated they did no hospital births per annum.

Use of CAM
Midwives were asked to indicate how CAM featured in their practice. Most (71.95%) indicated they recommended or referred CAM often (31%), very frequently (28%) or always (12.95%). There was similar distribution between countries. As well, 40.6% of respondents indicated they initiated discussions regarding CAM with every client.

Midwives estimated a majority of their clients utilised CAM during their midwifery care. Nearly a third of the respondents estimated over 60% of their clients use CAM. Reporting was similar between countries.

Data was obtained about four CAM therapies that are considered to be alternative medical systems or have therapeutic applications that may affect or change the body's responses or condition (Table 1). These four modalities frequently appear in the literature and offer alternative options and adjunct support to conventional medical obstetrical management.

The most commonly used therapy was homeopathy with 42.8% (n=336) of midwives indicating 21-60% of their clients used homeopathics. There was no apparent difference between countries in the use of homeopathy. The next most frequently used modality was herbs with Canadian midwives (n=169) estimating a greater use of herbs by their clients than New Zealand midwives (n=167), (x2=65.121, p<0.001). Aromatherapy was not a frequently used modality and there were no apparent differences in the use of aromatherapy between countries. Acupuncture was the least frequently used with 8.7% of midwives indicating 21-60% of clients included acupuncture in their care.

Table 1: Percent of midwives estimating clients’ use of specific therapies (n=336)

<table>
<thead>
<tr>
<th>% of clients</th>
<th>Herbs</th>
<th>Homeopathy</th>
<th>Aromatherapy</th>
<th>Acupuncture</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;20</td>
<td>54.4</td>
<td>37</td>
<td>72.8</td>
<td>88.7</td>
</tr>
<tr>
<td>21-60</td>
<td>29.5</td>
<td>42.8</td>
<td>18.1</td>
<td>8.7</td>
</tr>
<tr>
<td>61-100</td>
<td>15.5</td>
<td>19.5</td>
<td>9.3</td>
<td>2.7</td>
</tr>
</tbody>
</table>

Referrals
When midwives were asked whether they made referrals to practitioners of CAM, 95.2% (n=292)
indicated yes. The responses indicated overall most midwives referred to Homeopaths (50.7%) followed by 49.7% to Acupuncturists, 48% to Naturopaths, 35.7% to Chiropractors, 31.3% to Massage Therapists and 20.1% to Osteopaths. These percentages were developed from a content analysis of an open-ended question on the survey and therefore may not indicate an accurate picture of the actual referral rate to the specific practitioners. There were some differences between countries in referral choices, which are outlined in Table 2.

There were statistically significant differences in most categories with New Zealand midwives referring more often to homeopaths, osteopaths, herbalists, and Canadian midwives referring more often to naturopaths, massage therapists and chiropractors. These differences may be representative of cultural divergences of the two health systems. For example, osteopaths are not a common health care practitioner in Canada and may practise under another professional designation.

Information and Training

Midwives were asked how they learned about CAM therapies. Most midwives indicated multiple sources with 80.8% of respondents from both countries learning from workshops; 89.7% by reading the literature; 95% learned from discussions with midwives; 65% from consultations with other health care professionals and 30% from the Internet. Overall 51.6% (n= 341) of respondents reported having attended workshops, courses, seminars and educational programmes related to CAM training and education. The distribution was similar in both countries. Of the 51.6% who sought education, 10.4% identified as having obtained certification or licensure in modalities such as homeopathy, acupuncture (five midwives), herbal medicine and others. A significantly greater number of New Zealand midwives (17%) indicated obtaining certification than Canadian midwives (4%) (χ²=15.718, p=< 0.001).

Specific Circumstances

Reasons midwives gave for not discussing CAM with clients were; lack of interest or belief in CAM, religious objections, language or communication difficulties; affordability, medical appropriateness. Although some midwives did not discuss CAM with every client they did report specific circumstances where they would suggest a CAM therapy to remedy a complication or condition and these are described in Table 3. The only statistically significant difference between countries was in the category of postdates with 27.8% of New Zealand respondents and 64% of Canadian respondents indicating this as a specific circumstance for suggesting the use of CAM (χ²=19.142, p=< 0.001).

Informed Choice

Informed choice regarding CAM was most commonly provided by discussion, for 96.7% of 337 midwives from both countries, followed by printed material (69.0%). Discussion content included the midwife’s own practice experience (88.9%), possible side effects (70.4%) and research (69.1%). Many respondents noted discussion on research was included only “when research was available.” The two areas of discussion content where a significant between country difference was noted were including research in the discussion (NZ 60%, Canada 77%; p=0.002) and possible side effects (NZ 62%, Canada 78%; p=0.001).

Only 6.2% of midwives provided informed choice consent forms regarding CAM for clients to sign.

CAM Use in Hospital Setting

Complementary and alternative medicine was used in the hospital setting by a majority of respondents (67.3% indicating yes). Fewer documented the use on the institutional charts (42.5%). The distribution was similar between New Zealand and Canadian midwives.

| Table 2: Referral Choices of Midwives in New Zealand and Canada * |
|-----------------------------|---------------------|-----------------|-----|------------------|
| Practitioners              | New Zealand % n=143 | Canada % n=151  | X²  | P value **       |
| Homeopath                  | 62                  | 40              | 40  | <0.001           |
| Acupuncturist              | 55                  | 45              | --  | NS               |
| Osteopath                  | 40                  | 1               | 65.612 | <0.001        |
| Naturopath                 | 24                  | 71              | 63.366 | <0.001        |
| Herbalist                  | 23                  | 10              | 8.209 | 0.003           |
| Cranial Sacral Osteopath   | 15                  | 6               | --  | NS               |
| Massage Therapist          | 13                  | 49              | 43.631 | <0.001        |
| Chiropractor               | 4                   | 66              | 117.812 | <0.001       |
| Chinese Medicine (TCM)     | 3                   | 10              | --  | NS               |

* multiple responses were possible
** significant difference between countries

| Table 3: Specific circumstances for discussions of CAM |
|-----------------------------|-----------------|----------------|
| Specific Circumstances      | N=158           | % of Respondents |
| Fetal Malpresentation - e.g. Breech | 116          | 73.4 |
| Urinary Tract Symptoms      | 79              | 50.0 |
| Postdates                   | 75              | 47.5 |
| Common discomforts of Pregnancy | 56            | 35.4 |
| Breastfeeding Problems      | 33              | 20.9 |
| Slow progress in labour     | 32              | 20.3 |
| Vaginal or yeast infections | 30              | 19.0 |
| Induction of Labour         | 26              | 16.5 |
| Postpartum Healing          | 25              | 15.8 |
| Sciatic / Back Pain         | 21              | 13.3 |
| Anemia                      | 21              | 13.3 |
| Other                       | 61              | 38.6 |
Midwives’ Opinions

Seven questions sought midwives’ opinions regarding CAM therapies and their relationship to midwifery practice. The scale provided six choices from strongly agree (1) to strongly disagree (6) and the findings are shown in figures 1-7 at right, and on the next page.

Midwives affirmed a relationship of CAM with midwifery practice; 76.2% strongly agreed, agreed or somewhat agreed that CAM supports normal birth, 71.5% that CAM is an essential part of midwifery practice, and 78% that CAM enhances midwifery care. There was strong support by 81.4% of midwives that CAM is used to avoid medical interventions. Although 77.4% concurred that CAM is a traditional part of midwifery practice, 63.3% felt that the long history of CAM use is not evidence for safety in practice. Midwives also indicated their awareness of the effects of CAM with 74.4% disagreeing with the statement that CAM is not an intervention.

In general, there was a congruent pattern in the responses from both New Zealand and Canadian midwives. However Canadian respondents (74.4%) demonstrated stronger disagreement with the statement that CAM therapies are not interventions and this was statistically significant ($\chi^2=58.233a, p<0.001$).

Primary Reason for Use of CAM

Thematic analysis of the open-ended questions revealed four composite and connected themes (Table 4 - over page). “Resistance”, the first theme, related to using CAM to avoid medical interventions, seeking natural alternatives instead of following conventional obstetrical management, and providing more options in care including informed choice (37%). The notions of CAM being helpful, safe, gentle and effective in the process of birth were expressed in the second theme “Efficacy” (35%). The third theme “Women’s Choice” presented that women’s interest in, or preference for CAM options was an important factor in using CAM and part of supporting women’s choice and autonomy (18%). The fourth theme, “Keeping Birth Normal”, pertained to supporting the normal process of birth and health promotion, which is perceived to be a normal part of midwifery practice (10%).

Other common reasons cited for use in specific conditions were postdates/induction, breech, malpresentation, labour that was slow or prolonged, common complications and discomforts of pregnancy, pain relief, breastfeeding, relaxation, urinary tract infection, and newborn issues such as colic. There was a general consensus of reasons for use expressed by midwives from both countries.

DISCUSSION

Traditionally complementary and alternative health care is an inherent part of midwifery practice. Its utilisation is part of the social framework of health care, from an historical perspective (Vickers, 2000; Ramsey, 1999) as well as resistance to the dominant,
conventional, biomedical approach to childbearing. The findings of this study confirm that CAM is a usual part of autonomous midwifery practice and that the majority of midwives' clients utilise CAM. Most of the midwives responding to the survey recommend CAM to their clients. There were similar patterns of CAM recommendation across education levels, suggesting the route of education did not appear to influence use. Midwives in the study perceive CAM as enhancing midwifery care, supporting normal birth and to be an essential part of midwifery care. Respondents also affirmed that CAM is a traditional part of midwifery care.

More than half of the midwives responding estimated that most of their clients use CAM. These figures are congruent with the estimates of CAM use in the general population (Boedeker & Kronenberg, 2002; Ernst & Fugh Berman, 2002; Ramsay, 1999; Zolman & Vickers, 1999; Eisenberg et al., 1998). Midwives noted that many clients who choose midwifery care are already using CAM as part of their health care. For some women CAM is their first choice for any health care intervention.

Midwives indicated they integrate the use of CAM therapies into all aspects of their care, employing them in the home and hospital. Although the majority of midwives use CAM in the hospital setting, around half of the respondents in both countries indicated this use was not noted on hospital charts. There are likely medico-legal concerns for this, as well as encountering negative regard from hospital personnel. Not documenting CAM use is of concern since some CAM therapies may interact with conventional biomedicine therapies. Some midwives reported that mothers used CAM therapies in both settings on their own initiative.

Midwives are interested in learning about CAM. They participate in workshops or programmes, read the literature and network extensively with one another. Given that 95% of respondents indicated they learn about CAM from discussions with other midwives this is a rich field of information and perhaps misinformation and raises questions relating to what midwives should know about CAM when graduating from midwifery programmes and what should be included in curricula.

We propose the notion that the use of CAM by midwives is in resistance to the conventional biomedical approach to childbearing as expressed by their comments of “avoiding medical interventions and “supporting birth to be normal” and using CAM in situations that have a strong potential to result in medicalised birth with its associated morbidity. Midwives cited reducing the incidence of postdates or imminent induction of labour as a common reason for using CAM. Given that the rates of induction and caesarean birth are rising, these are real and present concerns evident in every pregnancy and birth (Moon, 2002). By considering CAM, women and midwives have increased the options and opportunities to achieve a normal birth and they do not perceive any increased risks to the mother and baby.
There are questions to be asked and answered about the evidence base for CAM use in childbirth. Respondents did acknowledge the lack of research and evidence for use and were cognisant that using CAM is an intervention albeit a “natural” or more gentle one. However, this did not appear to affect the incidence of use overall. There is some evaluation and evidence for the use of CAM therapies appearing in specific circumstances, for example, acupuncture as a treatment to reduce nausea and vomiting in early pregnancy (Smith et al., 2002) and moxibustion for turning breech to cephalic presentations (Budd, 2000). Breech presentations were commonly cited as a reason for employing CAM, both by midwives who do not routinely or commonly utilise them and midwives who do. A breech presentation is most often an indication for an elective caesarean section (Hannah et al., 2000) and as the number of vaginal breech births decrease so do women’s chances of finding a practitioner willing or able to provide safe care. Therefore employing a CAM therapy in this instance is not only providing an option but also providing a way to avoid medical intervention, to avoid transfer of care, to support birth to be normal and a way for women to take responsibility and maintain control in their care. Evidence for the use of CAM in obstetrical care is however scarce, making informed choice difficult for women and midwives. Many of the research questions remain locked in paradigmatic conflicts and the answers may not be available unless the politics of health care are put aside and a genuine search for the knowledge and truth in each therapy is the principal motivation in the research.

LIMITATIONS OF THE STUDY

The lower response rate of the New Zealand midwives may limit the generalisability of these findings. New Zealand has a busy midwifery community with an active research agenda generating from the undergraduate, graduate and postgraduate midwifery programmes and practising midwives are frequently called upon to participate in research projects, which may have decreased the number of participants. In Canada, midwifery research is relatively new and the practitioner requests are less frequent. Alternatively the lower response rate in New Zealand may reflect less use of CAM in the larger midwifery population and therefore less interest in the survey.

RECOMMENDATIONS FOR FUTURE RESEARCH

Given the high rate of use of CAM in midwifery practice, without strong evidence of efficacy and safety, it is imperative that research is undertaken in this area. The challenge is that the most robust research design to test the efficacy of an intervention is the randomised controlled trial (RCT). We need a midwifery profession prepared to undertake RCTs where appropriate and if not, to employ innovative research alternatives suitable to the situation. We need a situation of equipoise (where we are prepared to acknowledge that we do not know whether the CAM intervention makes a difference or not to the outcome) and we need women prepared to participate in trials. Given the apparent prevalence of CAM use in midwifery practice and belief in its efficacy identified in this study, support for research of this nature may be low.

To develop an increased understanding of CAM efficacy the midwifery profession could be engaged in an international audit of its use in specific circumstances which would include a description of dose, timing and route of application together with maternal and infant outcomes. In this way the knowledge base for CAM use in pregnancy would gradually be increased. Current practices are ad hoc and based on the practice wisdom of individual practitioners and the individual experiences of women in their care. This is problematic for midwifery practice and makes it difficult to provide adequate informed choice to women.

SUMMARY

CAM in midwifery care appears to be employed as a means to support the normal processes of pregnancy and birth and to respect women’s autonomy. The inclusion of CAM in midwifery care appears to be congruent with a holistic approach to childbirth that many midwives, in primary care/autonomous practice, feel reflects a different care relationship; one of working with women as opposed to the perceived medical care relationship of working on women. Many questions about the inclusion of CAM and the interface with evidenced based practice are yet to be answered.

Complementary and alternative medicine is interwoven into the current health care paradigm and into midwifery care. Although the conventional biomedical approach dictates most of current obstetrical care, CAM consistently and persistently continues to be utilised during childbearing. Knowledge regarding CAM use for pregnancy and birth continues to be passed from woman to woman; mother to midwife, midwife to midwife to mother, maintaining a circle that has that been in place throughout the history of childbearing.

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