

# Complementary and alternative groups contemplate the need for effectiveness, safety and cost-effectiveness research

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**SUMMARY.** **Objective:** To examine the views of complementary and alternative medicine (CAM) groups on the need to demonstrate the effectiveness, safety and cost-effectiveness of their therapies and practices. **Design:** Qualitative interviews were conducted with 22 representatives of three CAM groups (chiropractic, homeopathy and Reiki). Qualitative content analysis was used to identify similarities and differences among and across groups. **Setting:** Ontario, Canada. **Results:** There were striking differences in the views of the three sets of respondents. The chiropractors agreed that it was essential for their group to provide scientific evidence that their interventions work, are safe and cost-effective. The leaders of the homeopathic group were divided on these points and the Reiki respondents showed virtually no interest in undertaking such research. **Conclusions:** CAM groups that are more formally organized are most likely to recognize the importance of scientific research on their practices and therapies.

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## INTRODUCTION

With the dramatic rise in use of complementary and alternative medicine (CAM) in western society, has come a corresponding rise in the number of CAM practitioners.<sup>1-4</sup> Prior to these developments, CAM therapists were relatively invisible and the need for establishing reliable, common standards of practice was not readily apparent. Word of mouth was sufficient to give practitioners the credibility they needed. Today, however, there is an increasing call for accountability and evidence-based health care. Indeed, as governments seek to control health care costs, the demand for evidence based on peer-reviewed research is being heard in all sectors of the health system, not just for CAM.<sup>5</sup>

In this context, issues of effectiveness, safety and cost-effectiveness have become critically important. Governments and physicians are demanding this kind

of evidence.<sup>6</sup> The public has not been as insistent on 'scientific' evidence; consumers are typically more interested in personal testimonies about the effectiveness of CAM.<sup>7</sup> But even the public is beginning to ask for more proof that CAM therapies work.

This paper describes the views of representatives of three CAM groups regarding the need to provide valid and reliable evidence of the effectiveness, safety and cost-effectiveness of their own therapeutic modalities. The three groups are: chiropractors, homeopaths and Reiki practitioners in the province of Ontario, Canada. These groups were chosen for comparison because they represent a spectrum of CAM occupations in terms of the degree of legitimacy they

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are accorded within Canadian society. Chiropractors are the largest group and are closest to being considered ‘mainstream,’ while the Reiki group is the least organized and smallest of the three. There are other marked differences between the groups, including not only their therapeutic approaches to health care (physical manipulation of the spine and joints for chiropractors, treatments based on the principle that ‘like cures like’ for homeopathy, and hands-on, noninvasive techniques that make use of ‘universal life-force energy’ for Reiki)<sup>8</sup> but also in the extent of their cohesion, the length of their formal education and the nature of their infrastructure. For example, chiropractors have the longest formal training (6 or 7 years post-high school), homeopathic training varies (up to 4 years) and Reiki practitioners’ training also varies (from a few weekends to several years, typically in the form of apprenticeships).

The chiropractors are by the far most organized, on both the national and provincial level and have achieved a high degree of consensus, making it easier for them to agree on matters of policy. Unlike the other two CAM groups, the chiropractors have been granted self-regulatory status by the provincial government. Homeopaths constitute a much smaller and more splintered group. They have numerous, competing associations and colleges organized around different leaders. The Reiki practitioners are the smallest and least institutionalized of the three groups. They lack an organized leadership to speak on their behalf. The vast majority work independently or under the supervision of a Reiki master, rather than belonging to any formal associations. Although Reiki is popular in Ontario, it is not as formally established as the other two groups. It was included in the study to provide an important comparative perspective, since many CAM therapies are similarly unstructured.

## METHODS

In the case of chiropractic and homeopathy, we conducted personal interviews with all the formal leaders (i.e. of associations and colleges) for each group. In the case of Reiki, there was only one person who held a leadership position; the others were selected on the basis of their reputation. (Using the “snowball” technique, we identified the busiest and most prominent practitioners in the community.) We spoke with eight chiropractic leaders, seven homeopathic leaders and seven Reiki practitioners. The interviews lasted about 1 h and there were no refusals. We used structured interviews to query the participants about their perceptions of the need to produce evidence that their modalities were effective, safe and cost-effective. All interviews were audio taped and transcribed verbatim.

The replies to these questions were analyzed using qualitative content analysis to identify differences between the views of the participants from

each of the three groups. Each author independently coded each transcript and team meetings were held after every four to six interviews to reach consensus on key themes and codes. All interviews were entered into NVIVO<sup>9</sup> to facilitate comparison between groups.<sup>10,11</sup>

## RESULTS

The key theme was the relationship between the extent of formal organization of a group and the leaders’ beliefs in the importance of demonstrating effectiveness, safety and cost-effectiveness in a rigorous “scientific” manner. Their views on each topic are described below.

### The need to demonstrate effectiveness

When asked about the necessity to show that their therapies actually had a positive effect on the health outcomes of patients, the leaders of the three groups had very different views. The chiropractic leaders unanimously believed that it was essential to demonstrate the effectiveness of their treatments. Furthermore, they were convinced that research on effectiveness had to be ongoing; proving again and again that chiropractic therapies work for a range of specific conditions such as low back pain, neck pain and headaches. As one leader commented: “Research, validation and development of core knowledge must continue; it is the basis of our survival.” Another leader remarked on the impact of the political environment in which evidence is assessed and asked: “When will we have produced enough evidence to satisfy the critics? We already have a solid body of research but they keep raising the bar higher and higher. Will it ever be good enough?”

The homeopathic leaders were divided on the need to demonstrate effectiveness. Three of them were convinced that there is no need for further proof. In their view, the effectiveness of their therapies has already been demonstrated over a long period of time. As one leader commented: “There is a 200-year history in case studies that have worked. The powers-that-be want clinical trials but homeopathy does not function well in that way; the treatments are too individually tailored.” Another said: “It has been proven but the proof is not accepted by doctors and scientists because of prejudice. We know it works; we just don’t know why it works.” On the other hand, the remaining four leaders believed that further research needs to be done so that people can understand and appreciate homeopathic care. These leaders want to develop research and do double blind studies that will be acceptable to the scientific community, but they are concerned that this kind of research is very costly for a small group and wonder how they will be able to fund it.

The Reiki respondents were the least interested in demonstrating effectiveness. They found the notion

puzzling and troublesome and were uncertain how to reply to our questions about it. With one exception, they considered it unimportant to prove that Reiki works and were also convinced that conventional outcome measures would be inappropriate for their form of healing. They explained that Reiki therapy is a form of spiritual growth based on energy and that scientific research on effectiveness is too mechanistic to fit their paradigm. As one respondent commented: “Reiki speaks for itself.”

### **The need to demonstrate safety**

The chiropractic leaders were not unanimous about the need to prove that their therapies are safe. Over half of them regarded further research on safety as essential, especially as there are currently two court cases pending in Canada concerning possible harm done by chiropractic adjustments. The others, however, argued that safety has already been satisfactorily proven and further research on this issue is not required. They blamed concerns about safety on the critics of chiropractic, and on the media. As one said: “Chiropractic has been shown to be extremely safe, but some of our more rabid opponents manipulate the media and it hurts our credibility. People don’t realize how rarely there are risks involved in treatment.” Another claimed: “It is hard to demonstrate safety because the incidence of harm is so low. We have problems in the range of one in a million and compared to medicine that’s very favorable.”

Just as the homeopathic leaders disagreed on the need for research on effectiveness they also had differing opinions about research on safety. While a few wanted to see more research on safety, the majority emphatically stated that there is no need; that homeopathy is very safe and has no side-effects. A leader explained: “The substances with which we work are so diluted that there are almost no chemicals in them; it is basically a form of energy healing that is non-invasive and non-toxic.” A caveat was added, however, by one of these leaders who argued that homeopathy is safe, but only when treatments are given by knowledgeable practitioners. This point was echoed by those leaders who favored more research on safety. They argued that treatments given by practitioners who have not been properly trained can have negative side-effects and it is a fallacy that homeopathy can do no harm.

All the Reiki practitioners expressed confidence in the safety of their treatments and saw no need for proof. One pointed out that Reiki is “so non-invasive that it cannot do harm. It is just a gentle laying on of hands and a transference of energy.” One respondent, however, did express a concern about safety that focused on the emotional stability of the client: “It is crucial for the client to feel safe when they are being treated because a Reiki treatment can sometimes trigger an emotional reaction.” In spite of this concern, the need for scientific proof of safety was not salient to this group.

### **The need to demonstrate cost-effectiveness**

All the chiropractic leaders believed that chiropractic care is cost-effective. They also agreed that there is a need for more research on this issue. They said that while there are already a few studies that demonstrate cost-effectiveness, more and better research is needed. They were convinced that if costs such as medications and hospitalization were taken into account, research would show that chiropractic care is less costly for musculoskeletal problems than conventional medical care. One of the leaders claimed: “We can demonstrate that people can avoid using drugs and surgery and thus reduce costs. We can also show that chiropractic care can minimize complications and thereby return people to work more quickly.” Clearly, these leaders hoped that research on cost-effectiveness would prove to be critically important for the future development of their discipline.

The homeopathic leaders all agreed that the inexpensive nature of their remedies and the fact that natural substances cannot be patented, means that homeopathy is more cost-effective than conventional treatments. They argued that homeopathy saves money because it works proactively to promote the natural healing capacity of the body and prevents complications. As one leader put it: “The potential for real cure is there and that makes it cost-effective because we can bring patients along faster and in less costly ways.” When it came to consideration of proof of this cost-effectiveness, however, most felt that there is not yet enough evidence to support their claims and believed that more solid proof is definitely required.

The Reiki practitioners were also convinced that their therapies could save money for the health care system. They argued that because Reiki healing is holistic, it can accelerate the natural healing properties of the body on the physical, emotional and spiritual levels. One explained: “You can prevent certain ailments and lessen others like stress, and keep patients from developing illnesses later on.” However, as with proof of effectiveness and safety, the requirement for research to back up these beliefs did not seem to fit well with the Reiki approach. As a respondent told us: “The proof comes from our clients. One woman who had 20 years of psychiatric care was helped after only 7 months in Reiki.” The pattern for this group was clearly a negative response to the whole concept of scientific research on their healing practices.

## **DISCUSSION**

The three CAM groups were selected for inclusion in this study because they were at different stages of formal organization and professional legitimacy in the hopes of highlighting the range of opinions

about the importance of research. Our findings show striking differences in the attitudes of the three sets of respondents. The chiropractors were strongly in favor of ongoing scientific research; the homeopaths were less certain that rigorous evidence was needed, while most of the Reiki practitioners had not thought much about the need for research.

These variations in attitudes toward the importance of research and evidence can be partially accounted for by the fact that the three groups are at different stages in the process of professionalizing. The chiropractic leaders encouraged continuing peer-reviewed research because they seek legitimacy and full acceptance for their group. They realized that in order to accomplish this goal, they must provide convincing evidence that their practices have a positive impact on health outcomes, are safe, and can save the government money in the long run. Because they have been able to organize effectively, and increase their numbers across the country, they are in a position to undertake and fund the required research.<sup>12</sup>

The homeopathic group is far smaller and much more divided than the chiropractors. While some of the leaders recognized that producing a solid base of evidence could help to win acceptance for their therapies, others expressed no interest in pursuing this course of action.<sup>13</sup> Even if the various factions were to agree that scientific research is a desirable strategy to pursue, the size of the group would be a serious handicap. Producing credible research is a costly undertaking and requires a sizable group of practitioners who are sufficiently committed to the project to provide the required funds.

The Reiki group is the smallest of the three and consists of several informal communities which have little or no contact with one another. With one exception, our Reiki respondents were uninterested in encouraging research on their healing practices. The idea of scientific research that could demonstrate the value of their approach to health care seemed alien to them. They regarded conventional methods of measuring health outcomes as inappropriate for their philosophy of care. Furthermore, their small size and lack of an organizational structure would make it impossible to carry on this kind of research, even if these negative attitudes toward scientific research were to change.

The findings indicate that health care occupations that seek to become professionalized are the most receptive to research on their therapies and practices. CAM groups are increasingly meeting demands from other health care professionals and governments for evidence-based health care.<sup>14</sup> Groups that wish to join the mainstream health care system recognize that they must respond to these demands. But not all health care occupations are at the point in the professionalization process where they are willing or able to undertake rigorous research. Some may never choose to do so. The data presented here provide a picture of three groups with widely differing

attitudes toward research that may be explained by their differing patterns of organization (or lack thereof).

The fact that there was only one formal Reiki leader in the sample, may explain some of the differences between Reiki and the other two groups. It is frequently the case that the elites of a group hold beliefs and values that differ from the people they are supposed to represent. In order to investigate this further, we are currently undertaking research to discover whether the opinions expressed by the leadership of chiropractic and homeopathy are shared by the rank and file membership.

## CONCLUSION

Health occupations are under pressure to provide credible evidence that their particular form of health care is effective, safe and cost-effective. There is a danger, however, that this kind of scientific research may not do justice to the personal, individualized nature of the therapies. Groups, like the chiropractors, that decide to carry out research using widely accepted, conventional methods in order to gain professional acceptance may have to give up some integral and important elements of their practice. To some extent, they run the risk of becoming 'medicalized.' While some CAM occupations are unwilling, or unable, to participate in rigorous, scientific research on their therapies and practices, this kind of activity appears to be a necessary pre-requisite for being accepted into the mainstream health care system.

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