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Potential Internal Resources for Teaching Complementary and Alternative Medicine: The UCI Experience.

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Abstract

Background: Integrating Complementary and Alternative Medicine (CAM) into mainstream education is well accepted. Debate about methods, modalities, and format is ongoing. A key concern is the limited availability of reliable scientific resources/teachers. This report will assess available resources for CAM education in one university setting. **Method:** An online questionnaire was developed, tested and implemented on the university website. An e-mail was sent to all university staff and provided a direct link to the survey. Answers were tabulated and quantitative analysis was conducted. **Results:** Seventy-one faculty members responded. Forty-four were College of Medicine faculty, 11 with prior training in CAM modalities. Twenty-two were currently conducting research in CAM and 22 were incorporating CAM into their curriculum. **Conclusion:** Faculty members within the university possess knowledge and expertise in CAM. They can be used as mentors, teachers and resources for education in CAM.

Key Words: Complementary Medicine; Alternative Medicine; Integrative Medicine, Education; Curriculum.

Word Count: 1420

Background

Complementary and alternative medicine (CAM) has a long history and encompasses numerous therapeutic modalities. These include time-honored practices of eastern origin (i.e. Traditional Chinese Medicine, Ayurveda), folkloric healing traditions (region and culture dependent), as well as many variations of these modalities. In fact, the National Center for Complementary and Alternative Medicine (NCCAM) has identified more than 360 healing modalities and grouped them into five major categories: 1) Alternative Medical Systems (Traditional Oriental Medicine, Homeopathy, Naturopathy, etc.); 2) Mind Body interventions (meditation, hypnosis, touch therapy, etc.); 3) Biologic-Based therapies (Herbs, supplements, vitamins, etc.); 4) Manipulative and Body-Based therapies (Massage, Chiropractic, etc.); and 5) Energetic therapies (Reiki, Qi Gong, electromagnetic field, etc.) (http://nccam.nih.gov).

Over the past two decades, surveys across the U.S. reported a gradual increase in the use of CAM by the public.(1) Use is not limited to a specific ethnic group, age bracket, gender, medical condition or modality. (2, 3) Some insurance companies have begun incorporating a few CAM therapies under their covered benefits (acupuncture, chiropractic). Research and publications, fueled by public and government (National Institutes of Health) funding, is currently providing an

increasing amount of scientific information about CAM therapies (acupuncture, chiropractic, hypnosis, etc.).

Despite the immense public interest and use of CAM, education and knowledge of health care providers has lagged behind. It has been well documented that courses in medical schools have been heterogeneous and diverse in content and approach. (4) Recently, the White House commission on CAM (http://www.whccamp.hhs.gov/tc.html/) reported that, in academic year 2000, 91 of 125 allopathic medical schools included CAM in required conventional courses; 64 schools offered CAM as a stand-alone course, and 34 schools included CAM as part of an elective course.

The public, (3) students, (5) and healthcare providers (6)'(7) are interested in learning about CAM. By virtue of demand, academic centers and other educational venues are gradually incorporating CAM into their curricula. Modalities and methods of incorporation vary by discipline, school, location, resources, and interest. The value of focusing only on evidence-based information is still debated. (8)'(9) However, it is important for educators to remember that information imparted during their classes might eventually be used in clinical settings.

While agreement has been achieved about the need to incorporate teaching into different courses, there is still debate about the modalities to be taught, and who

is most qualified to provide a balanced and practical approach to the topic. Incorporating CAM community providers into academic settings is often fraught with difficulties and bureaucratic delays. Besides ensuring the qualifications and experience of the provider, it is important to ensure their ability to communicate this essential knowledge in a scientifically accepted format. To circumvent this deficiency, some schools provide students with basic knowledge of critical thinking prior to inviting CAM providers to share their knowledge. (9) Using mainly university teachers with little experience or knowledge of CAM is also unacceptable, since many have preconceived negative ideas, or choose to focus mainly on the weakness of the current level of evidence.

Another avenue for educators looking to circumvent these limitations may be to reach within their own institutions. For academicians who have training or pursue research in this field. This report provides some evidence that resources within and outside of the medical school could be recruited for such a task.

Method

We developed a questionnaire which focused on three main areas: interest in research, education, and training. We pilot tested the questionnaire, and after appropriate construct and content revisions, developed a web-based survey using Microsoft FrontPage. The final web-based survey contained 6 major questions and used both fixed and open-ended response formats (Appendix A).

The survey was designed to take a maximum of 10 minutes to complete. Colorful graphics were used to enhance the presentation.

All faculty and staff at the University of California Irvine (UCI) (faculty, researchers, librarians, and student assistants; n=2802) received an e-mail message informing them about the survey, and explaining its objectives. We implemented the survey between March and June 2002. Only faculty teaching, doing research, trained in, or practicing CAM were asked to respond to the survey. Responders were made aware that the survey was not anonymous.

Data were collected in tab delimited .txt format, imported into Microsoft Excel, and later transferred to SPSS (Statistical Package for the Social Sciences) for analysis. We used descriptive univariate and bivariate statistics to analyze the data.

Results

Seventy-one respondents completed the survey. Forty-four (62%) were college of medicine (COM) faculty (n=1294), the others were from all other schools (n= 1508) (Table 1). Eleven respondents had formal training in 9 CAM modalities, 7 (63.6%) were still practicing; the remaining 4 had practiced CAM in the past. Faculty from both COM and other schools were trained in meditation, while dance and yoga were two disciplines in which no COM faculty had training (Table 2).

Twenty-two respondents reported previously conducting research in 32 different CAM areas. Among those, 21.8% research projects focused on alternative medical systems; 28.1% on biologic-based therapies; 15.6% on manipulative and body-based methods; 6.2% on biofield therapies; 3% on mind-body Interventions; and 25% in “other” areas. Among the research projects previously conducted, 78.9% (n=15) were basic and 36.8% (n=7) were clinical. At the time of the survey, 22 respondents (31.0%) were pursuing CAM research. Eighteen research projects focused on alternative medical systems, 10 on mind body interventions, 18 on biologic-based therapies, 11 on manipulative and body-based methods, and 13 on energy therapies (Table 3).

Twenty-two (31.0%) respondents incorporated CAM topics in their curricula/ teaching. Energy therapy was the only area not currently covered. COM faculty covered topics pertaining to 4 of the major CAM domains (such as acupuncture, herbals, etc.), while non-COM faculty covered general topics (Table 4). Learners ranged all levels of training from undergraduates to medical residents and residents. Thirteen of the respondents provided community education.

Discussion:

Our goal was to find the extent to which faculty within the University had knowledge in CAM. Results confirm our suspicion that a small number (71) of

faculty did indeed have the knowledge, experience, and knowledge to serve as resources in an integrated curriculum. Given the criticism that CAM often receives within the medical community, it is surprising to observe that 62% of resources were COM faculty. In addition, a higher number of COM faculty had training and conducted research in different CAM modalities. The results are also very encouraging because the knowledge within this small group of faculty and staff spans a wide range of therapies, particularly those most often used by the public (e.g. acupuncture, manipulation, mind-body medicine, and biologic therapies).

A road map for incorporating CAM into the medical curriculum or residency education has been well described elsewhere.(10)'(11) However, the actual integration of CAM has proven challenging for a variety of reasons. These include financial, scheduling conflicts, and the lack of faculty support. The argument most often advanced is that knowledge imparted by community providers is anecdotal, not evidence-based, and of limited scientific basis.(12) Using scientifically-based resources and teachers within the same university could be more acceptable to course directors and addresses several of the limitations (e.g. lack of scientific information, etc.). Our results indicate that such resources are distributed throughout the university and possess both practical and scientific knowledge in CAM. They could bridge the gap of language and science and serve as acceptable brokers for integrating CAM into medical curricula. Given their unique position, these same faculty could serve as role

models for CAM community providers, and would open the doors for mutually acceptable cooperation.

It is important to note that the results of our survey are limited by several factors. The results are from one school in a particular geographic area; hence these may not translate into similar findings at other universities and schools. The small number of responders (71), could be due to the topic, or to the usual poor response of faculty to surveys.(13) An e-mail survey could be especially limiting for faculty who do not commonly use e-mail.

Conclusion

Despite the expected small number of responders, we are encouraged by the results of this limited survey, and feel that it provides us with a foundation for possible collaboration between faculty in the medical school and beyond to advance the integration of CAM into the medical curriculum. It is obvious from this survey that there are diverse resources possessing knowledge and expertise in CAM. Schools across the US could employ a similar strategy to identify established faculty to serve as resources and mentors in the integration process and hence enhance the credibility of education about CAM.

Competing interests:

None

Authors' contributions

All authors worked on the design of the survey, and pilot study. WIN and SIM analyzed the data and wrote the report.

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Table 1

Educational background and school affiliation of survey responders

Characteristics	N	%
Degree		
MD	27	38
PhD	38	53.5
Other, not specified	6	8.5
School		
College of Medicine	44	62
Social Sciences	5	7
Humanities	5	7
Social Ecology	4	5.6
Biological Sciences	3	4.2
Physical Sciences	3	4.2
Art	2	2.8
Engineering	1	1.4
Other, not specified	4	5.6

Table 2

Prior training/certification in CAM modalities among faculty

Focus / Responders	**N (7)**	**N (4)**
Traditional Oriental Medicine	3	0
Relaxation	2	0
Hypnosis	1	0
Imagery	1	0
Meditation	1	2
Prayer	1	0
Dance	0	1
Yoga	0	1
Other	0	1

Table 3

CAM research focus and type of research currently pursued

Research Activities *Areas Of Research*	**N**	**COM Faculty N**	**Non-COM Faculty N**
Alternative Medical Systems (n=18)		***11***	***7***
Traditional Oriental Medicine	11	6	5
Homeopathy	3	3	0
Ayurveda	1	0	1
Native American	1	1	0
Folk (traditional)	3	2	1
Other (NAET, Caucasian, or not specified)	2	1	1
Mind-Body Intervention (n=10)		***3***	***7***
Spiritual Healing	4	0	4
Meditation	3	1	2
Prayer	3	2	1
Hypnosis	1	0	1
Other (psycho-neuro-immunology, singing and immune system, yoga, or not specified)	4	1	3
Biologic-Based Therapies (n=18)		***16***	***2***
Dietary supplements (herbs, minerals)	15	13	2
Special diets (Atkins, Ornish)	2	2	0
Biologic therapies (Laetrile, shark cartilage)	3	3	0
Manipulative and Body-Based Methods (n=11)		***5***	***6***
Chiropractic	6	3	3

Massage	6	3	3
Osteopathy	3	1	2
Exercise	1	1	0
Energy Therapies			
Biofield Therapies (n=8)		***4***	***4***
QiGong	6	3	3
Therapeutic Touch	2	1	1
Reiki	1	0	1
Other, not specified	2	1	1
Bioelectromagnetic-based Therapies (n=5)		***4***	***1***
Magnets	2	2	0
Pulsed fields	2	2	0
Alternating or direct current fields	1	0	1
Other	1	1	0
Types of Research (n=30)		***19***	***11***
Literature review	17	8	9
Basic laboratory research	15	13	2
Clinical research	12	10	2
Applied research	10	5	5
Epidemiological research	3	0	3

Table 4

Teaching experience, format and learner level of CAM reported

Teaching Activities	N	COM Faculty N	Non-COM Faculty N
Areas of Teaching (n=14)		***13***	***4***
Alternative Medical Systems	8	8	0
Mind-Body Intervention	7	7	0
Biologic-Based Therapies	7	7	0
Manipulative and Body-Based Methods	2	2	0
General	3	1	2
Teaching Format (n=22)		***18***	***4***
Lecture	22	18	4
Seminar	6	6	0
Workshop	3	3	0
Other (student research, clinical setting, fieldwork, etc).	7	5	2
Learner Level (n=21)		***17***	***4***
Undergraduate	10	6	4
Graduate	7	5	2
Postgraduate	7	5	2
Medical students	11	11	0
Residents	9	9	0
Continuing education	5	4	1

Appendix A
Complementary & Alternative Medicine Faculty Inventory

Name: _____ Title: _____

Department: _____

E-mail: _____

Phone #: (___)_____-_____ Fax #: ( )____-_____

1) Do you wish to receive regular updates and mailings from the Samueli Center?
   __ YES __ NO
2) What is your preferred mode of communication:
   ☐ e-mail ☐ letter

3) Have you conducted any research (literature review, basic, clinical, or applied research) in any Complementary and Alternative Medicine modalities?

   __ YES __ NO **[Go to Ques. 4]**

   3a) If yes, please describe:

   - Modality(ies): [Check as many as applicable]
     _____
     [attached category list]
   - Type of Research: [Check as many as applicable]
     - Literature review
     - Basic laboratory research
     - Clinical research
     - Applied research
     - Epidemiologic
     - Other: _____

   3b) Have you published your research? [Check as many as applicable]
   - Yes, as peer-reviewed article(s)
   - Yes, as non-peer reviewed article(s) or book chapter(s)
   - Yes, as opinions, editorials, letters, monographs, or other format
   - No

4) Are you currently pursuing research in any CAM modality?
   __ YES __ NO **[Go to Ques. 5]**

4a) If yes, please indicate which modality(ies) and the type of research (literature review, basic laboratory research, clinical research, epidemiologic, applied research, other):

Modality(ies)	Type of Research

5) Do you teach any aspect of CAM through your curriculum education?
____ YES ___ NO **[Go to Ques.6]**

5a) If yes**,** could you share with us which aspect of CAM you teach?

Course Name: _____
Number of years you have taught this course: _____
CAM modality(ies) covered: _____
Course Format: _____
Is the whole course devoted to CAM education? Yes No
If no, what proportion of the course is devoted to CAM education?

6) Are you interested in lecturing on CAM?
__YES __ NO **[Go to Ques. 7]**

6a) If yes, please check all venues that apply:
__ Elective courses __ Academic colloquia and seminars
__ Public lectures
__ Other (please specify) _____

7) Are there any areas within CAM that specifically interest you?
Yes No **[Go to Ques. 8]**

7a) Please describe area(s) within CAM that interest you:
_____
_____

8) Have you had formal training in the practice of any CAM modality?
Yes No **[Go to Ques.9]**

8a) If yes, in which modality(ies) have you received formal training?
_____

8b) Do you currently practice the modality (ies)
Yes No

8c) If no, did you ever practice the modality (ies)

Yes No

9) Please describe any other ways in which you might like to participate or collaborate with the Samueli Center:

_____
_____
_____
_____