

MEDICAL RESIDENTS' AND STUDENTS' ATTITUDES TOWARDS HERBAL MEDICINES: A PILOT STUDY

Shuang Xu¹, Mitchell Levine^{1,2}

¹McMaster University, Hamilton, Ontario, ²Centre for Evaluation of Medicines, St. Joseph's Healthcare, Hamilton, Ontario

Corresponding Author: levinem@mcmaster.ca

ABSTRACT

Background

There is a growing public interest in complementary and alternative treatments. The attitudes and perceptions regarding herbal therapies have not been evaluated amongst physicians-in-training.

Objective

This pilot study aimed to assess the self-perceived competence and attitudes of physicians-in-training in dealing with herbal medicines in clinical practice.

Methods

A survey was distributed amongst 26 medical residents and clinical clerks proceeding a lunch hour teaching session about the risks and benefits of herbal medicines. Respondents were asked to rate their competence, the adequacy of formal training, to indicate their belief in usefulness, and the sources used when dealing with herbal medicines. Estimates of patient use and personal use were also identified.

Results

Respondents indicated low confidence in their competency when dealing with herbal medicines in practice; they lacked formal training on the subject, and were not knowledgeable about sources to refer patients to regarding herbal medicines. Half the respondents estimated that between 11-30% of their patients use herbal medicines, but 80% felt that less than 1 in 10 patients was sufficiently competent in the safe use of herbal medicines. The median response regarding the belief in the usefulness of herbal medicine was 'less favourable than neutral' but their interest in further information was 'more favourable than neutral'. Although the literature was the most common source consulted, often no source was used.

Conclusions

Although residents and medical student clinical clerks encounter many patients who use herbal medicines, their own lack of knowledge and personal experience limit their ability to assist these patients in this area. Increased training on the benefits and risks of herbal medicines may help physicians-in-training care for patients using herbal medicines.

Key words: *Primary care education, postgraduate/intern training, herbal medicines*

The use of herbal medicines in Canada and around the world has grown considerably. The 2000-2001 Canadian National Population Health Survey revealed that approximately 9.3% of Canadians had taken an herbal remedy two days prior to the survey.¹ Herbal medicines are used for

conditions of varying pathology, e.g., from fibromyalgia to diabetes.¹

Previous studies have characterized a lack of knowledge of the benefits, harms, and evidence for herbal medicine in physicians.² Patients are also reluctant to reveal their usage due to the

perception that physicians are not knowledgeable in this area or disapprove of alternative treatments.³ This may give rise to situations where patients would be at risk for drug-herb interactions with conventional medications (e.g. Ginkgo Biloba in conjunction with anticoagulants may result in bleeding complications).⁴

To date, studies have focused on patient use of and physician attitudes toward complementary and alternative therapies of a general nature.⁵ One related study in 2000 found that 54% of the physicians surveyed discussed complementary therapy with their patients, and 86% of physicians and 74% of medical school students felt that complementary medical education should be incorporated into the medical school curriculum.⁶ Few studies however, have examined how physicians-in-training, including residents and medical student clinical clerks, feel about the increasing usage of herbal medicines. The current pilot study investigates this issue, including self evaluation of competence, coping in practice, patient usage, interest in training, and personal experience with herbal medicines.

METHODS

After reviewing previous surveys in the literature, the authors developed a 14-item survey. Five questions asked respondents to rate on a 5 point Likert-type scale their competence, formal training, sources of information, belief in the usefulness of herbal remedies, and their interest in further training. Additional questions asked the respondents to rate the types of diseases they consider herbal medicine to be useful for, sources consulted, how brands were decided, reasons against using herbal medicines, and areas of interest for training. Respondents were asked to estimate the percentage of their patients using herbal medicines, their perception of the patients' knowledge regarding the safe use of herbal medicines, and their own personal use of herbal medicines.

The survey was initially pre-tested with three medical school students (results not included). The surveys were distributed prior to two educational rounds held at a family practice clinic and a general medicine hospital ward on the topic of the risk and benefits of herbal medicines. Quantitative analysis of the data was performed

using SPSS version 9.0. The study was approved by the Research Ethics Board at St. Joseph's Healthcare in Hamilton, Ontario.

RESULTS

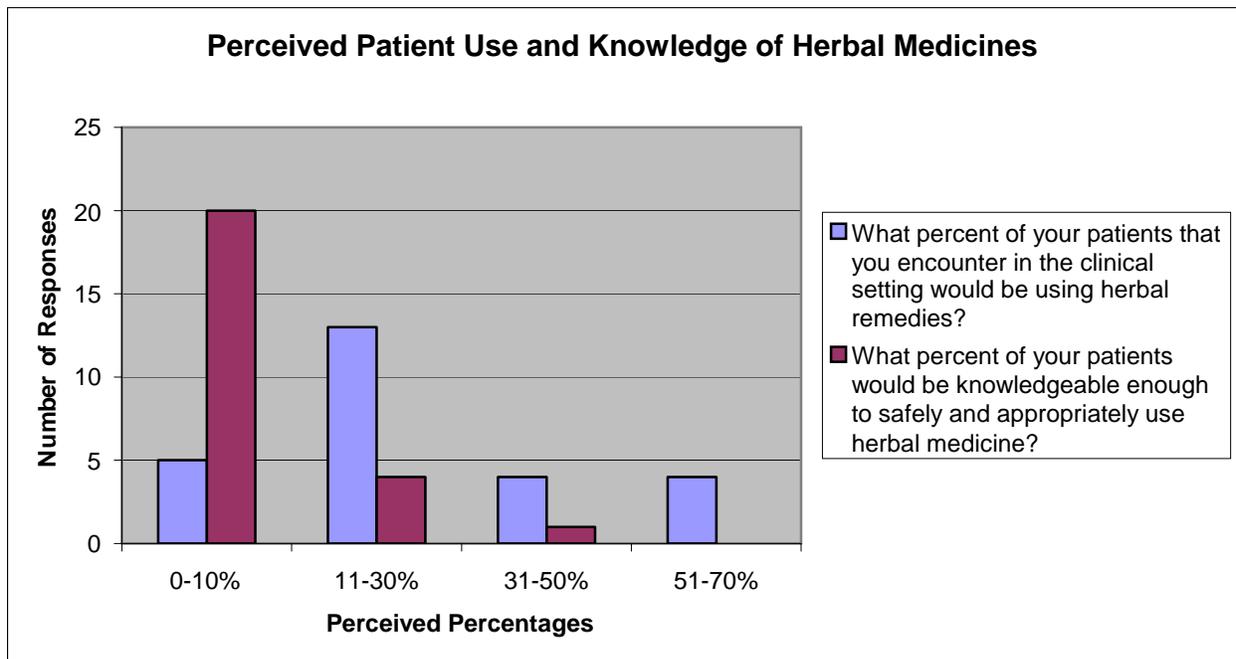
Twenty-six surveys were completed during March-April, 2007. Respondents included 10 family medicine residents, 6 internal medicine residents, 1 surgery resident, 5 clinical clerk medical students, and four did not supply this information. Fourteen respondents were female, 9 male, and for 3 persons the sex data was not provided. The respondents were asked to rate, from 1 to 5 (1=not at all competent, 5=very competent), a variety of items regarding herbal medicine. The mean responses and 95% confidence intervals are described in Table 1. The respondents' level of formal training was the lowest at 1.6 (1.3,1.8), and their further interest in the topic was the highest at 3.7 (3.3,4.0).

When asked about the types of diseases they consider herbal medicines to be useful for, the most prevalent answer was musculoskeletal, followed by general pain, gastrointestinal, and inflammatory. Respondents primarily consulted the literature when deciding to use herbal medicines, and then with decreasing frequency, no source was consulted, colleagues were consulted and classes/seminars were used. Respondents generally did not consider brand to be relevant, but some consulted the literature and colleagues about this issue. When asked why herbal medicines were not used, being unsure of the effects was cited most often, followed by inadequate literature and not being applicable to the disease. The respondents indicated that they wanted access to a wide range of additional information, including side-effects, benefits, treatment effectiveness, and drug-herb interactions. Half of the respondents estimated that between 11-30% of their patients were using herbal medicines; no one estimated more than 70% of patients were using herbal medicines. Twenty of 25 respondents believed that less than 10% of their patients could use herbal medicines safely (Figure 1). Thirty-eight percent (9/24) of the respondents had never personally used an herbal medicine, while 46% (11/24) had previously used a product but not in the past year. A wide range of conditions for use were identified by the respondents with prior personal use.

TABLE 1

Question	Number of Responses	Mean Response (95% CI)
How would you rate your level of competence in informing patients about herbal remedies in their treatment or everyday health? (5=very competent, 1=not at all competent)	26	1.7 (1.5, 2.0)
How would you rate your level of formal training in the characteristics, uses, and potential dangers of herbal medicine? (5=very thorough, 1=none)	26	1.6 (1.3, 1.8)
How would you rate your knowledge in sources of information that you can refer your patients to regarding herbal medicine? (5=very knowledgeable, 1=not at all knowledgeable)	26	2.0 (1.7, 2.4)
How useful do you consider herbal remedies to be in the treatment of your patients? (5=very useful, 1=not at all useful)	26	2.3 (2.0, 2.7)
How interested are you in receiving further training on the uses and benefits and risks of herbal medicine? (5=very interested, 1=not at all interested)	24	3.7 (3.3, 4.0)

FIG. 1 Estimates from physician-in-training regarding the percentage of patients who are using herbal medicines and whether they are thought to be competent to safely use herbal medicines



DISCUSSION

The physicians-in-training surveyed, felt that they had inadequate exposure to the topic of herbal medicines in their formal education. Not surprisingly, their perceived competence in managing such issues with patients and referring patients to sources of information were also very low. The respondents generally did not consider herbal medicines to be very useful in treating their patients. Nevertheless, further interest in the topic was high, especially regarding usefulness and potential side-effects.

The percentage of patients whom the respondents estimated to be using herbal medicines was most commonly within the 11-30% range, consistent with previous studies.¹ With the respondents' lack of knowledge on the topic and their low estimate of patients who are sufficiently knowledgeable to safely use herbs, there is likelihood that many patients may not be receiving adequate medical counsel regarding the safe use of herbal medicines. The respondents were also not confident in the sources of information to which they could refer their patients, further compromising the situation.

The respondents also have not had extensive personal experience with herbal medicines, perhaps since many do not believe it to be useful in treatment. This may also be related to the lack of valid evidence regarding herbal medicines in the literature - the most prevalent source consulted by the respondents. Improving access to literature on the potential risks and benefits of herbal medicines may aid future physicians in coping with increasing patient interest.

Almost half of the respondents had remote use of an herbal product; yet, most did not think herbal products to be useful. In light of the fact that most participants were not confident in their knowledge of herbal medicine, had not received formal training in herbal medicine, and had relatively little knowledge on where to find herbal information, it seems that the opinions regarding herbal medicines may be skewed by either their own or others' previous experience with herbal medicines. An interesting question for subsequent study would be "Could medical school or residency training have changed the attitude of those who tried herbal medicines in the past?"

The present study is limited to its small sample size and concentration of respondents from one local region. Answers are also limited to respondent's estimations and personal opinions. Interest may be overestimated as respondents were attending a session related to herbal medicines.

CONCLUSION

Physicians-in-training have limited exposure to herbal medicines in their formal training. The lack of reliable access to resources on the topic may also limit their ability to deal with these issues in practice. Further training in medical school and continued research regarding herbal medicines are needed to help physicians manage with increasing patient use.

REFERENCES

1. Singh SR, Levine MAH. NHP Use in Canada: Analysis of the National Population Health Survey. *Can J Clin Pharm* 2006;13(2):e240-e250.
2. Suter E, Vergoef M, O'Beirne M. Assessment of the information needs and use of information resources on complementary and alternative medicine by Alberta family physicians. *Clin Invest Med* 2004;27(6):312-315.
3. Busse JW, Heaton G, Wu P, Wilson KR, Mills EJ. Disclosure of Natural Product Use to Primary Care Physicians: A Cross-sectional Survey of Naturopathic Clinic Attendees. *Mayo Clinic Proceedings* 2005;80(5):616-623.
4. Brazier N, Levine M. Understanding Drug-Herb Interactions. *Pharmacoepidemiology and Drug Safety* 2003;12:427-430.
5. Lump JJ, Yarbrough L, Kilpatrick S, Cable T. Physicians' Attitudes Toward Complementary and Alternative Medicine. *Int Med* 1998;1;149-153.
6. Einarson A, Lawrimore T, Brand P, Gallo M, Rotatone C, Koren G. Attitudes and Practices of Physicians and Naturopaths Toward Herbal Products, Including Use During Pregnancy and Lactation. *Can J Clin Pharm* 2000;7(1):45-49.