



# Training in Integrative Therapies Increases Self-Efficacy in Providing Nondrug Therapies and Self-Confidence in Offering Compassionate Care

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## Abstract

**Background.** Patient demand and clinician interest have driven professional training in integrative therapies, but few rigorous evaluations have been published. **Methods.** This project evaluated the proof of concept of training in acupuncture, guided imagery, massage, and Reiki on clinicians' sense of self-efficacy in providing nondrug therapies, self-confidence in providing compassionate care, and engagement with work. **Results.** Three out of 4 topics met minimum enrollment numbers; 22 of 24 participants completed follow-up as well as pretraining surveys. All would recommend the training to others and planned changes in personal and professional care. There were significant improvements in self-efficacy in using nondrug therapies, confidence in providing compassionate care, and unplanned absenteeism ( $P < .05$  for each). **Conclusion.** Training in integrative therapies is feasible and associated with significant improvements in clinicians' sense of self-efficacy, confidence in providing compassionate care, and engagement with work. Additional studies are needed to determine the impact on quality of care and long-term workforce engagement.

## Keywords

education, integrative medicine, compassion, self-efficacy, complementary and alternative

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There is growing interest in providing professional training in complementary therapies. There are several reasons for this interest. First, patients with multiple chronic conditions have increasingly turned to complementary therapies and asked that these therapies be available in conventional health care settings (integrative care models);<sup>1,2</sup> a growing number of hospitals and health systems have responded by offering diverse therapies such as pet therapy, music and creative arts therapies, aromatherapy, massage, acupuncture, and other complementary services.<sup>3-6</sup> Second, the opioid epidemic in the United States has led many health systems and professionals to seek nonpharmacologic approaches to pain management such as guided imagery and acupuncture.<sup>7,8</sup> Third, efforts to addressing burgeoning burnout levels among health professionals have included training in complementary therapies such as meditation and guided imagery.<sup>9,10</sup>

Credentialing and hiring complementary therapists such as acupuncturists and massage therapists is desirable from a quality and safety standpoint, but training nurses to provide selected, evidence-based complementary therapies within their scope of practice to inpatients is also attractive for several reasons. First, the supply of complementary therapists who

have training in and are credentialed to work in inpatient settings is limited and, while growing, is unlikely to grow rapidly enough to meet demands. Second, nurses are the largest group of health professionals, and many complementary therapies already fall within their scope of practice;<sup>11</sup> this makes rapid implementation of basic levels of complementary practices more straightforward and less expensive than creating new credentialing and billing processes and hiring from a limited pool of complementary therapists. Of special importance to the issue of clinician burnout, evidence suggests that training in complementary therapies can improve nurses' well-being.<sup>12,13</sup>

Instituted under the leadership of Lori Knutson, RN, BSN, HNB-BC, at the Penny George Center for Integrative Health and Healing at Abbott Northwestern Hospital in 2005, the

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Transformative Nurse Training (TNT) program offers comprehensive training in holistic nursing. It has since been expanded to additional sites in Minnesota and a growing number of Veterans Administration hospitals. The 4-day (32-hour) comprehensive program includes holistic nursing philosophy and practice, guided imagery, basic massage, and acupressure as well as self-care. It has fostered the rapid growth of a hospital-based integrative health care program in Minnesota that has undergone rigorous research on patient outcomes and cost-effectiveness.<sup>6,14-17</sup>

Despite its promise, the TNT program has several challenges. Its cost and length may deter some clinicians who are interested in starting to expand their therapeutic repertoire with just one or two complementary therapies. Also, its title and focus on training nurses may miss other health professionals such as physicians, psychologists, and physical therapists who could also use these skills to help patients manage troublesome symptoms. Furthermore, the scope of therapies offered in TNT may not meet all local interests and local resources to teach the entire program may vary.

To address these challenges at our academic medical center, we conducted a proof of concept project to address 3 questions: (1) Within our integrative medical clinic, which clinicians were interested in *teaching* introductory skills in their area of expertise to other health professionals? (2) Were the training programs sustainable? That is, would at least 6 health professionals register (and pay) for training for each topic and would they be willing to recommend the training to their peers? and (3) Were there any changes in participants' sense of self-efficacy and confidence in offering compassionate care? Additional questions, such as the quality of care provided by those trained in this program compared with other training programs and the increase in referrals to licensed therapists in the outpatient setting, were beyond the scope of this study but are pertinent for future studies.

## Methods

To answer these questions, we conducted an evaluation of in-person educational interventions at the Ohio State University's (OSU) Center for Integrative Health and Wellness (CIHW), the OSU Integrative Medicine Clinic, and the OSU Wexner Medical Center (OSUWMC).

### Participants

Participants for this project were eligible if they were on the faculty, staff, or in training at our academic medical center and enrolled in one of the in-person training programs between January and May 2016 and completed the optional pretraining and posttraining surveys.

### Preparation

After reviewing the success of the CIHW *online* training programs for health professionals and learning about the TNT program while visiting the Allina Health System in 2013, we began to ask our integrative medicine clinical staff if they would be willing to develop and implement introductory in-person training for their colleagues at our academic medical center, focusing on safety, indications for use and referral to licensed specialists in a practice, contraindications, and

resources for more in-depth training. In 2014, we began to apply for continuing education (CE) credit for the first training program, and in 2015 applied for institutional review board (IRB) approval for the evaluation component of the project. Because this was primarily a professional training initiative, training was implemented as soon as CE credit for a program was approved, but the research evaluation component did not begin until after IRB approval was received in late 2015.

### Initial Topic Selection

The first clinician to volunteer to provide introductory training was a clinical nurse specialist in mental health (CNS-MH) that had previous experience teaching as well as providing guided imagery. With the collaboration of the Center's Associate Director for Education, the CNS-MH developed a set of learning objectives and experiential-based learning divided into two 3-hour workshops separated by 2 weeks. The separation of the training into 2 sessions was intended to provide an opportunity for learners to practice what they had learned in the first session and to ask practice-based questions when they returned for the second session in a supportive peer learning environment. The curriculum was then submitted to the OSUWMC Nursing CE Office for approval. The first *Guided Imagery* program, held in April 2015, had 7 registrants, and the second, held in July 2015, had 9 registrants. After IRB approval was obtained to evaluate the training, there were 10 registrants for the March 2016 training and 8 registrants for the May 2016 program.

The second clinician to offer to provide introductory training was a licensed acupuncturist with previous experience teaching acupressure. He prepared two 4-hour workshops separated by 2 weeks. The first *Introduction to Acupressure* workshop, held in November 2015, had 8 registrants. After IRB approval was obtained for program evaluation, there were 12 registrants for the April 2016 acupressure training.

The third clinician who offered training was a licensed massage therapist who had no formal experience as an educator. The first *Introduction to Massage* workshop, held in June 2015, had 8 registrants, but subsequently scheduled programs failed to attract at least 6 registrants and were cancelled. Thus, none were held after IRB approval was obtained for this study.

The fourth training program, held at the request of nurses at our academic medical center, was on Reiki. This was designed as a single day-long workshop of 8 hours led by a master-level Reiki practitioner. The first *Reiki* workshop was held in February 2016 and had 17 registrants.

### Feasibility and Sustainability

The criterion for feasibility and sustainability was having at least 6 health professionals enroll in a scheduled class at least 3 days prior to the first session. This criterion was based on a calculation determining number of participants that would cover the cost of the teacher's time (time spent developing and providing the training) as well as administrative time spent on marketing, registration, and responding to potential participant email and telephone inquiries. Sustainability would also be supported if a majority of participants planned to recommend the program to others.

### Marketing

The training was advertised to potential participants several ways. First, it was announced in the Center's monthly newsletter. Second, it was sent to nursing leadership to distribute in institutional nursing

e-newsletters. Third, word of mouth advertising occurred through the integrative nursing interest group at the medical center.

### Location and Timing

All training programs were held at the OSU Integrative Medicine Clinic on weekdays between 8 AM and 4 PM.

### Evaluation

Evaluation consisted of 2 pieces: (1) the standard, required CE evaluation form, completed by each participant at the second session and immediately sent to the nursing CE office (not discussed here); and (2) elective online pre/post training evaluations based on our earlier online training programs in Herbs and Dietary Supplements Across the Lifespan (<http://herbs-supplements.osu.edu>) and Mind-Body Skills Training for Resilience, Effectiveness, and Mindfulness (<http://mind-bodyhealth.osu.edu>).<sup>18-21</sup>

In addition to standard demographic questions, the online surveys included previously validated instruments. Our 2 *primary outcomes* for this study were self-efficacy in using nondrug therapies (the 10-item Self-Efficacy in using Non-Drug Therapies)<sup>19</sup> and confidence in providing compassionate care (the 10-item Confidence in Calm, Compassionate Care Scale).<sup>19</sup> Hypothesizing the improvements in self-efficacy would improve employee engagement, we also assessed *secondary outcomes* using a single item on absenteeism in the past 30 days (days missed aside from scheduled vacation or holidays, also known as unplanned work missed) and presenteeism (the 6-item Stanford Presenteeism Scale [SPS]).<sup>22</sup> Presenteeism is defined by the developers of the SPS as active engagement at work despite personal challenges; higher scores indicate greater engagement with work despite personal or health difficulties.

Because mindfulness, stress, and burnout were primary outcomes in our earlier studies evaluating online training in mind-body skills,<sup>10,20,23-25</sup> we explored the impact on these outcomes with the in-person training programs using the same standard scales for mindfulness (the 10-item version of the Cognitive and Affective Mindfulness Scale-Revised),<sup>26</sup> resilience (the 6-item Brief Resilience Scale),<sup>27</sup> stress (the 10-item Perceived Stress Scale),<sup>28,29</sup> and burnout (using the 7-item Physician Well-Being Index).<sup>30,31</sup>

An electronic link was sent to registrants a week before scheduled training inviting them to participate in the research; only surveys completed prior to the training were included as pretraining surveys. An electronic link to posttraining surveys was sent to registrants 1 week after each training program was complete. Up to 3 reminders for posttraining surveys were sent approximately 1 week apart. No incentives were offered for completion of any project evaluations or surveys.

Data analysis included 2-tailed *t* tests to compare pre- to posttraining outcomes that had continuous values and Fisher's exact test for percentages. Analysis was conducted using Microsoft Excel, version 2010.

The evaluation component of the project was approved by the OSU IRB (2013B0611).

## Results

Of the 47 registrants for training after the IRB application was approved, 24 (51%) completed the optional pretraining surveys and 22/24 (92%) completed posttraining surveys. Most (96%)

**Table 1.** Participant Description.

| Characteristic                                                                                                    | Mean/Percentage (N = 24; 2 Often Nonrespondents) |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Age (years)                                                                                                       |                                                  |
| 25-34                                                                                                             | 21%                                              |
| 35-44                                                                                                             | 33%                                              |
| 45-54                                                                                                             | 21%                                              |
| 55-64                                                                                                             | 25%                                              |
| Gender (% female)                                                                                                 | 96%                                              |
| Race (% Caucasian)                                                                                                | 83%                                              |
| Ethnicity (% Hispanic or Latino)                                                                                  | 4%                                               |
| Professional group                                                                                                |                                                  |
| Nurse                                                                                                             | 71%                                              |
| Physician                                                                                                         | 8%                                               |
| Nonclinician                                                                                                      | 8%                                               |
| Other clinician                                                                                                   | 12%                                              |
| Trainee (%)                                                                                                       | 18%                                              |
| Prior training in integrative therapies (may add to more than 100% because they could check more than one option) |                                                  |
| Aromatherapy                                                                                                      | 42%                                              |
| Dietary supplements/herbal remedies                                                                               | 17%                                              |
| Mind-body skills training                                                                                         | 38%                                              |
| Massage or reflexology                                                                                            | 25%                                              |
| Reiki, Therapeutic Touch, Healing Touch                                                                           | 25%                                              |
| Other (acupressure)                                                                                               | 4%                                               |
| None                                                                                                              | 33%                                              |

were women and most were practicing nurses (71%) or trainees in the health professions (18%). No participants were younger than 25 or older than 64 years; most (67%) reported prior training in one or more complementary therapies, primarily through the OSU CIHW *online training* in aromatherapy (42%), mind-body skills (38%), or dietary supplements (17%); some reported more than one type of training (Table 1).

Of those who completed posttraining surveys (Table 2), 45% completed Reiki, 36% completed acupressure, and 18% completed guided imagery. All of these participants reported that the training met learning objectives, was well organized, provided an opportunity to ask questions, and that they would recommend the training to other health professionals. All participants reported that as a result of the training they planned to make changes in their personal self-care and their care of others.

### Program Impact

Pre- and posttraining scores on standard measures are shown in Table 3. For the primary outcomes for this study, there were statistically significant improvements in both Self-Efficacy in using Non-Drug Therapies to relieve common symptoms and the Confidence in providing Compassionate Care Scale ( $P < .05$  for both).

**Table 2.** Course Evaluation.

| Items                                                                      | Percentage of Respondents |
|----------------------------------------------------------------------------|---------------------------|
| Type of training completed (from 22 completing posttest)                   |                           |
| Acupressure                                                                | 36%                       |
| Guided imagery                                                             | 18%                       |
| Reiki                                                                      | 45%                       |
| How well did the training (% answering well or very well)                  |                           |
| ... meet learning objectives                                               | 100%                      |
| ... was well organized                                                     | 100%                      |
| ... instructor provided opportunities for practice                         | 95%                       |
| ... instructor provided opportunity to ask questions                       | 100%                      |
| I would recommend this course to others (% yes)                            | 100%                      |
| As a result of participating in this course, I plan to make changes in ... |                           |
| ... my personal self-care                                                  | 100%                      |
| ... my care of others                                                      | 100%                      |

**Table 3.** Pre- to Posttraining Changes Associated With Skills Training in Integrative Therapies for Caring Health Professionals<sup>a</sup>.

| Instrument                                                    | Pretraining Average | Posttraining Average | <i>P</i>    |
|---------------------------------------------------------------|---------------------|----------------------|-------------|
| Primary outcomes: self-efficacy and compassion                |                     |                      |             |
| Self-Efficacy in using Non-Drug Therapies for Common Symptoms | 55 ± 1.5            | 74 ± 1.5             | <b>.01</b>  |
| Confidence in Compassionate Care Scale                        | 71 ± 12             | 80.01 ± 14.2         | <b>.04</b>  |
| Secondary outcomes: engagement with work                      |                     |                      |             |
| Missed unplanned work days past 30 days                       | 13/24 (54%)         | 5/22 (23%)           | <b>.038</b> |
| Stanford Presenteeism Scale                                   | 25.4 ± 3.5          | 26.4 ± 3.7           | .38         |
| Exploratory outcomes: clinician well-being                    |                     |                      |             |
| Mindfulness (CAMS-R)                                          | 28.5 ± 5.3          | 30.6 ± 4.3           | .19         |
| Resilience (BRS)—item average                                 | 3.8 ± 0.8           | 3.9 ± 0.8            | .71         |
| Stress (PSS)                                                  | 14.2 ± 6            | 13.4 ± 6.5           | .87         |
| Burnout (PWBI > 3)                                            | 36%                 | 17%                  | .32         |

Abbreviations: CAMS-R, Cognitive and Affective Mindfulness Scale—Revised; BRS, Brief Resilience Scale; PSS, Perceived Stress Scale; PWBI, Physician Well-Being Index.

<sup>a</sup>Two-tailed *t* tests were used to compare continuous variables, and  $\chi^2$  tests were used to compare percentages.

There was also a significant decrease in the percentage of participants who had unplanned work absences, falling from 13 (54%) out of 24 participants before training to 5 (23%) out of 22 of participants after the training ( $P = .04$ ); the median number of days missed fell from 1 to 0. The mean number of days missed fell from an average of 13.2 days per year to 9.6 days per year. Given a mean wage of \$72 980 per year in 2015 for inpatient nurses, ([www.bls.gov/oes/current/oes291141.htm](http://www.bls.gov/oes/current/oes291141.htm); accessed June 28, 2016) this represents a savings of \$1051 per year per nurse in salary alone or about an 8:1 return on investment.

There were no significant pre- to posttraining changes in presenteeism or in the exploratory outcomes of mindfulness, resilience, stress, or burnout with the in-person training programs.

## Discussion

This proof of concept educational evaluation had 3 primary findings. First, within our integrative medicine clinic, the clinicians who expressed the earliest interest in offering introductory training to other health professionals were those who had prior teaching experience. Second, the topics offered were generally sustainable, with enrollment for 3 out of 4 topics well above our calculated minimal number for financial viability and very favorable participant reviews including 100% of participants planning to recommend the training to others. Third, the training was associated with significant improvements in the primary outcomes of participants' sense of self-efficacy in providing nondrug therapies to relieve common symptoms and confidence in providing compassionate care. There was also significant improvement in a secondary outcome, unplanned work absences, which may have significant financial implications for health care employers.

Unlike our earlier research evaluating the impact of mind-body skills training, these courses had no significant impact on clinicians' mindfulness, resilience, or burnout.<sup>10,20,23-25</sup> While the study may have been underpowered to detect significant improvements, it is also possible that different types of professional training target and improve different skills and practices in health professionals. One cannot assume that all types of training in complementary therapies improve clinician well-being to the same extent or in the same manner. This proof of concept study was not designed to compare differences between different types of in-person training. Future studies with larger samples should compare the impact of training in different types of complementary therapies to better determine, not only the impact on clinical skills and quality of care but also on clinician well-being.

The observations that clinicians are most likely to volunteer teach if they have previously functioned as instructors as well as practitioners and that learners register in greatest numbers for topics they have requested hold important lessons for other programs initiating training programs in complementary therapies. Ideally, before undertaking training, a program would assess both potential teachers' and learners' interest in new training programs as well as the evidence that a therapy is safe and effective. For clinicians without prior teaching experience, strategies to increase teacher confidence, such as teacher training or offering 1-hour lectures before multihour workshops, may be helpful. We started with therapies with a strong evidence base for safety and effectiveness, and we offered Reiki training only after there was repeated demand from nurses in our institution for such training; although there was some resistance on the part of some medical staff members to giving institutional "approval" to Reiki training, the resistance was eased by suggesting that having a cohort of well-trained nurses

could better support future research evaluating the safety and effectiveness of this therapy in an inpatient setting.

Overall, we found that the training offered by experienced clinician-teachers was financially sustainable and well-regarded by participants: 100% planned changes in personal and professional care and 100% planned to encourage colleagues to participate. This is important because as patients demand access to integrative therapies, health systems will need to devise innovative, sustainable strategies to develop a workforce capable of delivering these therapies. Furthermore, as concern grows about dependence on opioid analgesia, many health systems seek safe, effective nonpharmacologic therapies to address chronic pain and other symptoms. Enhancing the skill sets of existing professionals such as nurses offers an attractive option to address this need, and nurses appear to be eager to develop these skills. However, this study was designed as a proof of concept study to evaluate feasibility and self-assessed impact on learners; future studies will need to be larger and designed to address questions about the impact of such training on quality of care, teamwork, referrals to more specialized licensed professionals such as massage therapists and acupuncturists, and patient outcomes.

Learning new skills to effectively help patients manage concerning symptoms may also help nurses feel more engaged with their work, decreasing absenteeism. In this sample, absenteeism rates fell by more than 50% with this brief training. If sustained over time, such an impact on absenteeism would have substantial implications for cost savings for employers.<sup>32</sup> Future studies will need longer follow-up and larger sample sizes to determine whether training in diverse complementary therapies affects clinicians' work engagement, quality of care, and patient satisfaction.

As a proof of concept project, this study had several limitations. The small sample size precludes comparisons between the different types of complementary therapy training. Future studies should include larger samples to maximize the ability to detect statistically significant improvements in self-efficacy, mindfulness, burnout, and resilience. Because it began as an educational project and IRB approval was not obtained until after several training sessions had been held, opportunities to obtain evaluation data on all participants were missed; although nearly all participants who completed pretraining surveys also completed posttraining surveys, nearly half of the training participants did not complete an optional pretraining survey, and their responses may differ from those who did not participate in the research portion of the project. Future studies should attempt to recruit more training participants as research participants to reduce nonresponse bias. This project occurred at an academic medical center with a strong culture of continuing education and a well-established integrative medicine clinic; results may not be generalizable to community settings just beginning to engage in integrative care. All participants volunteered for training; results may not generalize to mandatory training programs. Future studies would benefit from collecting objective absenteeism data from Human Resources records rather than self-report, and by a longer follow-up to determine

the length of time that benefits in engagement and productivity persist. This study did not collect patient-level data to determine the impact of training on the actual quality of care provided, patient satisfaction, or symptom relief; future studies should do so. This study was not designed to compare the quality of care provided by nurses with introductory training to other licensed professionals who have undergone hundreds or thousands of hours of specialized study (eg, acupuncturists and massage therapists) and is not intended to suggest that minimally trained nurses can replace other health professionals.

## Conclusion

Despite these limitations, the results of this pilot project suggest that in-person training for nurses in diverse complementary therapies is feasible, sustainable, and has significant benefits on clinicians' sense of self-efficacy and confidence in offering compassionate care using nonpharmacologic therapies. Future studies should include larger sample sizes to compare the impact of different kinds of professional training on burnout, resilience, productivity, and the quality of care.

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## Author Contributions

KJK conceived of the project, designed the pre- and posttraining surveys, and drafted the article. EH conducted the data analysis and edited and approved the final article.

## Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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## Ethical Approval

This project was approved by the Ohio State University Office of Research Institutional Review Board (Approval Number 2013B0611).

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