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Integrative Healing Health Care: Brief Experiential Education for Doctor of Nursing Practice Students

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ABSTRACT

Background: *To bridge the gap between chronic diseases affecting aging patients and provision of appropriate services, the Institute of Medicine (IOM) urges academic training institutions to incorporate Integrative Medicine (also known as Integrative Healing (or Holistic) Healthcare or IHHC) into their curricula. However, there is a lack of data on IHHC curricula for advanced nursing professionals. This study addresses the effect of a 4 hour experiential approach educational course on IHHC with DNP students and the resultant changes in attitudes toward IHHC and related variables.*

Method: *The design used repeated measure assessments with three well-validated IHHC survey instruments before and after the workshop: Integrative Medicine Attitudes Questionnaire, Self-Compassion Scale and Spirituality Perspective Scale. The participants who volunteered for this study were post-master DNP students from an urban university.*

Results: *34 students participated in the workshop and 23 filled out both pre- and post- surveys. Significant pre- post improvements were demonstrated on all 3 measures.*

Conclusion: *The data support the effectiveness of a 4 hour workshop format for DNP students in introducing IHHC education. The public healthcare need for changing healthcare professional education and practice toward an IHHC approach is urgent. Reforms of Nursing curricula and its barriers are discussed with an eye to aligning with IOM's recommendations.*

Keywords

Integrative Medicine, Integrative healing healthcare, Nursing curriculum, Self-compassion, Spirituality.

Introduction

In the light of changing demographics, healthcare providers in the U.S. are facing new challenges. A disturbing increase in the rate of chronic diseases now accompanies an increasing proportion of aging persons in the U.S. The Centers for Disease Control (CDC) predict the risk of chronic disease exceeds 50%; that is, one out of every two persons risks having a disease such as cancer, heart disease, diabetes, arthritis, or depression during his/her aging years [1]. Adding to this concern, studies show that those in the baby boomer generation are more obese than previous generations, a problem that contributes significantly to the development of chronic conditions [2]. The CDC warns that the combination of increased obesity and chronic illnesses will deplete public resources for all members of society in the near future [1,3].

As early as 2001, the nation's healthcare advising agency, Institute of Medicine (IOM), described current US healthcare education that emphasizes quick diagnoses and quick fixes with drugs and technology as at odds with comprehensive care needs of chronically ill patients [4]. The complex nature of patients with chronic illness care requires a much different educational approach. The discrepancy between the needed and existing health

professions training has been repeatedly emphasized by IOM as "not a gap" but a "quality chasm" [4,5]. It is critical to change health professions education towards a proactive comprehensive approach to include health promotion and risk prevention for a better quality of life, health and well-being of these patients. This has been the ongoing mission of "Integrative Medicine" in medicine and "Integrative Healing Healthcare" or "Holistic Nursing" in Nursing. Despite the years of costly medical doctors' training in medicine, healthcare scholars point out that current medical graduates frequently assume the role of not much more than "advanced bio-technicians." They often lack the skills to effectively address the chronic disease patient's needs as a whole individual [6].

In 2009 leaders of all healthcare disciplines including healthcare scholars and researchers, doctors, nurses, other allied professionals and healthcare educators gathered at another IOM conference. They came to a consensus and made a position statement envisioning Integrative Medicine (IM, also known as, Integrative Healing Healthcare or Integrative Holistic Healthcare (IHHC) or simply Integrative Healthcare) as the future of healthcare and medicine. They urged healthcare professions, educational institutions, and policy makers to endorse curricula based on Integrative Healthcare education that is patient centered, an integrative holistic healthcare approach of care [7].

What is IM or IHHC?

IHHC is not a discipline-specific term for medicine or nursing, but indicates a philosophy based on healthcare that is patient-centered whole person care for all healthcare professions. Whether termed Integrative Medicine (IM), Integrative Holistic Healthcare, or Integrative Healing Healthcare (IHHC), the terms we will use interchangeably in this paper, all are healthcare modalities based upon the best evidence-based integration of conventional and non-conventional treatment modalities. From an educational vantage point, these acronyms refer to curricular innovations for health professions training and education [8,9]. "Non conventional" here refers to any types of healing modalities based on evidence such as self-healing practices, mind-body medicine and meditation, acupuncture and traditional Chinese medicine, and all other categories included by NIH's National Center for Complementary and Integrative Health (NCCIH). NCCIH was formerly called National Center for Complementary and Alternative Medicine (NCCAM); the name was changed to NCCIH to emphasize integrative healthcare approaches to health and wellness [10].

IHHC is more than a judicious choice or style of treatment modality of disease. It involves developing a healthcare lens, seeing a patient as a whole person of internal and external system, rather than seeing the patient as the disease case that can be "fixed" with drugs and technology alone.

To summarize, Integrative Medicine (IM) or Integrative Healing Healthcare (IHHC) is a holistic care system that is based on the firm belief that patients are whole beings who are dynamic, complex and constantly interacting and changing within and through a broader environment. Our patients deserve professionals' phenomenological attention to what is going on with them in multiple aspects of health and illness experience in their lives.

Relevance of IHHC to Nursing Profession

IHHC philosophy has particular relevance for Nursing because it historically has been at the core of the profession. IHHC is the same concept embedded in beginning undergraduate professional nursing education via holistic assessments and comprehensive patient care plans. Having been professionally grounded in holistic care concepts from day one of their undergraduate education and continuing throughout their graduate work, advanced nursing professionals have the unique proclivity to deeply understand healthcare paradigms that are holistically oriented. The view of human being as the whole person system with more than sum of its biological parts does not come in a few months of training, especially in the fast moving healthcare practice environment of disease care model. Thus, not surprisingly, it has been argued that the nursing profession has the most qualified potential to lead Integrative Healthcare system in the nation [11]. The expertise of nursing profession is often taken for granted, even by nursing professionals themselves.

For the past century since the "scientific revolution" that has swept the country with medical education reform, we have experienced astounding bio-technological advancement that has enriched us in daily life and disease cures and treatment. At the same time, we ignored and sacrificed much needed human values, such as compassion, empathy, and basic notions of caring for another human being. Within the current healthcare environment, the concept of holistic quality care such as reflected in the philosophical foundation of IHHC has not been adequately implemented in the current educational environment. It is getting easier to normalize the bio-medical model of only drug and technology related transactional care [11].

It is a significant notion to recognize that while adapting to the impressive cutting edge science and technology, to date, Nursing has kept its professional core of humanism and holism in its educational curriculum. This is despite living in the bio-medical society that has exerted constant demand and pressure towards a reductionist model of education for the past 100 years. It is still rare to find any nursing instructor who approves students' patient care plans without including all aspects of the patient's life; physical/medical, psychological, social, spiritual, environmental and family situations. Nurses do not hesitate navigating the bureaucracy of the entire healthcare system if it is for their patients. True altruism is the nursing professional credo and identity; their priority always has been patient safety and well-being.

Several universities in US have thriving Integrative Health and Nursing programs. Among the largest is the Center for Spirituality and Healing at the University of Minnesota, founded and led by a professor of nursing; it serves as a facility that provides internship rounds for nursing and medical students as well as for the community population [12]. This center has arguably the largest

website, and one can take advantage to learn about Integrative Healthcare. There are many mindfulness based curricula in place. The nation's first doctoral program for integrative health practice program was established years ago. Their graduate degree is called "IHHDNP" which stands for Integrative Health and Healing Doctor of Nursing Practice [13].

However, nationally, the Nursing discipline has not disseminated IHHC systemically as compared with medicine, which started IM residency in Family Medicine and semester rotations in IM in the 4th year medical school in some universities across the US in 2011 [14].

The immediate purpose of this study was to assess attitudes and knowledge of Doctor of Nursing Practice (DNP) students at an urban university about integrative healing healthcare approaches and to evaluate the impact of a half day experientially- based IHHC educational workshop. The implicit purpose of the study was to size up the feasibility and acceptability of educational scope and pedagogy of IHHC within a nursing department.

Method

Participants

The study participants were doctor of nursing practice (DNP) students enrolled in an urban University in the US. As compared to traditional PhD nursing programs that focus on research, the DNP graduate program is a practice doctorate of nursing emphasizing a clinical focus integrated with clinical research. All participants already possessed master's degrees and were advanced nursing professionals with extensive experience in healthcare (mean experience = 19.02 years; standard deviation = 9.73 years). An important participant characteristic was that these students held major leading roles in healthcare communities including Nurse Practitioners, Nursing Executives, Nurse Educators, Nurse Anesthetists, and Clinical Nurse Specialists. They came back to pursue a higher degree that would enable them to increase the scope of their services in their healthcare practice. DNP participants were considered to be desirable targets for this pilot since they were actively engaged in advanced practice. Considering the ultimate future goal of this experiential educational workshop being an integration to practice, DNP students offered future follow-up potential in possibly disseminating in their practice setting in the community as well as integrating into their personal practice.

Study procedures

After approval was received from the university's Institutional Review Board, small support funding was obtained from the nursing department to defray travel expenses and provide a small honorarium to an external presenter at the workshop. This feasibility study did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. There was no funding nor contributions received in the study design, collection, analysis and interpretation of data; in the writing of this report; and in the decision to submit the article for publication.

Students from the 2nd year DNP program participated in a half day (4 hours) educational course on Integrative Healing Healthcare as a part of the semester orientation. First, students were informed via email that the workshop would include a "survey to understand how you feel and what you know about Integrative Healing Healthcare approaches and modalities." Attendance at the workshop was a mandatory component of their orientation, but the participation in the study and completion of the survey was completely voluntary. Participants' informed consents were obtained following dissemination of information describing the study. The informed consent made it clear that their participation in the research aspects of the workshop (the surveys) would have no relation to their academic performance in the DNP program nor to any academic sanctions. This author was not engaged in the teaching of these students. They were free to end their research participation at any point during or after the education workshop. Their anonymity was assured by de-identification through a coding procedure in which names were replaced by case numbers only. The primary investigator analyzed participants' pre- and post-survey responses.

The only inclusion criterion was current enrollment in the DNP program at the University. There were no exclusion criteria for participation. The DNP students took both pre and post surveys using Qualtrics software to control online administration. The URL site was provided one week prior to the orientation date for pre-educational workshop survey, and the participants were asked to fill out the surveys within 72 hours after the educational workshop.

Study Intervention

The components of the intervention were chosen due to their centrality to IHHC tenets, including demonstrated effectiveness for relieving stress. Reviews from evolutionary biology and social science link prosocial emotions such as love, compassion and empathy with well being and species survival. More recently, compassion researchers are finding that Loving Kindness Meditation for 20 minutes a day for 2 weeks, has increased self-compassion of participants; it also correlated with increase in compassion for others [15].

Although it is an assumed notion in Buddhist philosophy, the scientific verification of this correlation is significant for health service professionals; by being kind to oneself, one will also improve quality of care to patients professionally [16,17]. Thus, self-care is always emphasized in integrative health education model. For example, the prototype of IM for family practice residents' education from University of Arizona medical school emphasizes self-care of residents throughout the program. Included in the curriculum is self-health assessment and self-care plans according to the assessment of the resident's self-health [14]. As Daili Lama observes, self-care is required to care for others [18]. Considering the rapid increase of aging cohorts and chronically ill patients, nurse's health and well-being is critical to better care for these vulnerable patients.

Content in the half day course included didactic and experiential teaching modalities. Three topics of mind-body-spiritual

intervention based on Integrative Healing Healthcare concepts were presented. First, the principal investigator, a nursing professor with Integrative Medicine and Healthcare specialty with the background of doctoral, post-doctoral research, education and residency training of IM provided an overall introduction of IM/IHHC. She then used a short interactive exercise consisting of simple centering movements, moving meditation of ancient Chinese healing practices Taiji (aka Tai Chi) and Qigong as selected by the author [19]. These centering movements are incorporated with four compassion mantra derived from the Buddhist love and compassion training literature [20]. Various contemplative sciences such as meditation and mindfulness, Cognitively Based Compassion Training and the most recent Mindfulness Based Interventions, Mindful Self Compassion based on Loving Kindness Meditation are integrated in this self-care practice [21-23].

The second guest speaker, a psychologist who is an expert in spirituality application in healthcare, talked about the healing and life-giving roles of spirituality application in patient care, in the experience of healthcare providers, and in the life and culture of healthcare organizations [24].

The last speaker, the university campus physician with a license to practice acupuncture, presented the principles of acupressure and acupuncture. He also briefly followed with hands-on practice instruction of acupressure points on the students themselves. Acupressure points are used as skills to decrease stress and self-massage [25].

Design and Measures

A single group repeated measure design with assessments before and after the workshop was used with a non-probability sample of healthy DNP student volunteers. The data were analyzed with SPSS 22.0 statistical software to calculate all inferential statistics (paired t-tests) as well as means, frequencies, standard deviations, and other descriptive statistics.

Three surveys were employed as measures of dependent variables. The first survey was the Integrative Medicine Attitudes Questionnaire (IMAQ), which consisted of 29 items addressing attitudes and knowledge of Integrative Medicine. This questionnaire has been used frequently in IM research with medical students and residents. Although nursing students and medical students differ in educational environment and professional training history, it is a useful measure to assess overall knowledge and attitude toward the IHHC.

Participants rated their agreement with test items using a 7 point Likert scale from 1 "Absolutely disagree" to 7 "Absolutely agree." Sample items include "A patient is healed when the underlying pathological processes are corrected or controlled," and "The advanced healthcare professional's role is primarily to promote the health and healing of the physical body." Ratings were summed to form a total IMAQ score. Past research employing factor analysis of 296 completed IMAQ surveys indicated 2 factors with strong reliability coefficients; Cronbach's alpha ranged from 0.91 to 0.73 [26].

The second dependent measure was the self-compassion of the students: Self -Compassion Scale- Short Form (SCS-SF) consisted of 12 items with ratings on a 5 point scale with 1 "Almost never" to 5 "Almost always was used to measure the difference." Sample items include "I try to be understanding and patient towards those aspects of my personality I don't like," and "When something painful happens I try to take a balanced view of the situation" [27]. A mean was taken to form each participant's SC score. The SCS-SF demonstrated internal consistency with Cronbach's alpha ≥ 0.86 in all samples and a near-perfect correlation with the long form SCS of $r \geq 0.97$ in all samples [28].

The third dependent variable was the students' spirituality perspective; it is an important initial step to further assess the advanced professionals' applicability of spirituality in healthcare. Spirituality Perspective Scale (SPS) had 10 items with ratings ranging from 1 to 6. 1 indicated "Not at all/strongly disagree" and 6 indicated "About one a day/Strongly agree." Sample items include "Forgiveness is an important part of my spirituality," and "I seek spiritual guidance in making decisions in my everyday life." A mean of each participant's ratings was calculated to form a SPS score. IHHC places the application of each patient's spirituality as a component of caring [29]. Construct and criterion-related validity and reliability of SPS were 0.90 or above with no redundancy in inter-item correlations [30].

To estimate the sample size required for a given effect size, power, and alpha level, power calculations were performed with G*Power 3.1.9.2. Assuming a two tailed paired t-test, large effect size of 0.8 [31], power of 0.8, and Type 1 error of 0.05, G*Power calculated a minimum sample size of 15.

Results

34 students volunteered for this study and gave their consent to participate, and 23 students (67.6%) submitted both pre and post survey assessments, which enabled the computation of change scores for the inferential tests. Some descriptive statistics for the dependent variables are listed in Table 1.

Survey	Mean	Maximum	Minimum	Standard Deviation
Pre-IMAQ	159.56	192	135	15.74
Post-IMAQ	169.26	203	142	17.48
Pre-SCS	3.17	4.8	1.8	0.69
Post-SCS	3.48	4.9	2.3	0.7
Pre-SPS	4.11	6	1.5	1.27
Post-SPS	4.40	6	2.6	1.19

Table 1: Descriptive Statistics for IMAQ, SCS-FS, and SPS Surveys (N = 23).

Inspection of the means shows increases in all three surveys. The results of inferential tests on the change scores from pre-workshop to post-workshop are all significant as listed in Table 2.

Survey	t	df	Mean difference	2-tailed significance
IMAQ	3.39	22	9.7	0.003
SCS-SF	3.99	22	0.3	0.001
SPS	2.45	22	0.29	0.023

Table 2: Inferential Statistics for Change Scores on IMAQ, SCS-SF, and SPS Surveys.

All three measures showed significant increases. The increases were also apparent graphically; please see Figures 1 to 3.

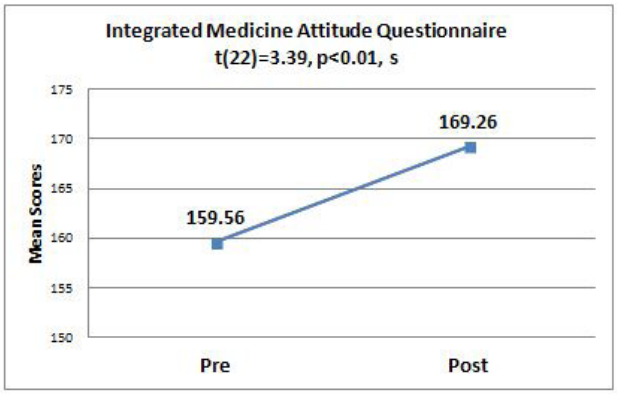

Figure 1: Means Pre and Post for Integrated Medicine Attitude Questionnaire.

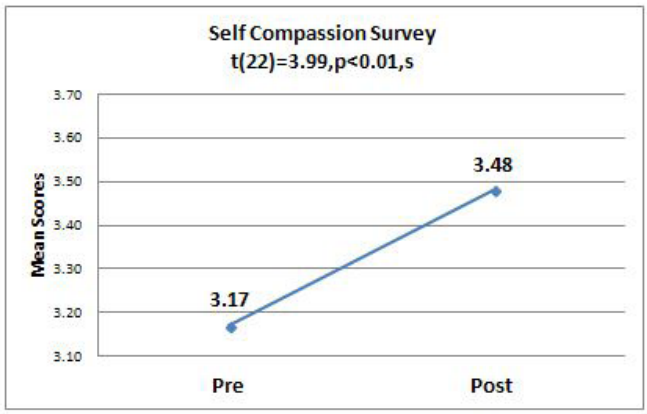

Figure 2: Means Pre and Post for Self Compassion Survey.

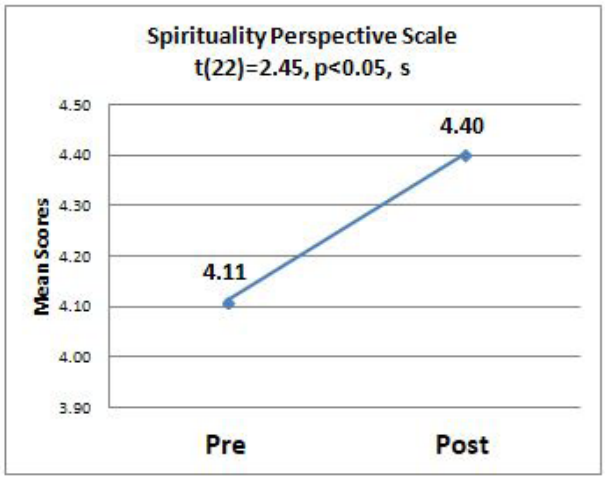

Figure 3: Means Pre and Post for Spirituality Perspective Scale.

IMAQ showed significant improvement in knowledge and attitude toward Integrative Medicine knowledge and attitude. While some knowledge improvement was expected from the educational workshop, the "knowledge" test was not restricted to integrative medicine such as types of herbs or therapies. Rather, it assessed knowledge of the principles and attitudes regarding philosophical positions of human care. Self-Compassion showed a significant increase. Finally Spirituality Perspective significantly increased after the workshop.

Discussion

We begin our discussion by considering our study data from the IHHC workshop. We discuss its generalizability to other levels of nursing students. More broadly we consider the changes and clashes in healthcare paradigms as we pursue the recommendations of the IOM. Finally, we address some implications for the nursing profession if it adopts IHHC as the dominant healthcare standard.

Participation in, reactions to, and effectiveness of the workshop

The study data obtained from the participants in the four hour DNP Educational workshop were probably a representative sample of the workshop attendees, with roughly two-thirds of the students completing the voluntary pre- and post- surveys. The other third of the sample completed either the pre or the post assessments, but not both; their scores were omitted from further analysis.

The data revealed significant gains in knowledge and attitudes towards integrative medicine, significant gains in self-compassion scores, and significant gains in spiritual perspective. A more extensive intervention might be feasible for graduate nursing curricula. This workshop was very well-received with students being able to relate to all three speakers' sessions. They appeared to be fully engaged, offering more comments and questions than could be accommodated during the time allotted for the workshop. On the post survey, 65.2% indicated interest in completing a certificate in IHHC either during or after their DNP program.

We conclude from this pilot study that a short term experiential educational modality of IHHC for teaching advanced nursing professionals/students is effective at teaching foundations of IHHC. It has potential for inclusion without putting much demand for time from existing curricula.

Limitations of the Current Study

Limitations of the study are numerous. The generalizability of the results is a logical consequence of the homogeneity of educational level of the students and the research design employed in this study. All participants were doctor of nursing practice students who already had master's degrees in the practice of their specialty area and were engaged in advanced healthcare practice in their communities. Considering the nursing holistic basis of professional training, these students may be more aware of the deficiencies of the current biomedical system of patient care models thus, may be more sensitive to the need for a new holistically oriented approach

of care, thus influencing the outcome. Different outcomes might be obtained with other samples of professionals with lesser levels of education and exposure to patient care. Replications of this study with students at the post BSN level or with graduate students from other advanced healthcare disciplines are needed. Furthermore, with only one post assessment conducted immediately following the workshop, the sustainability of the changes in knowledge and attitude has not been demonstrated. Demand and Hawthorne effects might influence behavioral and attitudinal measures, particularly considering the long term professional training DNP students had [32,33]. The lack of a separate control group is a weakness limiting the interpretation of this study. Comparison with other educational methodologies for IHHC such as to an online module would be useful

Barriers to reforming healthcare professions education and implications for Nursing

Moving beyond our pilot study, we now look at IHHC from a broader perspective. A landmark survey in 2012 mapped US clinics for the use of Integrative healthcare modalities. The authors found 75% efficacy of Integrative Healthcare treatments for various types of patients; they concluded that IM has become the mainstream in the US [34]. Despite Nursing's kindred spirit with IHHC, it has been slow to adapt to this new healthcare movement. One can think of several reasons why the nursing discipline as a whole is slow to implement the IOM recommendations for curricular reform. The first reason may be that adding any new curricula is difficult even if the department wants to integrate IHHC education. From the very beginning of the undergraduate education, nursing curricula is already overloaded with learning materials to get the students licensed for professional patient care in the hospitals, which are mostly fast moving bio-medical environments. This argument stands weak because the medical profession has the same curriculum issues, but they are systematically integrating IM curriculum into their existing coursework.

A second problem may be a lack of understanding of IHHC by leading figures of the Nursing profession. Instead of viewing IHHC as a potential framework or vehicle to finally integrate the science and art of nursing, they may view it as the opposite of science. It is especially difficulty when the naysayers towards IHHC within the department hold administrative powers. Education on IHHC is an urgent need for the profession of nursing in order to elevate the healthcare discourse.

From a researcher perspective, the nursing profession is up against a larger systemic difficulty in disseminating IM/IHHC. There is difficulty in the capacity building because of the lack of funding support for Nursing faculty members and leaders in general for the IHHC topic area as compared to medicine. For example, in 2002 NCCAM distributed a considerable amount of funding for IHHC development for the nation, but out of 15 schools only 2 were awarded to Nursing [35]. Lastly, the IHHC intervention-based specific research data for inclusion of brief teaching modalities for advanced nursing professionals is lacking. Perhaps a short term educational modality like this study presented here could be easier to integrate into the current education and practice system.

Gaydos (2004) suggested that the largest barrier to reforming health professions' education in order to change healthcare practices is overcoming the paradigmatic hegemony of biomedical reductionism and shifting toward a more integrative holistic person healthcare model [36]. Because it is embedded in a centuries old established belief system, biomedical science of reductionism has become the dominant epistemology of our time. Finding absolute magic cures and freedom from all illnesses and human suffering through biotechnology has been the goal since the early 20th century [6]. In turn, all other perspectives and goals have been diminished and neglected. The core of the ethical values that humans uphold and any other helpful alternative approaches in healthcare practice that are based on these values, such as spirit and behaviors of human caring, empathy and compassion are being eroded and even devalued under the priority named "science". Integrative Healthcare principle embraces all that is human, and current state of science cannot show all that it means to be human. IHHC does not reject science but believes in the necessity of integration for better balance for human health and well-being. Humans have multiple needs beyond the measurable and most of nursing professionals understand this from professional experience. As the astute nursing scholar Salmon observes, it is difficult to care in a society that does not value or encourage caring [37].

This study has shown the feasibility and acceptability of a half day course of integrative holistic healthcare education for the advanced professionals such as DNP students. They are ready and hungry for more meaning and satisfaction drawn from truly altruistic professional work to which they committed their lives. The implementation of Integrative Healing Healthcare curriculum as a more expansive healthcare model deserves further research and consideration for widespread adoption in the nursing education to optimize healthcare for all members of our society.

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