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Research Article

The Effects of an Enhanced Education Protocol on Nursing Students within an Integrative Primary Health Care Centre

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Abstract

This paper reports the descriptive qualitative components of a mixed-methods study employing quantitative and descriptive qualitative approaches. The participants were nursing students of a tertiary institution who had completed a clinical placement at an integrative healthcare centre. An Enhanced Learning Protocol was developed to facilitate student learning in this specific clinical placement. The protocol included case management in nursing practices, integrative healthcare, health assessments, therapeutic communication, drug dispensing for Traditional Chinese Medicine (TCM), and health education and promotion. Concept mapping was used in the seminar to illustrate the nursing care plan using integrative therapy. The aim of this study was to examine the intervention of an enhanced learning protocol for its effect on the competency performance and therapeutic communication skills of students, and on their perceptions of the integrated care experience. The research questions were: (1) What have you learnt about integrative therapy in this placement? (2) What were your most successful experiences in nurse case management? (3) What were your most successful experiences when conducting therapeutic communication with patients? (4) What were your less successful experiences in the learning activities? (5) What are the benefits of integrative healthcare for holistic nursing? The results showed that the students were able to integrate TCM and Western nursing interventions in holistic patient care; appreciate the essence of therapeutic communication; and integrate the results from taking the patients' vital signs using approaches from both TCM and Western medicine to establish the diagnosis. The students commented that integrative care is holistic and that they were interested in providing comprehensive care to patients through a combination of TCM and Western medicine. To facilitate student learning of integrative healthcare, a specific learning protocol that includes various learning activities referencing both TCM and Western nursing interventions is essential in the educational process.

Keywords: Enhanced education protocol; Integrative healthcare centre; Nursing students

Introduction

In recent decades, complementary, alternative, and traditional therapies have become increasingly popular both overseas and in Hong Kong. The World Health Organization defines Complementary and Alternative Medicine (CAM) as 'a broad set of health care practices that have typically not been part of conventional Western medicine and not integrated into the dominant health care system' [1]. With regard to systems of care, CAM includes Ayurveda (balanced cooking and food consumption), Hmong (cupping and

coining), Homeopathy (diluted substances tailored for specific patients), Naturopathy (a combination of nutrition, herbal medicine, and lifestyle adjustments), and Traditional Chinese Medicine (herbs, acupuncture) [2]. Traditional Chinese Medicine (TCM) is holistic and focuses on the prevention of disease. It has been practised in China for 5,000 years and is becoming popular around the world. TCM regimes include herbal medicine, acupuncture, moxibustion, cupping, Gua Sha, and massage [3].

Integrative practice encourages nurses to use CAM alone or in conjunction with Western medicine in patient care [4]. Nurses, regardless of their work areas, are in a unique position to promote safe CAM in the plan for patient care [5]. It was noted that 60%

of nursing student's vs 35% of medical students agreed that CAM practices should be included in the school curriculum and clinical care [6]. The integration of a CAM curriculum in nursing schools does not require much of a paradigm shift, as wellness and holistic healthcare are deeply rooted in nursing education [7]. Despite the development and incorporation of integrative healthcare in clinical settings and in the academic curriculum, previous studies have focused mostly on patient outcomes and cost effectiveness [8-13]. Similarly, reviews on how an integrative healthcare learning model within the curriculum can benefit students' learning and development are sparse; only one recent study has been conducted on integrating CAM into the nursing curriculum [14].

Integrative healthcare is about developing a new system that incorporates self-care and emphasizes therapeutic relationships to tackle diseases [15]. Therapeutic communication is a professional technique based on empathy; its purpose is to increase understanding and reduce stress for clients and caregivers [16]. The verbal and non-verbal communication of information to patients comprises a large part of a nurse's activities. It is considered essential to help nursing students to develop constructive communication skills in practice [17]. While there are many studies assessing the therapeutic communication of nurses in academic and various clinical settings, there is a paucity of research on individual communication skills for undergraduate nursing students in integrative care settings. Integrative health practices in nursing have provided innovative educational experiences and broadened horizons about the various possibilities of care [18,19].

Today, there are three publicly funded universities in Hong Kong that provide training for TCM practitioners. However, with regard to the training of nurses, the universities do not offer courses in Chinese medicinal nursing, as there are no hospital in-patient services for TCM. As nursing involves providing holistic and client-centred care to meet the changing health needs of society, the Nursing Council of Hong Kong stipulates that the training of general registered nurses include a minimum of 40 hours of theoretical input on TCM as a requirement for registration [20]. The objective of the curriculum is to give nursing students some knowledge of the basic theories of TCM, including the scope and principles of Chinese Medicinal Nursing and an appreciation of its use in modern society. Hence, nurses do not usually provide education related to TCM to hospital patients nor in the primary care settings.

In Hong Kong, The School of Nursing of a tertiary institution in Hong Kong operates a facility called the Integrative Health Centre (IHC). The Centre is staffed by healthcare professionals, they are the TCM practitioners and nurses training for western medicine. The Centre offers a clinical training ground for undergraduate nursing students in Primary Health Care. At present, the intended learning outcomes of the placement fall mainly

within the scope of Primary Health Care in nursing practices. As the Centre combines primary care using TCM and nursing services for holistic patient care, the notion of integrative healthcare should be further expanded and enhanced. The School is committed to providing students with a quality education, focusing on knowledge integration and reflective practice; thus, the implementation of an enhanced learning model with pedagogy for integrative healthcare is worth attempting. Therefore, understanding how an enhanced learning model may improve nursing students' competencies and therapeutic communication in patient care would assist in filling the gaps identified in the literature on integrated care.

The aim of this study was to examine the intervention of an enhanced learning model in an integrative healthcare setting for its effect on the competency performance and therapeutic communication skills of students, and on their perceptions of the integrated care experience. The research questions were as follows:

- What have you learnt about integrative therapy in this placement?
- What were your most successful experiences in nurse case management?
- What were your most successful experiences when conducting therapeutic communication with patients?
- What were your less successful experiences in the learning activities?
- What are the benefits of integrative healthcare for holistic nursing?

Methods

Development of the Enhanced Learning Protocol for Integrative Healthcare

In the usual practice, a nursing student would receive his/her respective patient after registration and provide an assessment of the patient's vital signs, such as the patient's blood pressure, pulse and respiratory rate, and oxygen saturation (if needed). The student would stay with the patient during the consultation with the TCM practitioner. A brief and general session on health education and the dispensing of medications would be provided to the patient before the patient is discharged. With the Enhanced Learning Protocol approach, the students were required to utilize integrative therapy incorporating nurse case management to provide patients with individualized care in the IHC. Case management is a care delivery model designed for coordinating and managing patient care across the continuum of healthcare systems [21]. According to the American Nurses Credentialing Center, 'Nursing Case Management is a dynamic and systematic collaborative approach to providing and coordinating healthcare services to a defined

population.’ The framework includes assessment, planning, implementation, evaluation, and interaction [22]. In order to successfully implement the integrative healthcare interventions, the new learning protocol was developed integrating TCM, nurse case management, health assessments, and therapeutic communication. Please refer to Appendix I for the protocol.

The students were case managers for patients in the IHC. Similar to the traditional education model, the students were instructed to use Western nursing interventions to assess the vital signs of all patients, such as blood pressure, pulse rate, respiratory rate, and body weight. The Lawton Instrumental Activities of Daily Living (IADL) Scale was used to assess the independent living skills of patients over the age of 65, including their ability to prepare food, manage their own medications, keep house, and so on. The instrument is intended for use among older adults, particularly those dwelling in the community [23]. The students were instructed to submit the patient’s IADL score to the TCM practitioner and to stay with the patient during the medical consultation. The health education provided before discharge included information about the effects and possible side effects of the prescribed Chinese medicine, plus information on how to attend to the specific disease, followed by the dispensing of medications. It is essential for students to understand herbal therapies because prescribed regimens could have interactions that the patients do not recognize. Based on the IADL scores, the students gave the patients reminders about adhering to their medications, their daily nutritional needs, and follow-up appointments, if any. The patients were discharged from the IHC by the student case manager. The rationale behind the interventions was to enhance the students’ abilities in the areas of culturally competent health promotions and patient-centred therapeutic communication.

To reinforce the students’ learning, teachers conducted case seminars using an integrative care approach. The students were required to work in pairs to select a client case to present during the course of their placement. They needed to collect a patient’s clinical data and draw up healthcare advice, integrating TCM and incorporating Western nursing interventions for optimal patient care. The formulated care plan was guided by a model of nursing care that was based on activities of living and facilitated reflections on the delivery of integrated care. A concept map was used to illustrate the patient’s demographic characteristics, including age and sex, the diagnosis, the etiology of the disease, the diagnosis from the perspectives of both Western medicine and TCM, and interventions using Western medicine and TCM. Concept mapping is considered an effective and active teaching-learning method for students of most disciplines. With a concept map, a large amount of information can be summarized and condensed in a comprehensible and visible format [24]. It is an educational strategy that helps graduate nurses to improve their critical thinking skills and correct areas of theoretical and clinical deficiency in

their work lives [25]. A more recent study further reported that using concept maps to display the patient care plan was having a positive effect on the critical thinking skills of nursing students, as indicated by the significant differences between the post-test scores of the experimental group and the control group of students [26].

Communication by nurses is considered a crucial aspect of providing safe and quality patient care. It is therefore important to provide nursing students with practice opportunities that include appropriate and practical content on therapeutic communication [27]. Other than teaching the theory and the essential skills of therapeutic communication, video clips and role plays are teaching strategies that have been used to convey information for practical learning experiences. On-line video clips were carefully selected for contextual appropriateness and comprehensibility. The students were required to perform a return demonstration before they actually communicated with patients and began teaching them about positive lifestyles and disease prevention. Because of the wide diversity of patients who attend the IHC, for the benefit of the students’ learning and practice, patients with chronic pain, influenza, sleep disturbances, and skin problems were recruited to take part in this study.

This study is a mixed-methods study employing both quantitative and descriptive qualitative approaches. The present paper presents the descriptive qualitative findings of the results. The participants were required to answer five open-ended questions after completing a 5-day Primary Health Care placement within an integrative care setting.

Design

The study is an exploratory and descriptive study.

Study Setting and Sample

The setting of the study was the IHC of a tertiary institution. Consecutive sampling was adopted. All nursing students attending the Primary Health Care placement at the IHC who had completed the basic subject in TCM in the academic programme were recruited. Students who had not yet completed the above subject were excluded. A total of 88 students participated in this study.

Data Collection

The data were collected from April to August 2018. Students were invited to complete the questionnaire after completing their placement in the IHC. The participants filled out the questionnaires anonymously, and then submitted them to the staff of the Centre, who were not involved in the research. All of the returned questionnaires were included in the final analysis.

Ethical Considerations

Ethical approval for this study was obtained from the Ethics

Review Committee of the participating institution. Although attending the practicum at the IHC was compulsory, participating in the research was voluntary. The informed written consent of the nursing students to participate in this study was obtained before the data were collected. They were told not to write down any personal information on the questionnaire, and were given assurances of anonymity and confidentiality with regard to the data.

Results

The participants were nursing students, 35.5% of whom were from Year 3, 42.0% from Year 4, and 22.5% from Year 5. Nearly all of the students, 97.6%, were between the ages of 20 and 25, while the remaining 2.4% were above the age of 26. Sixty-nine (78.1%) of them were female. Seventy-two (81.1%) of the

students had completed two subjects on TCM, while the remaining students had completed only one TCM subject.

The following tables show the major constructs deduced from the students’ responses and contain a summary of statements or quotations given in response to the five research questions.

- What have you learnt about integrative therapy in this placement?

The major constructs were: Learnt to integrate TCM and Western nursing interventions in holistic patient care; therapeutic communication and integrating the results of taking the patients’ vital signs using both TCM and Western medicine to establish the diagnosis. Please refer to (Table 1) for details.

Constructs	Participants’ Statements or Quotations
Integrating Traditional Chinese Medicine (TCM) and Western nursing interventions in holistic patient care	Integrative therapy is not only about focusing on medicines or diseases, but is patient centered.
	It is about caring for patients holistically, including attending to their psychological, social, and physical health.
	Combining TCM and Western medicine speeds up the recovery process. This benefits the patients, as they can be cared for using a therapy that includes a diverse range of treatments.
	Integrative therapy is no single therapy; the treatment regime is a balance between TCM and Western medicine.
Therapeutic communication	Helped to clarify misconceptions from patients regarding diseases and treatments.
	Interacting with patients is a rewarding experience.
	Good time management was required for taking health histories and conducting patient assessments.
	The techniques that were learned included active listening, sharing, making observations, showing empathy, instilling hope, etc.
Integrating patients’ vital signs using both TCM and Western medicine to establish the diagnosis	Combined Western techniques (such as the taking of blood pressure, temperature, and oxygen saturation) with the pulse diagnosis of TCM.
	Western nursing interventions, involving processes such as conducting an inspection, listening, asking questions, and making inquiries could be applied in a TCM nursing intervention.
	Patients quickly regained mobility through the combined treatment of acupuncture and physiotherapy.

Table 1: The constructs and participants’ statements for Research Question 1.

- Please give one or two examples of your most successful experience in nurse case management.

The major constructs that were identified were: skills in therapeutic communication; health education and promotion; and preparing patients for acupuncture. Please refer to (Table 2) for details.

Constructs	Participants' Statements or Quotations
Integrating Traditional Chinese Medicine (TCM) and Western nursing interventions in holistic patient care	Integrative therapy is not only about focusing on medicines or diseases, but is patient centered.
	It is about caring for patients holistically, including attending to their psychological, social, and physical health.
	Combining TCM and Western medicine speeds up the recovery process. This benefits the patients, as they can be cared for using a therapy that includes a diverse range of treatments.
	Integrative therapy is no single therapy; the treatment regime is a balance between TCM and Western medicine.
Therapeutic communication	Helped to clarify misconceptions from patients regarding diseases and treatments.
	Interacting with patients is a rewarding experience.
	Good time management was required for taking health histories and conducting patient assessments.
	The techniques that were learned included active listening, sharing, making observations, showing empathy, instilling hope, etc.
Integrating patients' vital signs using both TCM and Western medicine to establish the diagnosis	Combined Western techniques (such as the taking of blood pressure, temperature, and oxygen saturation) with the pulse diagnosis of TCM.
	Western nursing interventions, involving processes such as conducting an inspection, listening, asking questions, and making inquiries could be applied in a TCM nursing intervention.
	Patients quickly regained mobility through the combined treatment of acupuncture and physiotherapy.

Table 2: The constructs and participants' statements for Research Question 2.

- Please give one or two examples of your most successful experience when conducting therapeutic communication with patients.

The major constructs that were identified were maintaining eye contact, showing respect, actively listening, and using open-ended questions. Please refer to (Table 3) for details.

Constructs	Participants' Statements or Quotations
Maintaining eye contact, showing respect, and leaning forward while listening	A square sitting position is one of the crucial elements of therapeutic communication.
	I smiled and introduced myself to the patient. I arranged for her to sit on a sofa to make her feel comfortable during the conversations.
	I was able to show empathy when communicating with patients.
Actively listening	I summarized and repeated the phrases with appropriate body touches.
	I kept smiling and nodding my head to show my interest. The patient was very thankful and happy after the conversations.
	Before giving feedback, I summarized the information and kept silent for a while to organize my responses to the patients.
Using open-ended questions	This approach helped me to collect comprehensive information from patients.
	With the open-ended questions I was able to start a dialogue on general life activities.
	I shared cooking methods and talked about buying food ingredients to start the dialogue with patients.
	I started by asking a broad question, and then tried to prompt the patients to speak more.

Table 3: The constructs and participants' statements for Research Question 3.

- Please give one or two examples of your less successful experiences in the learning activities.

The major constructs that were identified were: medication management; failure in communicating with patients; and the health promotion talk was not attractive. Please refer to (Table 4) for details.

Constructs	Participants' Statements or Quotations
Dispensing of drugs	More practice is required to dispense Chinese medicine granules.
	I was not familiar with the procedures and the dispensing machine, and was spending too much time on them.
	It was very different from the administration of oral medications in Western nursing practice.
Failure in communicating with patients	A patient sat on a sofa while I sat on another sofa, with a handrail between us. It was difficult to make eye contact and hard to communicate.
	I asked irreverent questions, making the patient feel uncomfortable.
	It was difficult to communicate with the patient in my first encounter, as I was a stranger.
	Occasionally, there was dead air.
	I was not aware that the patient needed silence in between conversations.
Health promotion talk was not attractive	The PowerPoint file was not well prepared.
	There were too few people in the audience.
	I need to improve my presentation skills to community audiences.
	I should provide more concrete advice to patients.

Table 4: The constructs and participants' statements for Research Question 4.

- What are the benefits of integrative healthcare for holistic nursing?

The major constructs that were identified were: comprehensive care of patients; using a combination of Chinese and Western therapies; and health education and promotion. Please refer to (Table 5) for details.

Constructs	Participants' Statements or Quotations
Comprehensive care of patients	The care that was provided included physical, mental/psychological, and social care.
	The patients trusted the nurses because of a good nurse-patient relationship.
	Older people were more willing to see a TCM practitioner. The health assessment conducted using Western nursing techniques was more accurate in confirming a diagnosis.
Combination of Chinese and Western therapies	The Western medicine helped to remove the tumour; TCM assisted the recovery process.
	Other than antibiotics or surgical procedures, integrative healthcare with holistic nursing might improve the immunity of the patients, shortening treatment times.
	The connectivity between mind and body in TCM could have a positive impact on Western medicine.
	The combined healthcare services were effective in preventing and treating diseases.
Health education and promotion	A partnership approach was used where patients were involved in their decision making. They were encouraged to make lifestyle choices according to advice from a professional and their desires.
	Patients were able to learn more about self-management, such as food nutrition from the perspective of TCM.
	Teaching about health led to improvements in the quality of care and the life of the patients.

Table 5: The constructs and participants' statements for Research Question 5.

Discussion

Integrative healthcare has now been included in the medical and nursing curricula of most developed countries, and has become a new approach in healthcare education and practices. The aim of the present study was to examine the learning outcomes of students through the enhanced learning protocol in an integrative healthcare setting. This is the first known study in Hong Kong to examine the efficacy of a learning protocol for nursing students through their participation in the various components of patient care in an integrative care setting. Although a training venue for integrative healthcare is readily available in the participating institution, it may not be possible to achieve effective learning without sound and appropriate pedagogical approaches. Clear communication with instructions and frequent interactions with students is important for all student learning [27]. In this study, a student seminar is embedded in the learning protocol to gear learners towards real-world applications to bridge the gap between theory and practice. The professional knowledge that is acquired will adequately prepare newly graduated nurses to begin working competently in an integrative clinical environment.

To undergraduate students, nurse case management is a new and complicated concept. Most students are unlikely to be able to practice case management in hospital environments during their training. Therefore, it would be ideal to introduce a brief nurse case management intervention as the major care delivery model at the IHC. Active student participation and a quality learning environment will determine the success of clinical education. Active student participation typically takes place during clinical

clerkships and senior year rotations [28]. Throughout their practicum in the integrative care centre, students not only become familiar with case management theory, but also implement patient care anchored in this concept. The enhanced learning component provides a solid foundation for students to practice competently in their future nursing career.

In the curriculum for Registered Nurse training, the Nursing Council of Hong Kong stipulates that the training include a minimum of 40 hours of theoretical input on TCM as a requirement for registration. The notion of TCM is kept separate from Western medicine, even though students are taught to use inductive reasoning to devise patient care plans in healthcare settings. The Western approach tends to override the Eastern approaches, causing numerous difficulties when these two paradigms are combined when designing teaching activities focusing on providing quality patient care. Our results showed that only through the development and incorporation of integrative healthcare in clinical settings will the wisdom of Eastern approaches be transformed into modern knowledge.

Although the concepts of therapeutic communication are fairly similar in most clinical situations and settings, it could be more difficult to master the skills in an out-patient centre. In hospitals or long-term care facilities, it would be easy for nurses to develop good relationships and rapport with patients due to the long period of interaction, which can lead to the overcoming of social barriers. In out-patient settings, the students have to overcome these barriers and start the therapeutic communication with the patients in their first encounter. A few students experienced dead air during

their first conversation with patients, causing embarrassment for both parties. This could have been partly due to the inadequate training received by the students, the introverted personality of some students, or to their lack of interpersonal experience. Teaching therapeutic communication could pose a huge challenge to most nurse educators. Other than using role plays or simulated cases or recordings, Rosenberg suggested using reflection as a study tool for therapeutic communication. Reflection can increase the students' awareness of how they feel about themselves, bolster their confidence and self-esteem, and lead them to accept what they need to improve [29]. Instead of providing feedback to the students directly, teachers could ask them to reflect on what they can do to achieve further improvements in the learning activity. In this way, the teachers can avoid causing offense to the students, and can put in place a system for reinforcing existing improvements and motivating the students to pursue further improvements.

In our study, students appreciated the benefits of integrative healthcare for holistic nursing. As mentioned, due to segregation of Eastern and Western medicine in the nursing curriculum, a new pedagogical model for teaching and learning in an integrative healthcare setting makes it possible to link the two approaches in the scenario. Through using the enhanced learning protocol, students can enlarge their theoretical knowledge on disease management and related treatments, and will be able to offer rationales for their care and actions.

Study Limitations

This study was conducted in a single centre, which could reduce the generalizability of the findings. The data were collected from one cohort of students, which might have influenced the results of the study. Therefore, in a future study it would be necessary to recruit a larger sample of students.

Conclusion

This study provides evidence that the enhanced learning protocol can help students to learn in an integrated healthcare setting. The carefully prepared protocol integrating TCM, nurse case management, therapeutic communication, and physical and daily activity assessments can broaden the students' theoretical knowledge of both Eastern and Western medicine. The use of a concept map can strengthen and integrate the students' learning for integrative therapy. The findings could be used in other out-patient or primary healthcare settings that deliver either or both Western medicine and TCM for nursing students. The patients' satisfaction with integrative therapy could be explored in a future study.

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Conflicts of Interest

The author declares that there were no conflicts of interest regarding the publication of this paper.

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