



## Impact of interactive situated and simulated teaching program on novice nursing practitioners' clinical competence, confidence, and stress



Sue-Hsien Chen<sup>a,b,c</sup>, Shu-Ching Chen<sup>d</sup>, Shu-Chiou Lee<sup>b</sup>, Yi-ling Chang<sup>b</sup>, Kun-Yun Yeh<sup>e,\*</sup>

<sup>a</sup> Chang Gung Medical Education Research Centre, CG-MERC, Gueishan, Taoyuan, Taiwan

<sup>b</sup> Department of Nursing, Chang Gung Memorial Hospital, Keelung, Taiwan

<sup>c</sup> School of Nursing, Chang Gung University and Chang Gung University of Science and Technology, Taoyuan, Taiwan

<sup>d</sup> Department of Medical Research, National Taiwan University Hospital, Taiwan

<sup>e</sup> Division of Hemato-oncology, Department of Internal Medicine, Chang Gung Memorial Hospital, Keelung, and Chang Gung University, Taiwan

### ARTICLE INFO

#### Keywords:

Situated and simulated teaching

New nurses

Clinical competence

Stress

### ABSTRACT

**Background:** Novice nursing practitioners (NNPs) often struggle to make the transition to fully competent professionals. We sought to determine the impact of an interactive, situated learning workshop on a participant's clinical competence.

**Objectives:** This work aimed to improve the clinical competence, promote the self-confidence, and reduce the number of work-related stressors of NNPs.

**Methods:** We randomly allocated 31 newly graduated NNPs into interactive situated and simulated teaching (ISST) and non-ISST groups, which were perceived as the homogeneity of the 2 groups based upon no significant difference at age, education level and work units. The ISST program comprised six follow-up interactive face-to-face support sessions over a three-month period following the standard orientation training course. We assessed the participants' competency, stress, and confidence levels in professional competence before and at the end of the study.

**Results:** At the end of the three-month study period, the ISST group demonstrated superior nursing competency ( $p = 0.001$ ), as well as reported lower stress levels ( $p = 0.011$ ), and increased confidence in professional competence ( $p = 0.026$ ) as compared with those in the control group. A multiple regression analysis revealed that clinical nursing competence was positively correlated with the use of ISST ( $p = 0.02$ ) and negatively correlated with stress ( $p = 0.03$ ).

**Conclusions:** The ISST program for NNPs significantly improved their clinical competence. It may be helpful to ensure that new trainees have access to training programs that can facilitate their acclimation to their new working environments at the beginning of their careers.

### 1. Introduction

Healthcare organizations require a stable, highly proficient, and wholly engaged nursing staff to provide effective and efficient levels of patient care (Honour, 2015). Novice nursing practitioners (NNPs), however, may have difficulty in practicing competently, which can then compromise the quality of care (Lin et al., 2014). The transition period can be a time of strain and stress as they acclimatize to their new professional status (Missen et al., 2014). Nursing competence has been defined as the ability to use knowledge, skills, judgment, attitudes, values, and beliefs to perform a given role or task in a specific practice setting and in different situations (Brown and Crookes, 2016; Chen and Roger, 2011). Obstacles to the successful transition of an underqualified

newcomer to a well-trained caregiver are a lack of competence in handling work-related stress, unpleasant experiences in daily practice, and multiple professional challenges (Chen and Roger, 2011). Indeed, poor nursing competence has negative effects on the quality of care and the ability to guarantee patient safety (Kieft et al., 2014). Thus, the turnover rate tends to remain high at the beginning of nursing careers. Such difficulties may be overcome by offering NNPs an appropriate training program that would boost their professional competence and help them adjust to their work environments and know what is expected of them.

An efficient nurse training program that focuses on enhancing skills, increasing the knowledge needed to accomplish clinical tasks, improving patient care-related concepts, reducing work-related stressors, and

\* Corresponding author at: Division of Hemato-oncology, Department of Internal Medicine, Chang Gung Memorial Hospital, Keelung, and Chang Gung University, College of Medicine, 222 Maijin Road, Keelung, Taiwan.

E-mail address: [yehtyng@gmail.com](mailto:yehtyng@gmail.com) (K.-Y. Yeh).

<http://dx.doi.org/10.1016/j.nedt.2017.04.025>

Received 28 November 2016; Received in revised form 21 March 2017; Accepted 28 April 2017

0260-6917/ © 2017 Elsevier Ltd. All rights reserved.

improving the ability to manage an unpredictable clinical practice can offer several advantages to new trainees (Yakovlev and Yakovlev, 2014). First, it bridges the gap between the academic knowledge acquired in the classroom and the applied knowledge acquired during actual clinical practice. NNPs gain competence and learn how to successfully apply skills to patient care. Second, appropriate teaching techniques used in the training program encourage NNPs to participate in learning clinical skills (Aliakbari et al., 2015). Lastly, since NNPs frequently report that their first-year work experience can be characterized by considerable unhappiness and high stress levels with concerns that they are not yet ready to manage the unpredictability of professional practice, an efficient training program helps them cope with their work-related stressors (Missen et al., 2014).

An interactive situated training program may mirror, anticipate, or amplify real-world situations with guided experiences in a fully interactive manner (Akaike et al., 2012). This has been considered an effective and practical teaching model (Missen et al., 2014), as it applies several theory-based educational approaches to training, including information processing, demonstration, knowledge construction and practice-based rehearsal methods. Trainees have exposure to a range of real-life scenarios in a safe, controlled environment (O'Leary, 2015). Trainees can rehearse practical procedures and communication skills and can receive feedback from facilitators, peers, and simulated patients (Ashley et al., 2016; Falconer, 2013; Foronda et al., 2013; Murray-Parahi et al., 2016). Situated training programs may help newly qualified nurses deal with real clinical situations quickly and efficiently amid pressures in different practice settings and advances in technology.

Few studies discussed the effect of applying both situated and simulated teaching program to the clinical competence of NNPs. It is therefore important to investigate if integration of interactive situated and simulated teaching facilitates successful transition of NNPs to competent practitioners. We attempted to create an interactive situated and simulated teaching (ISST) program to reinforce learning incentives, promote participation in nursing activities, and improve care-related concepts in a controlled environment. The aim of the current investigation is to evaluate the effects of the ISST program on developing competency in NNPs and thus promote their self-confidence and reduce the number of work-related stressors.

## 2. Methods

### 2.1. Study Design

We conducted a randomized control design to examine the impact of a standardized ISST program on the clinical competence of new nurses (Fig. 1). Thirty-one NNPs, who obtained diploma of bachelor degree in nursing in Taiwan but had no internship experience in clinical practice were enrolled from different work units in July 2014. They were randomly allocated into an ISST group ( $n = 16$ ) and a control group ( $n = 15$ ) by a computer program that generates random sequences. The study was conducted from August to November 2014. All participants took 5 days of standard orientation training courses (Two-Year Training Program for Nurses of Chang Gung Memorial Hospital accessed by <http://cghdpt1.cgmh.org.tw/intr/24000/>) designed and verified by the Department of Nursing at our institution. The course comprised patient communication, physical assessment skills, introduction to medical illnesses and safe administration of medications including instructions for actions and uses of medication, safe dosage, side effects, and nursing implications. While the control group received the standard orientation training course alone, the experimental group received the ISST program following the standard orientation training course. The principal investigator informed the study participants of the purpose of the study and mechanisms of the data collection tool; the research assistants helped the participants complete the questionnaires. Data were collected before the implemen-

tation (pretest) and after the end of the ISST program (posttest).

### 2.2. The ISST Program

We developed the ISST program with the assistance of an interdisciplinary team including physicians from the department of internal medicine, director of nursing education, and nurse practitioners with > 10-year clinical practice experience. The ISST program comprised six follow-up interactive face-to-face support sessions over a three-month period following the standard orientation training course. The main theme of this program was to reinforce learning incentives, promote understanding of care-related concepts and improve clinical communication through participation in situated and simulated nursing activities. During the interactive support sessions, the instructors set up certain clinical situations that commonly occur in daily practice and guided new nurses to participate in these activities, question, and reflect on what they had learned. The instructors also focused on teaching NNPs to recognize the signs and symptoms of diseases, understand daily medication regimens, interpret abnormal laboratory data, and find communication difficulties between the nurses and patients. Participants discussed their work with the instructors focusing on three parts: patient communication, procedural skills and medical knowledge, and the social relationship with colleagues. Each follow-up session took 1 to 2 h to complete.

### 2.3. Instruments

The questionnaire is a modification of a tool used in a previous report that contained basic learning information, personal background information, a Nursing Competency Questionnaire (NCQ), a Stress scale, and a Satisfaction in Learning scale (Cheng et al., 2015). Items pertaining to the NCQ included 26 questions to assess nurse competency in four domains: medical knowledge (five questions), physical assessment (three questions), skill (seven questions), critical thinking (five questions), and communication (six questions). The nurses responded to items on a five-point Likert scale (1 = incapable, 2 = very difficult, 3 = reasonable difficulty, 4 = good ability, and 5 = excellent ability). The Stress scale consisted of 10 statements describing stressful nursing situations. Each item required respondents to rate the situations on a five-point Likert-type scale ranging from 1 ("never stressful") to 5 ("extremely stressful"). The Satisfaction in Learning scale consisting of a three-item instrument was designed to measure nurse satisfaction. Each item contained a statement on one's attitude toward satisfaction with learning in obtaining inputs from the trainers. A five-point Likert scale was used for each item, from 1 ("strongly disagree with the statement") to 5 ("strongly agree with the statement"). To validate this study, seven experts, including three attending physicians and four senior nursing supervisors, were invited to evaluate the relative appropriateness of the checklist to the study's intent. An internal test for reliability was used in which ten senior nurses with more than three years of working experience were initially chosen. Next, professionals conducted a content validity test, in which the content validity index (CVI) was 0.88–0.90. The instrument takes approximately 15 to 20 min to complete.

### 2.4. Ethical Consideration

Data collection began after a local research ethics committee approved the study protocol at Chang Gung Memorial Hospital in Taiwan. Subsequently, we held a meeting with the new nurses to explain the program and the study, including the study's purpose, procedures involved, participants' rights, and confidentiality. This information was included in a covering letter, which was sent to the participants before each data collection period, together with the questionnaire and a self-addressed and stamped envelope. For their convenience, participants could choose to fill out the questionnaires in

Download English Version:

<https://daneshyari.com/en/article/4940600>

Download Persian Version:

<https://daneshyari.com/article/4940600>

[Daneshyari.com](https://daneshyari.com)