Medical Education

The effects of scenario-based communication training on nurses' communication competence and self-efficacy and myocardial infarction knowledge

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ABSTRACT

Objective: The aim of the study was to determine the effects of a simulated communication training course on nurses' communication competence, self-efficacy, communication performance, myocardial infarction knowledge, and general satisfaction with their learning experience.
Methods: A randomized controlled trial was conducted with a pre-test and two post-tests. The experimental group underwent simulated communication training course and the control group received a case-based communication training course.
Results: The experimental group made more significant improvement in competence and self-efficacy in communication from pre-test to the second post-test than the control group. Although both groups' satisfaction with their learning experience significantly increased from the first post-test to the second post-test, the experimental group was found to be more satisfied with their learning experience than the control group. No significant differences in communication performance and myocardial infarction knowledge between the two groups were identified.
Conclusion: Scenario-based communication training can be more fully incorporated into in-service education for nurses to boost their competence and self-efficacy in communication and enhance their communication performance in myocardial infarction patient care.
Practice implications: Introduction of real-life communication scenarios through multimedia in communication education could make learners more motivated to practice communication, hence leading to improved communication capacity.

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1. Introduction

Cardiovascular diseases (CVD) are the most important cause of mortality and morbidity in the world [1] and continue to be the number one killer worldwide [2]. They are responsible for 30% of all deaths, with an estimated 17.5 million deaths each year [3]. In Taiwan, CVD are the second of the 10 leading causes of death [4]. The worldwide epidemic of cardiovascular disease poses a significant challenge to the implementation of interventions shown to improve patient outcomes [5]. Myocardial infarction (MI) is a disease that must be prevented and treated [2]. Effective nurse–patient communication enhances patients' understanding of their diagnosis, prognosis and decision making about future treatments, thereby facilitating good patient-care planning, patient education, discharge planning and timely patient outcomes [6,7].

Providing information and support to MI patients has long been identified as an important nursing function [8]. Previous studies have shown that patients with a history of myocardial infarction were often poorly informed by nurses as to the signs, symptoms, and consequences of delayed treatment of acute myocardial infarction (AMI) [9]. If information regarding common sources of fear or gaps in knowledge could be identified, this may be useful in assisting with patient education and communication processes prior to cardiac catheterization [10]. The content of patient information and how it is devised is, therefore, a very important consideration [11]. Behavioral changes and improvement in

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Table 1
Study design.

	Before	Intervention	Just after	1-Month after
R	O_1	X_1	O_2	O_3
R	O_1	X_2	O_2	O_3
Measures				
Demographics	$\sqrt{}$			
Communication competence	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$
Communication self-efficacy	$\sqrt{}$		$\sqrt{}$	$\sqrt{}$
Communication performance				$\sqrt{}$
Myocardial infarction knowledge	$\sqrt{}$		$\sqrt{}$	
Learning satisfaction			$\sqrt{}$	$\sqrt{}$

Note. R, randomization; O_1, the first measure; X_1, simulated scenario-based communication training course; X_2, case-based communication training course; O_2, the second measure; O_3, the third measure.

communication skills were observed in nurses who worked with cardiovascular disease patients in a three-day communication training course [12,13]. Communication training was found to be an effective enhancer of interpersonal and interviewing skills and confidence in communication of health professionals [14,15].

Simulation is defined as an educational technique that recreates an aspect of reality in a safe environment [16]. It can be effective for task or skill training, as well as for higher-level skills related to communication, decision making, and team work [17]. Scenario-based learning within an authentic clinical environment is feasible and is perceived by participants to be educationally useful [18]. There are several hypotheses: The hypothesis in this study are that simulated scenario-based communication education and cased-based communication education would bring about significant differences in the subjects' communication competence, self-efficacy, communication performance, myocardial infarction knowledge, and satisfaction with learning experience.

2. Methods

2.1. Design

The study was a randomized controlled trial with a pre-test and two post-tests. The experimental group received a simulated communication training course, whereas the control group underwent a case-based communication training course as presented in Table 1.

2.2. Sample/participants

Eligible subjects include Licensed Practical Nurses or Registered Nurses at clinical ladder levels from novice nurses (N0) to competent nurses (N2) who had personally taken care of patients and who were willing to participate in this study. Nurses were deliberately rendered unaware of the fact that they would be given different communication education in two separate groups. Conductors of Objective Structured Clinical Examinations (OSCEs) conducted it without knowing which nurse belonged to which group. A priori power analysis using G*Power version 3.1 was used to calculate the sample number [19]. About 45 participants were required to test within-subjects effects and 112 participants were required to test between-subjects effects. The participants were stratified by nursing clinical ladder level and randomized by four blocks to the experimental or control group using the random number table [20]. A modest incentive of 500 New Taiwan dollars was provided to encourage participation. The process from sample eligibility verification to data analysis and the changes in sample size were given in Fig. 1. Valid participants were 122 (63 in the control group and 59 in the experimental group) at the pre-test and 1st post-test and 61 (30 in the control group and 31 in the experimental group) at the 2nd post-test.

2.3. Data collection

Data were collected through self-assessment scales, myocardial infarction knowledge test, learning satisfaction survey, and direct observation. The self-assessment scales, myocardial infarction knowledge test, and learning satisfaction survey were administered before and after the intervention. Nurses' communication performances were observed during the 8-min OSCE by a qualified examiner at the 2nd post-test as shown in Table 1. The data were collected by the investigator and the examiner before, just after, and four weeks after the training courses between September 2012 and November 2012.

2.4. Intervention

The intervention, a session in which the participants received training to provide nursing care for MI patients, was designed based on existing theories on simulation [21] and communication [22–24]. In this study, the experimental group watched DVD
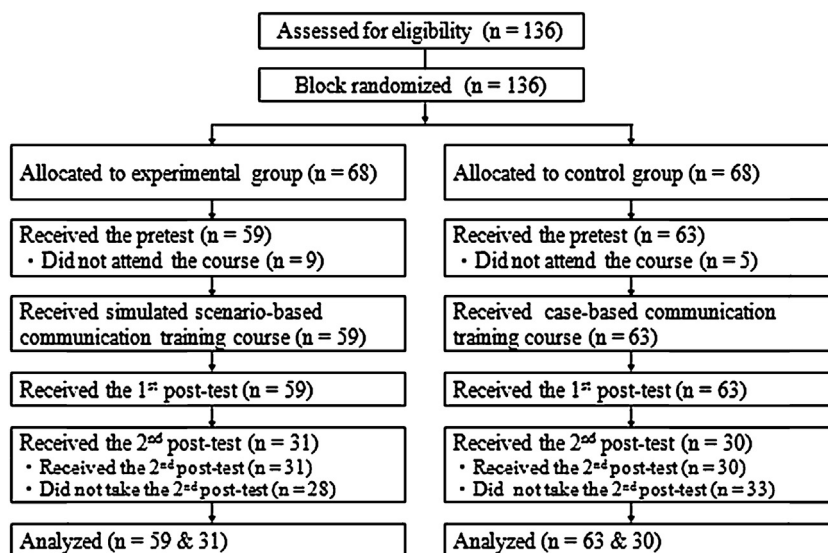

Fig. 1. Flowchart showing the process from sample eligibility verification to data analysis.