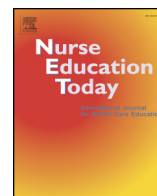




Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt

Impact of simulation training on Jordanian nurses' performance of basic life support skills: A pilot study[☆]

Samar Toubasi^{a,1}, Mohammed R. Alosta^{b,2}, Muhammad W. Darawad^{a,*,3}, Waddah Demeh^{a,c,3,4,5}

^a Faculty of Nursing, The University of Jordan, Amman 11942, Jordan

^b Specialty Hospital Amman, Jordan

^c Al-Farabi College for Dentistry and Nursing, Al-Farabi College, Riyadh 11514, Saudi Arabia

ARTICLE INFO

Article history:

Accepted 30 March 2015

Available online xxx

Keywords:

Basic life support

Training

Nurses

Jordan

SUMMARY

Background: Providing efficient basic life support (BLS) training is crucial for practicing nurses who provide direct patient care. Nevertheless, data addressing the impact of BLS courses on the skills and performance of Jordanian nurses are scarce. This study aimed to assess the effectiveness of a BLS simulation training on Jordanian nurses' skill improvement in cardiopulmonary resuscitation.

Methods: A prospective quasi-experimental, single group pretest–posttest design was used to study the effect of BLS simulation; using a 9-item checklist; on the spot training; American Heart Association, on a group of Jordanian nurses. A pre-test was conducted following a CPR scenario to test the skills using 9-item checklist extrapolated from the American Heart Association guidelines. After debriefing, an interactive on spot training was provided. Later, participants undertook an unscheduled post-test after four weeks that included the same nine items.

Results: Thirty registered nurses with a mean clinical experience of 6.1 years participated in the study. Comparing pre-test ($M = 4.6$, $SD = 2.9$, range = 0 to 9) with post-test results ($M = 7.5$, $SD = 1.7$, range = 4 to 9) showed an overall improvement in skills and BLS scores after the simulation training program ($t = 7.4$, $df = 29$, $p < 0.0001$).

Conclusions: BLS simulation training sessions are associated with significant improvement in skills and performance among Jordanian nurses. A refreshment BLS training session for nurses is highly recommended to guarantee nurses' preparedness in actual CPR scenarios.

© 2015 Elsevier Ltd. All rights reserved.

Introduction

Many healthcare professionals experience a high level of anxiety and fear about being involved in cardiopulmonary resuscitation (CPR) scenarios. This anxiety arises from the lack of confidence in their knowledge and skills, and how to manage and operate equipment appropriately in a timely manner (Fitzgerald Chase, 2009). In addition, Sahu and Latal (2010) reported that formal BLS classes in the form of BLS training courses that are based on one session training are not adequate to prepare nurses to provide high quality resuscitation efforts that may improve post-cardiac arrest survival.

Several performance evaluations of BLS and other crisis scenarios have shown a significant delay in performing the essential steps of resuscitation including airway management, activating the emergency system, providing high quality chest compression and performing defibrillation (Hunt et al., 2008b). These delays affect survival rates and post-resuscitation quality of life. Moreover, retention and maintenance of the learned CPR skills are challenges, even for critical care unit nurses, including junior and senior staff (Hill et al., 2010). Therefore, the need for frequent real scenario training has arisen as a means to maintain staff competency.

[☆] Ethical approval: On behalf of all the authors whose work has not been published and is not considered for publication elsewhere. The human rights of participants were protected. Therefore, this research was designed to match the ethical principles of voluntary participation and made sure that the participants were not harmed and that their right to privacy, anonymity, and self determination were guaranteed respected. These ethical principles were considered at each phase, including the ethical approval for the study. The study was conducted with consideration of the ethical implication at each phase of the study process. Institutional approval from the scientific research committee at the participating hospital was obtained prior to data collection.

* Corresponding author. Queen Rania St. Faculty of Nursing-The University of Jordan Amman, 11942 Jordan. Tel.: +962 6 5355000x23131.

E-mail addresses: samar_sami2002@yahoo.com (S. Toubasi), Mro1984@yahoo.com (M.R. Alosta), m.darawad@ju.edu.jo (M.W. Darawad), w.demeh@ju.edu.jo (W. Demeh).

¹ Samar Toubasi planned and designed the study, was responsible for manuscript preparation and provided supervision as well as technical and material support.

² Mohammed Alosta co-supervised data collection process, and helped in preparing the literature review section.

³ Muhammad Darawad was responsible for the manuscript preparation and he provided supervision as well as technical and material support.

⁴ Waddah Demeh was responsible for reviewing the manuscript according to the reviewers' comments, and editing the final manuscript.

⁵ Tel.: +966 556456666.

<http://dx.doi.org/10.1016/j.nedt.2015.03.017>

0260-6917/© 2015 Elsevier Ltd. All rights reserved.

Please cite this article as: Toubasi, S., et al., Impact of simulation training on Jordanian nurses' performance of basic life support skills: A pilot study, Nurse Educ. Today (2015), <http://dx.doi.org/10.1016/j.nedt.2015.03.017>

Furthermore, accommodating the adult learners' needs increases the effectiveness of the educational experience, which benefits patients through improved quality of care and safety (Hunt et al., 2008a, 2008b). Consequently, patient simulation has emerged as an important educational tool that is aimed at providing patient care-practice training within a controlled environment. The use of simulation provides the learner with an opportunity to improve their competence, ability and confidence levels with the tasks being performed. Literature has revealed a direct correlation between survival rates and the increased number of BLS simulation training (Andreatta et al., 2010).

Simulation is defined as "a set of techniques to replace or amplify real experiences with planned immersive experiences to evoke or replicate substantial aspects of the real world in an interactive fashion" (Sahu and Latal, 2010). One of the major benefits of simulation training is utilizing critical-thinking and clinical decision-making skills. Skills include difficult and challenging goals and tasks such as teaching nurses critical thinking and going beyond simply "knowing," to advancing synthesis and application of knowledge, and planning, implementation and evaluation of proper nursing care. Simulation provides an alternative to the traditional teacher-centered approach to nursing education with emphasis on the learning needs and preferences of nurses. The use of simulation for BLS refreshment of nurses' skills is a new culture in a developing country such as Jordan. The present study was carried out to determine the effect of a BLS simulation training program on improving the nurses' performance in BLS.

Although there is an increasing emphasis on the necessity of BLS certification in Jordanian hospitals, CPR training in Jordan is still facing important challenges. One of the important challenges is the limited number of certified BLS training centers and instructors in Jordan. Until recently, there were no formal and equipped AHA-certified training centers in the entire country. In fact, the first AHA authorized Life Support Training Center in Jordan was established in 2008 at King Hussein Cancer Center. Another limitation is the limited availability of BLS training resources and materials in hospitals, including manikins. Although there are no cultural barriers that hinder the participation in simulation BLS training, lack of adequate funds and lack of consensus and clear policies about the necessity of BLS certification in all Jordanian hospitals may explain the limited availability of these resources.

Literature Review

Basic life support is considered a fundamental skill for healthcare workers. However, the evidence suggests that retention of BLS knowledge and skills is generally poor (Berg et al., 2010). Many studies documented that nurses fail to recall critical steps in BLS sequences, especially during the rush of the urgent situation, which will be reflected on their response, performance and attitude during the CPR (Hunt et al., 2008a, 2008b). It is essential for nurses to be knowledgeable about resuscitation procedures and proficient in the delivery of care during an emergency (Hunt et al., 2008a, 2008b). Nurses must be ready to implement their knowledge and skills in order to perform safe, high quality CPR for the patients which will increase survival rates post-cardiac arrest (Van Voorhis & Willis, 2009).

Retention of learned knowledge and skills following BLS courses remains an important challenge. In fact, CPR skills deteriorate more rapidly than does BLS knowledge (De Regge et al., 2008; Smith et al., 2008; Spooner et al., 2007). Many studies showed that the nurses returned back to their regular duties without further practice or discussion and they lose the opportunity to properly reflect, learn, and grow from the experience (Alinier et al., 2009). Smith et al. (2008) proposed a number of variables that can affect skill retention, including insufficient practice, long interval between the course and actual practice, lack of supervision and feedback during learning, lack of consistency in and quality of the teaching of BLS, and the complexity of the skill being taught. In an attempt to improve skill and knowledge retention, investigators emphasized the importance of repeating the courses at regular intervals;

however, the optimal interval between the courses remained unclear. The American Heart Association recommends renewal of the BLS provider course every two years (Berg et al., 2010). Nevertheless, other investigators had different opinions about the optimal interval between the courses, for instance, a study by Villamaria et al. (2008) concluded that resuscitation training should be carried out at least every three to six months to prevent skill and knowledge deterioration.

It is evident that the introduction of simulation training sessions has reduced staff stress, improved the knowledge of participants and provided the bedside nurse with the opportunity to apply infrequently used skills (Hill et al., 2010). In addition, implementing a BLS simulation training program for acute care has added a valuable and appreciated source of support for bedside nurses, increased comfort for first responders in an emergent situation, and promoted teamwork and collaboration among all levels of caregivers (Hill et al., 2010). Furthermore, simulation training sessions have assisted in meeting the requirements of Joint Commission (2010) that hospitals collect data to measure the performance of potentially high-risk processes: resuscitations and their outcomes.

Providing performance feedback immediately after a simulation training session is crucial. This feedback especially related to the performance of the basic "circulation, airway, breathing" (CAB) is essential to the learning experience of the participants (Hunt et al., 2008a, 2008b). Reviewing both what went right and what went wrong is important. Allowing participants to ask questions about events that occurred during the simulation training session is important and vital to the learning experience. Oermann et al. (2011) concluded that even brief practice of CPR skills on manikins with corrective feedback could improve and maintain CPR skill competence. Other findings have highlighted that using the high technology simulation manikins in BLS is an effective tool for learning and they should be used more often (Lareau et al., 2010).

There is a gap in literature regarding the influence of BLS simulation courses on the CPR skills and performance of Jordanian nurses. Although, Aqel and Ahmad (2014) reported that high quality BLS simulation training affects CPR knowledge and skills in Jordanian nursing students, data related to licensed practicing nurses working in the different healthcare sectors remain limited. In the current study, we intend to provide data on the efficacy of such simulation courses on the skills and performance of nurses who work in a university hospital setting in an attempt to narrow this gap in literature and in a hope to open the door for future large-scale studies of BLS simulation in the various healthcare sectors in the country. Such data are highly needed to guide educators adopt and standardize CPR policies among Jordanian hospitals.

Research Hypotheses

Hypothesis 1. Participants will have better BLS skill testing scores after receiving simulation training program.

Hypothesis 2. Participants' characteristics will not have effect on nurses' BLS skill score.

Methods

Design

A prospective quasi-experimental, single group pretest–posttest design was used to study the effect of BLS simulation-skill training on a group of registered nurses who provide direct patient care at a Jordanian hospital.

Setting

This study took place from March to May 2014, at a university hospital in Amman–Jordan. The study targeted registered nurses who

Download English Version:

<https://daneshyari.com/en/article/10316359>

Download Persian Version:

<https://daneshyari.com/article/10316359>

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