

Effectiveness of Simulation Resuscitation Training to Improve Self-Efficacy of Physicians and Nurses at Aga Khan University Hospital in Advanced Cardiac Life Support Courses Quasi-Experimental Study Design

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Abstract : Introduction: Nurses and physicians have a critical role in initiating lifesaving interventions during cardiac arrest. It is important that timely delivery of high quality Cardio Pulmonary Resuscitation (CPR) with advanced resuscitation skills and management of cardiac arrhythmias is a key dimension of code during cardiac arrest. It will decrease the chances of patient survival if the healthcare professionals are unable to initiate CPR timely. Moreover, traditional training will not prepare physicians and nurses at a competent level and their knowledge level declines over a period of time. In this regard, simulation training has been proven to be effective in promoting resuscitation skills. Simulation teaching learning strategy improves knowledge level, and skills performance during resuscitation through experiential learning without compromising patient safety in real clinical situations. The purpose of the study is to evaluate the effectiveness of simulation training in Advanced Cardiac Life Support Courses by using the self-efficacy tool. Methods: The study design is a quantitative research design and non-randomized quasi-experimental study design. The study examined the effectiveness of simulation through self-efficacy in two instructional methods; one is Medium Fidelity Simulation (MFS) and second is Traditional Training Method (TTM). The sample size was 220. Data was compiled by using the SPSS tool. The standardized simulation based training increases self-efficacy, knowledge, and skills and improves the management of patients in actual resuscitation. Results: 153 students participated in study; CG: n = 77 and EG: n = 77. The comparison was done between arms in pre and post-test. (F value was 1.69, p value is <0.195 and df was 1). There was no significant difference between arms in the pre and post-test. The interaction between arms was observed and there was no significant difference in interaction between arms in the pre and post-test. (F value was 0.298, p value is <0.586 and df is 1. However, the results showed self-efficacy scores were significantly higher within experimental group in post-test in advanced cardiac life support resuscitation courses as compared to Traditional Training Method (TTM) and had overall (p <0.0001) and F value was 143.316 (mean score was 45.01 and SD was 9.29) verses pre-test result showed (mean score was 31.15 and SD was 12.76) as compared to TTM in post-test (mean score was 29.68 and SD was 14.12) verses pre-test result showed (mean score was 42.33 and SD was 11.39). Conclusion: The standardized simulation-based training was conducted in the safe learning environment in Advanced Cardiac Life Support Courses and physicians and nurses benefited from self-confidence, early identification of life-threatening scenarios, early initiation of CPR, and provides high-quality CPR, timely administration of medication and defibrillation, appropriate airway management, rhythm analysis and interpretation, and Return of Spontaneous Circulation (ROSC), team dynamics, debriefing, and teaching and learning strategies that will improve the patient survival in actual resuscitation.

Keywords : advanced cardiac life support, cardio pulmonary resuscitation, return of spontaneous circulation, simulation

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