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Effect of Enhanced Simulated Session on CPR Competency among Nursing Students at College of Applied Medical Sciences, Alnamas, Kingdom of Saudi Arabia

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Abstract: Effective cardiopulmonary resuscitation effort can lead to saving lives. This skill is especially important to nursing practice.

I. AIM

The Aim of this study is to measure the effect of enhanced training session supported by simulation on the retention of CPR knowledge and skills in nursing students.

It can be a lifesaver when applied by a competent and skilled person during resuscitation (Canlas 2009). CPR procedure is a coordinated integration of chest compression-induced circulation, rescue breathing and airway management whereby priorities are determined by evidence from literature and practice (AHA 2010). The two levels of CPR are basic and advanced cardiac life support (BLS and ACLS). In the present study CPR refers to the BLS only. During the study, health care and nursing students are instructed to carry out CPR effectively.

They are trained by educators who are usually licensed and well-experienced on performing CPR. This is usually followed by updates for the resuscitation knowledge and skills in different settings while studying, such as the simulation lab (Adams 2004). This practice of training is carried out in many countries around the world.

Adequacy of CPR knowledge and skills can be gained from two sources. First, it is the nursing graduates' professional responsibility to assume control and update their skills. Second, it is the responsibility of the nurse educator to ensure CPR adequacy among students while studying. Literature, however, indicated that nursing students, who attended CPR training, might not retrain, update or retest their skills frequently (Hoadley 2009).

Thus, they remain under limited supervision to ensure that they have the ability to perform CPR well when needed.

II. METHODS

Quasi Experimental two group Research design was used. Participants were Third -year students from the nursing program. The number of students who accepted to participate in the study was 40.

A. Procedure

The teaching method was for 3-hour conduction programme conducted only by the investigator, and certificated to train CPR by wockardt hospitals, India. It combined the standard CPR guidelines for adults and a low-fidelity simulation experience using cardiopulmonary arrest scenarios. Knowledge and skills acquisition tests were applied at three points: pretest, posttest I (directly after the conduction programme), and posttest II towards the end of week 10. All participants had been trained on CPR within the past 9 months as part of their training within the program.

The timing of the initial conduction programme was at week 1, enhanced session by the end of week 3 and again by the end of week 7 , and the administration of posttest II at week 10 toward the end of the academic year.

Students attended a standard multiple- choice question-pretest .Students also had skill test, which was rated based on a checklist representing the performance guidelines set by the AHA using low-fidelity human simulation

Participants were then divided using convenient sampling technique into experimental and control group. The collected data was organized and analyzed by using descriptive and inferential statistics.

III. RESULTS

A total of 40 Third year nursing students participated in this study. The age of the participants ranged between 19 and 22 year-old, 65% (n=26) of them were 22year-old . Half of the participants were female (n= 20), and only 30% (n=12) reported previous exposure to CPR. The scores for the skill test of the experimental group ranged from 20 to 25 points, with a mean of 23.5 (SD 1.670).Posttest II findings indicated the presence of significant differences between both groups on both tests .Comparison between both groups' mean scores had shown that students in the experimental group have achieved significantly higher scores in CPR skill test .

IV. CONCLUSIONS

The adoption of enhanced   sessions supported by simulation within the semester improves knowledge and skills of CPR competency. Although increasing the frequency of exposure and the use simulation are all strategies used to improve student ability to practice nursing skills competently.

V. RECOMMENDATIONS

Future studies are needed to evaluate their effect on different nursing competencies, and on the clinical decision-making abilities of nursing students.

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