THE EFFICACY OF SIMULATION TRAINING TO INCREASE CONFIDENT IN AIRWAY MANAGEMENT DURING RESUSCITATION AT RED ZONE AMONG FINAL YEAR NURSING STUDENTS KOTA KINABALU HEALTH MINISTRY TRAINING INSTITUTE

INTRODUCTION

Background: Clinical attachment to the Emergency and Trauma Department was a requirement in the curriculum for final year nursing student in Kota Kinabalu Health Ministry Training Institute (ILKKM KK). The clinical objective of this two-week clinical placement was to gain knowledge and skills in delivering care for critically ill patient such as Traumatic Brain Injury (TBI), Motor Vehicle Accident (MVA) and other trauma related injuries. They were also required to enhance their confidence level in involving airway management during resuscitation in the red zone such as preparing for endotracheal tube (ETT) insertion and intubation. **Problem Statement** : Prior to their first clinical attachment to the Emergency and Trauma Department, some of the final year Kota Kinabalu Health Ministry Training Institute nursing students verbalize anxiety towards the critical environment .According to Williams and Palmer (2013) and Lin (2016), clinical settings generally have long been described as one of the most anxiety-producing situations for students and this may interfere their performance and ability to learn.

Objectives:

To compare the confidence level between twenty ILKKM KK final year nursing students with simulation training in airway management (Test Group) and twenty ILKKM KK final year nursing student without simulation training in airway management (Control Group).

Method

Study Design : This was a pretest-posttest study design involving forty ILKKM KK final year nursing students with simulation on airway management (test group) and without airway management (group group) before posted to Emergency and Trauma Department (ETD).

Ethical Considerations : Permission to conduct this study was obtained from the investigator's thesis committee (FONAS) of Open University Malaysia, the director of the *Institute Latihan Kementerian Kesihatan* Malaysia Kota Kinabalu (ref no: 42432) and registered under the National Medical Research Register(NMRR-18-1887-42432).

Sampling : Simple Random sampling was used to divide between test and control group among final year Diploma Nursing students who meet the sample criteria and consent to participate in the study.

Assessment Tool :

Two instruments were used;

i) Pretest/posttest survey design by Porter et al (2013), and;

ii) The Simulation Efficacy Tool-Modified (SET-M). SPSS version 24.

Protocol For Simulation

The researcher was using the 'BLS Course Study Guide & Review' (AHA, 2010) as guidance for the simulation. The simulation procedure included four sessions including orientation, briefing, clinical teaching, hands on simulation, and debriefing.Students was divided into groups of four, five students in each group. Briefing, clinical teaching and hands on simulation will take place about two hours by the clinical instructors. A pre-test questionnaire was distributed to the student to assess their confidence level before simulation training. In providing smooth of the airway management practice, there was two airway stations and two CPR one-man stations. Each group was given one hour to take turns in practicing airway management in two stations, airway and one-man CPR, assisted by the clinical instructors.

Statistical Approach

The statistical analysis SPSS version 25.0 for window was used, first step was to recode the negative items found in questionnaire into positive items. Then test for skewness to see the normal distribution; checking for all assumption that meets with Independent T-Test.

Findings

Group Statistics

	Group	N	Mean	Std. Deviation	Std. Error Mean
Future Clinical	Test Group	20	31.1500	3.53039	.78942
	Control Group	20	31.1550	2.15809	.48256

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Future Clinical	Equal variances assumed	6.029	.019	-.005	38	.996	-.00500	.92523	-1.87803	1.86803
	Equal variances not assumed			-.005	31.460	.996	-.00500	.92523	-1.89090	1.88090

Levene's test for equality of variance shown significant (t= -.005, df = 38, p<.05), since the probability value (Sig.) obtained (.019) is less then predetermine alpha value (.05), thus null hypothesis was rejected. There exists adequate evidence to show that there was a significant different in the mean score of test group and the mean score of control group.

Discussion

The findings of this research suggested that student nurses ILKKM KK perceive differences between student nurse with simulation in airway management and nursing student without simulation training in airway management during resuscitation in the red zone. Student confident was a priority in both the current and ideal learning experience when examined by the questionnaire survey. There was need to create a new clinical nursing curriculum in ILKKM. Nurse educators who design nurse training programmes must consider an approach to include simulation training focusing in airway management into the final year nursing student curricular to increase the confidence level of nurses during clinical placement.

Limitation

- Sample size used in the study is small.

Conclusion

The test group (received the simulation training in airway management) were more confident compare to the control group (without simulation training in airway management) before going for clinical posting in ER. Simulation training in airway management increased confident level among the test group compare to control group who did not receive the simulation training.

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