



"EFFECTIVENESS OF V2REDU.COM, A VIRTUAL SIMULATION APPLICATION ON KNOWLEDGE REGARDING TRIAGE SYSTEM IN MASS CASUALTY INCIDENTS AND DISASTERS AMONG UNDER-GRADUATE NURSING STUDENTS"

Ms. Janet Joseph

Alumni of P.D. Hinduja College of Nursing.

Ms. Sani S George

Tutor, P.D. Hinduja Hospital and MRC, College of Nursing.

ABSTRACT

V2Redu.com is an online based software application for virtual simulation which interactively engages the user and simulates them within a virtual environment via various case scenarios related to a particular topic. **Objective:** To assess the effectiveness of Virtual Simulation Application on knowledge of student nurses regarding Triage system on mass casualty incidents and disasters. **Design:** Quasi-Experimental Non-equivalent control group pretest-posttest design. **Settings:** Under-graduate Nursing students from P. D. Hinduja College of Nursing. **Methods:** V2Redu.com application was given access to selected group of nursing students divided as experimental group which had an initial pretest (Day 1) followed by a tutorial video and case scenarios that ended with a post-test (Day -7) and certification. At the same time the control group was given an online session. Later on, the knowledge was assessed using structured questionnaire tool. **Results:** There was a significant statistical difference between the experimental and control group in the mean knowledge scores which was calculated using paired t-test. **Conclusion:** Virtual Simulation Application was found effective among the nursing students to improve their knowledge regarding triage system and could also be used as a reference material for reinforcement of their knowledge and critical thinking skills about the triaging victim.

KEYWORDS :

INTRODUCTION:

Triage is an emergency function carried out by the triage nurses in mass casualty incidents and disasters along with the doctors. It is critical for nursing students to have sufficient information about the process of triage as they have to handle many such situations in future and that period is crucial for the nurses to save the maximum lives. Triage skill among nurses is the key element of supervision of MCI and disasters. V2Redu.com is an online based software application for virtual simulation which interactively engages the users and simulates them within a virtual environment via various case scenarios related to a particular topic.

WHAT IS V2REDU.COM?

V2Redu.com is a website for virtual simulation that comprises of an explanation video and various questionnaire based case scenarios that are animated and user-friendly.

TITLE OF THE STUDY:

Effectiveness of Virtual Simulation Application on Knowledge regarding Triage System in Mass Casualty Incidents and Disasters.

PROBLEM STATEMENT:

A Quasi-Experimental Study 'To Assess the Effectiveness of Virtual Simulation Application on Knowledge regarding Triage System in Mass Casualty Incidents and Disasters 'Among under graduate nursing students.

OBJECTIVES:

Primary objective

To Assess the Effectiveness of Virtual Simulation Application on Knowledge of Student Nurses regarding triage System in Mass Casualty Incidents and Disasters.

Secondary objective

To assess the student nurses' previous knowledge regarding triage system in mass casualty incidents and disasters.

To develop a virtual simulation application regarding triage system in mass casualty incidents and disasters.

HYPOTHESIS:

H0: There is no significant mean difference in the pre-test and post-test knowledge scores among the nursing students between control and experimental groups.

H1: There is significant mean difference in the pre-test and post-test knowledge scores among the nursing students between control and experimental groups.

METHODOLOGY:

Research Design: Quasi-Experimental non-equivalent control group pre-test-post-test design.

Population/setting: Basic BSc Nursing students from PD. Hinduja college of Nursing.

Sample: Third year Basic BSc Nursing students.

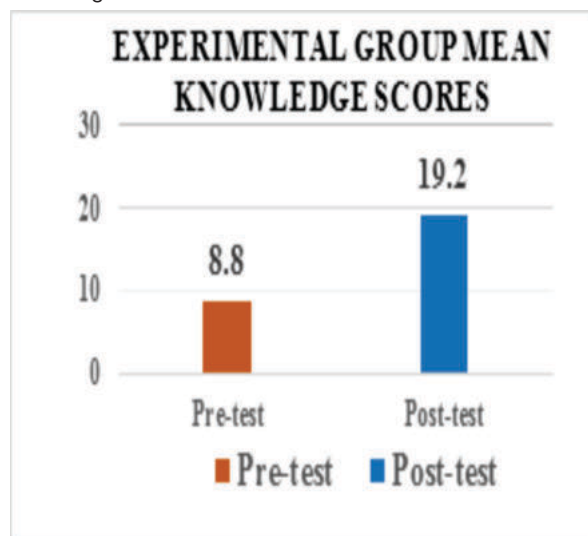
Sample Size: 30 Undergraduate nursing students.

Tool: Structured Questionnaire.

Plan For Data Collection: Pre-test (Day 1) – Virtual simulation application – Post-test (Day 7).

RESULTS:

This study reveals that there are no much statistical differences between both the groups in the demographic variables, however there is a significant statistical difference between the experimental and the control groups in the mean knowledge scores.





The test results evince that there is a statistically significant difference in the pre-test and post-test knowledge scores among the experimental group after the implementation of virtual simulation application. The mean post interventional scores raised from 8.8 to 19.2. However there is no significant difference in the pre-test and post-test knowledge scores in the control group after taking online lecture cum discussion method via zoom meeting.

DISCUSSION:

The researcher believes that larger studies are required, to determine the effectiveness of virtual simulation application among the nursing students on different topics. It is advantageous to seek more advanced technology in the field of nursing and improving their level of knowledge and critical thinking skills.

CONCLUSION:

It can be concluded that virtual simulation application was found effective among the nursing students to improve their knowledge regarding triage system in mass casualty incidents and disasters. However, it cannot be used on daily basis for teaching and learning method as it may cause strain to the eye, but can use as a reference material for reinforcement of their knowledge and critical thinking skills about triaging a victim.

Link For The Virtual Simulation Application:

<https://v2-redu.onrender.com>

REFERENCES:

1. Cynthia L. Foronda PhD, RN, CNE, ANEF, Keith Shubeck BA, Sandra M. Swoboda RN, MS, FCCM, Krysia Warren Hudson DNP RN, BC, Chakra Budhathoki PhD, Nancy Sullivan DNP, RN and Xiangen Hu PhD, Impact of virtual simulation to teach concepts of disaster triage, *Clinical Simulation in Nursing*, 2016, April 1, Volume 12, Issue 4, Page 137-144.
2. Yun-Kuan Lin, Kuang-Yu Niu, Chen-June Seak, Yi-Ming Weng, Jen-Hung Wang & Pei-Fang Lai, Comparison between simple triage and rapid treatment and Taiwan Triage and Acuity Scale for the emergency department triage of victims following an earthquake-related mass casualty incident: a retrospective cohort study, *World J Emerg Surg*, 2020, March 11, 15(1):20.