



ORIGINAL RESEARCH PAPER

Nursing

A NURSE LED INNOVATION "BUG BATTLE" MOBILE APP: FOR CLINICAL PREPAREDNESS OF UNDERGRADUATE NURSES ON BIOMEDICAL WASTE MANAGEMENT.

KEY WORDS: Biomedical Waste Management, BUG BATTLE Mobile Application

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ABSTRACT

Nursing personnel play a critical role in healthcare waste segregation in the hospitals. Their knowledge, attitudes, and practices regarding healthcare waste management are vital for the prevention of healthcare waste related hazards. A Preexperimental Single group pretest post-test design was adopted to assess the effectiveness of "BUG BATTLE" Mobile App for Clinical Preparedness of 30 undergraduate Nurses on Biomedical Waste Management. Non-Probability, Purposive Sampling was used to collect the data. Structured questionnaire was used to assess the knowledge scores and opinion about BUG BATTLE mobile App. Paired t –Test was used to evaluate the effectiveness of BUG BATTLE APP. The T stat i.e. calculated value was found to be 3.65 and table value is 2.05 at 0.05 level of significance. Since calculated value is greater the table value, Null hypothesis is rejected. Thus, BUG BATTLE App is effective for enhancing the knowledge on biomedical waste management.

INTRODUCTION:

Bio-medical waste management (BMWM) is a serious and vital issue, Infection control is everyone's responsibility, and Nursing personnel play a critical role in healthcare waste segregation in hospitals.

What is BUG BATTLE...??

"BUG BATTLE" Mobile App is a gaming solution which comprises of various Questions about awareness of biomedical waste, its hazards, management, the colour coding for segregation and methods used for disposal.

TITLE:

Development & Testing of "BUG BATTLE" mobile app: a Nurse led Innovation for clinical preparedness on Biomedical Waste Management among under graduate Nursing students.

AIM:

To develop "BUG BATTLE" Mobile App for clinical preparedness on Biomedical Waste Management among under graduate Nursing Students.

OBJECTIVES:

Primary Objective: To develop "BUG BATTLE" mobile App on Biomedical Waste Management.

Secondary Objective: To evaluate the effectiveness of "BUG BATTLE" mobile App

HYPOTHESIS:

H₀: There is no significant difference in pre & post-test mean knowledge scores after Implementation of BUG BATTLE Mobile App.

H₁: There is significant difference in pre & post-test mean knowledge scores after Implementation of mobile app

MATERIALS AND METHODS:

RESEARCH DESIGN: Preexperimental Single group pretest post-test design.

SETTING: Selected Nursing College.

SAMPLE: 30 Undergraduate Nursing Students

SAMPLING TECHNIQUE: Non-Probability, Purposive Sampling

TOOL: Structured Questionnaire

Day-1 Pretest- App- Day-2 Post-test

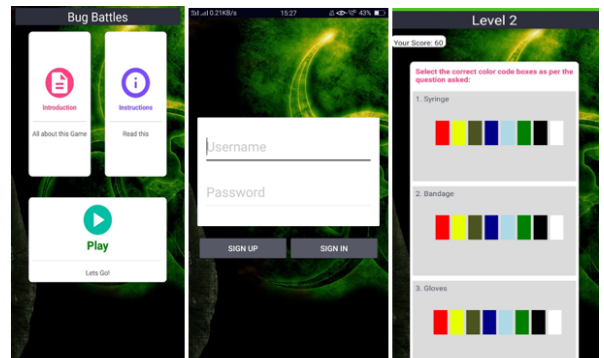
Phase-I: Development of "BUG BATTLE" mobile App related to Biomedical Waste Management.

- **NEED ASSESSMENT**
- **UPDATING** Domain knowledge
- **CONTENT VALIDATION** by Experts in Nursing Education & Service

- **DESIGNING APP** using Android Studio & coding through Java Script

PHASE-II: Release of App & Evaluate its effectiveness.

- Obtaining Pretest and Posttest knowledge scores.
- Performing Satisfaction Survey and obtaining feedback-App rating



RESULT:

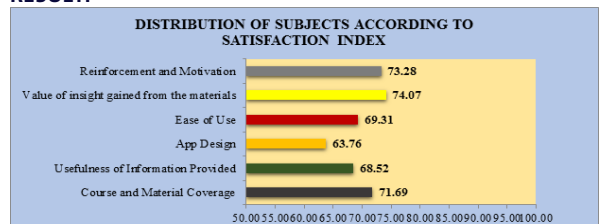


Fig1.1 Distribution of Subjects According to Satisfaction Index

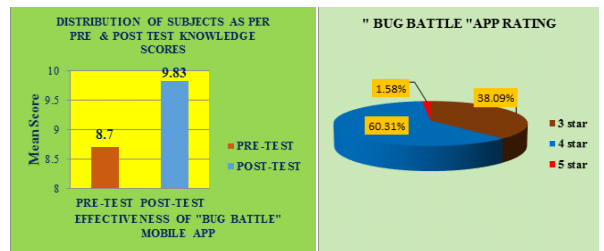


Fig1.2 Distribution of Subjects as per Pre & Post Test Knowledge Scores.

Fig1.2 Distribution of Subjects as per App Rating

Paired t –Test was used to evaluate the effectiveness of BUG BATTLE APP. The T stat i.e. calculated value is 3.65 and table value is 2.05 at 0.05 level of significance. Since calculated value is greater the table value, null hypothesis is rejected. Thus, BUG BATTLE App is effective for enhancing the knowledge on biomedical waste

management. Majority 60.31% of subjects rated 4 star rating for the app.

CONCLUSION:

Technology evolves at a rate much quicker than most of us can keep pace with. Right now, we are in the era of mobile applications, **Battle Bug** is an innovative, user friendly app, which can be used to reinforce and sensitize Nurses to practice biomedical waste management.

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