DEVELOPMENT, VALIDATION, AND EVALUATION OF THE EFFECTIVENESS OF SIMULATION IN BASIC LIFE SUPPORT TRAINING (SBLST) ON NEWLY EMPLOYED NURSES IN GOVERNMENTAL JORDANIAN HOSPITALS

Statistical Analysis Plan

Last update 0n 20-4-2023

Malaysian Human subjects protection review board date: 20-4-2023

*

Introduction

The data will be collected through the Google Forms platform, and the researchers will extract the data responses from Google Forms as an Excel sheet (Microsoft Office 2016); all the quantitative data will be coded and transferred to IBM SPSS version 27; the data will be analyzed by using (1) descriptive and (2) inferential statistic.

1. Descriptive Statistics

The descriptive statistic will illustrate the homogeneity and characteristics of NEN in the control and experimental group, including the number and percentage of participants for each group. Also, it will be used to describe statistics for participants' knowledge, practice and confidence level mean percentage in the pre-test and post-test scores.

2. Inferential Statistics

A. Independent T-test

Independent T-test will be used to identify the homogeneity or heterogeneity between pre-tests and post-tests in the control and experimental groups in all dependent variables by interpreting the P-value and comparing means (SD). The researchers plan to use independent T-tests despite the normality assumption not being fulfilled depending on the central limit theorem, which states that if samples are more than 30 participants in each group, the researcher can use mean and SD.

B. Repeated Measures-ANOVA

The researchers will use "Repeated Measurement ANOVA" for inferential statistics of the mean of the dependent variables between the interventional and comparator groups in all pre-test and post-tests. Finally, the researchers compared the

*

"Mean," "Standard Deviation," and significant level (*P*-value) between tests to explore the effectiveness of the intervention SBLST.

In this step of the analysis, the researchers want to estimate a good idea about the outcomes and how SBLST is considered a good intervention or not after comparing the knowledge score, practice score, and confidence level in both interventional and control groups. The researchers selected a *P*-value < 0.05 for statistical analysis significant to accept the alternative hypothesis or reject the null hypothesis.

C. Effect Size (Cohen's Score)

The researchers will calculate the effect size between pre-test and post-test-2 in each group and identify the most effective treatment method that increases knowledge, practice and confidence score. Effect size reflects the SBLST's effectiveness if it produces a small, moderate or large effect. The researchers plan to use Cohen's formula (d) to calculate the effect size; effect size assists the researcher in interpreting the effectiveness of the SBLST before and after intervention and also interpret the two intervention in two groups after the intervention, according to the following category (<0.2), small effect; (0.2-0.8), moderate effect, (>0.8), large effect; and finally more than 0.9, very large effect (La Cerra et al., 2019).

*