

# Evaluation of a Learning Module for Nurse Practitioner Students: Strategies to Address Patient Vaccine Hesitancy/Refusal

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## Background

Immunizations have been a major reason for the decrease in vaccine preventable diseases in the United States. Recently there has been an upsurge in vaccine hesitancy and refusal due to concerns about safety, efficacy and necessity of vaccines. Vaccine misinformation in the media has also impacted patient vaccine decision making.

Health care providers are encountering increasing rates of vaccine hesitancy and refusal in the primary care setting. Specific evidence based strategies are needed to assist providers when patients refuse recommended vaccinations

There is limited research on educating health care providers on strategies to address vaccine issues. Primary health care providers (including nurse practitioner students) need additional knowledge and effective communication skills to address the issue of patient vaccine hesitancy and refusal.

## Objectives

The purpose of this scholarly project was twofold:

First, to evaluate an online, interactive, learning module to enhance knowledge of nurse practitioner students on vaccine hesitancy and refusal issues.

The second purpose was to examine the effectiveness of the learning module on enhancing nurse practitioner student knowledge of motivational interviewing communication skills to address issues of vaccine hesitancy and refusal.

## Methods

Education Module: A one hour, web based interactive learning module was designed to educate nurse practitioner students on current issues of patient vaccine hesitancy and refusal. The same module incorporated specific strategies and motivational interviewing communication skills to address these issues.



Design: A one group pre-test/post-test design was used to evaluate knowledge and communication skills of nurse practitioner students to address the issue of vaccine hesitancy/refusal. The assessment tool consisted of a 25 item questionnaire administered before and after the subjects participated in the interactive module experience.

Sample and Setting: Nurse practitioner students enrolled in clinical courses in a school of nursing at a large private university were recruited for the study. Five nurse practitioner faculty also participated.



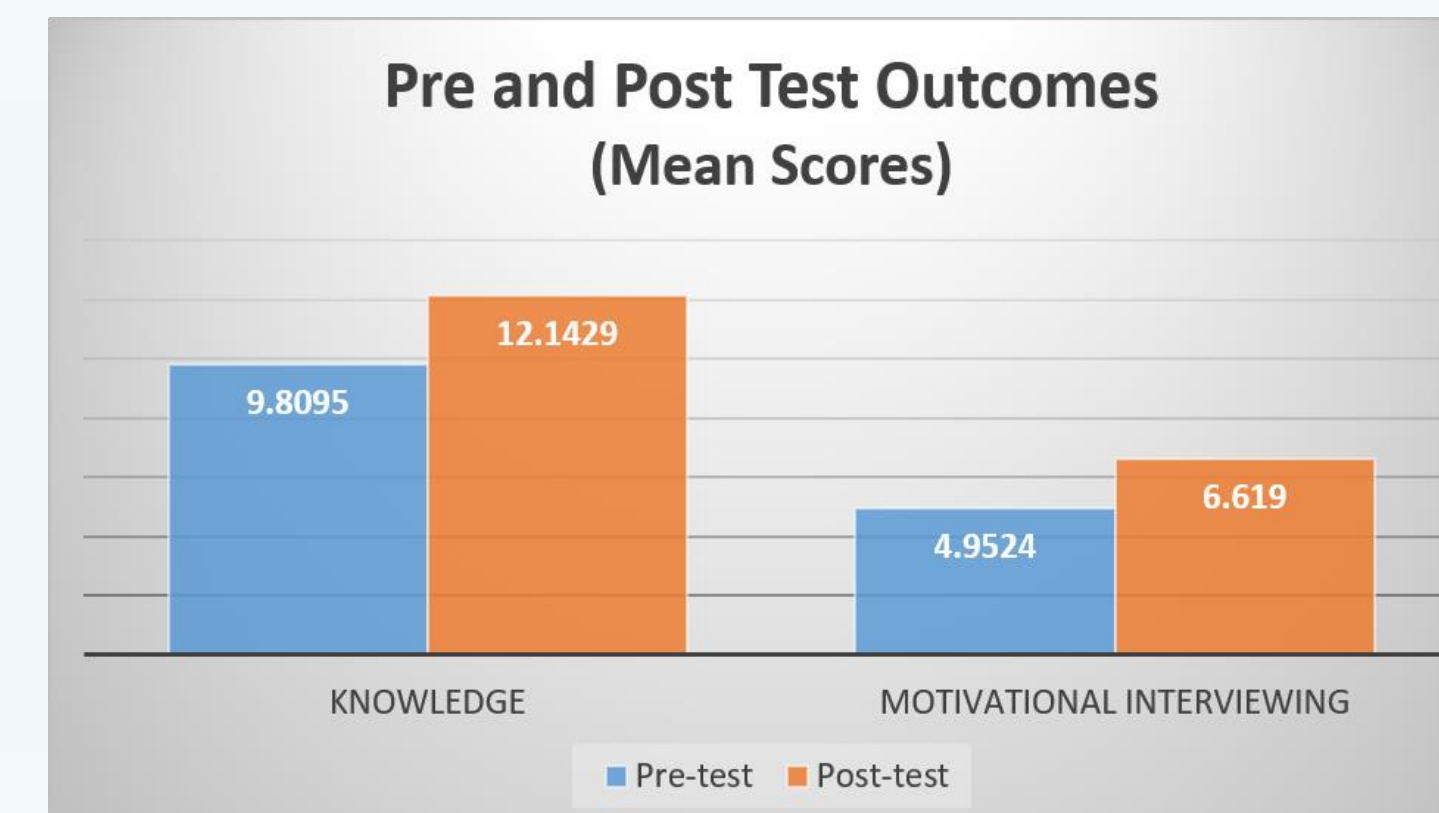
## Results

Descriptive Statistics:

- 21 participants completed the pre/post test along with the learning module.
- 9 participants were excluded from the study as they completed the pre-test only.

Mean Age: 38.29 years (SD 11.761)

Mean Years in Practice as RN : 9.14 years (SD 10.111)



The questionnaire consisted of 16 questions on knowledge of vaccine issues and 9 questions on motivational interviewing communication skills.



## Data Analysis

Paired t test results and analysis:

A paired-samples t-test indicated that scores were significantly higher for the post-test on Knowledge (M = 12.14, SD = 1.52) than for the pre-test on Knowledge (M = 9.80, SD = 2.44),  $t(20) = -3.598$ ,  $p < .002$ .

A paired-samples t-test indicated that scores were significantly higher for the post-test on Motivational Interviewing (M = 6.61, SD = 1.11) than for the pre-test on Motivational Interviewing (M = 4.95, SD = 2.08),  $t(20) = -3.439$ ,  $p < 0.03$ .

## Conclusions

Study results suggest that a web based learning module improved participants' knowledge of vaccine hesitancy and refusal issues and increased knowledge of motivational interviewing communication skills.

Additional study is needed on the use of web based education programs for health care providers to address vaccine hesitancy and refusal in clinical practice

## References

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