

# **Educational Electronic Medical Record Documentation Training and Their Effect on Self-Efficacy Among Senior Nursing Students.**

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The Electronic Medical Record (EMR) is a legal document used to:

- ▶ Maintain details of health professional interactions
- ▶ Plan care
- ▶ Communicate information
- ▶ Evaluate the quality of health services
- ▶ Deliberate cases that affect quality and safety in healthcare delivery

# Introduction

## Introduction (cont.)

Presently, with the introduction of technology and Electronic Medical Record (EMR)

- ▶ Limited access to document in the EMR
- ▶ Integration of EMR in nursing programs curriculum
- ▶ Faculty as a barriers of EMR training
- ▶ Need to integrate informatics skills in EMR
- ▶ Safety and quality
- ▶ Teaching tool to link of theory to practice.

# Background



- ▶ Limited exposure to document in the EMR during clinical practice.
- ▶ The importance of BSN students' practice and clinical experiences is to develop knowledge and skills for the appropriate use of information and technology (Perry & King, 2009).

## Background (cont.)

Reduced nursing students exposure to EMR may result in:

- ▶ Inadequate knowledge
- ▶ Inadequate skills to communicate findings
- ▶ Weakness in care plans development, affecting students' self-efficacy in the documentation once they graduate.

# Problem Statement

**Studies demonstrate that nursing students do not acquire the necessary skills in the EMR documentation.**

**Nursing professionals adopted the EMR slower than other disciplines (Nokes et al., 2015)**

**Weakness in the development of the EMR documentation skill:  
affects the quality and safety of services in health care  
sends unprepared professionals to the workplace.**

**Agencies have identified that newly graduated nurses lack mastery of this skill; which entails investing time and resources in education.**

# Purpose Statement

The purpose of this project was to evaluate the effect of an EEMR documentation training in Self-Efficacy of electronic documentation among senior nursing students.

# Research Question

What is the effect of an EEMR documentation training on the self-efficacy of EMR documentation among senior nursing students?

- P Senior nursing students from a BSN program
- I Educational electronic medical record documentation training
- C One group pre-test and post test
- O Increase self-efficacy level in electronic documentation
- T 10-hour training



# Hypothesis

## Alternative Hypothesis

- ▶ An Educational Electronic Medical Record training will increase self-efficacy in electronic documentation of senior nursing students after 10 hours of educational intervention.

## Null Hypothesis

- ▶ An Educational Electronic Medical Record training will not increase self-efficacy in electronic documentation of senior nursing students after 10 hours of educational intervention.

Pobocik (2013)

Warboys, Mok, and Frith (2014), Oetker-Black, Kreye, Underwood, Price, and DeMetro (2016)

Educational programs of EMR increased the level of self-efficacy

# Literature review

# Literature Review

Jones and Richards (2013)

Morente, Morales-Asencio, and Veredas  
(2014)

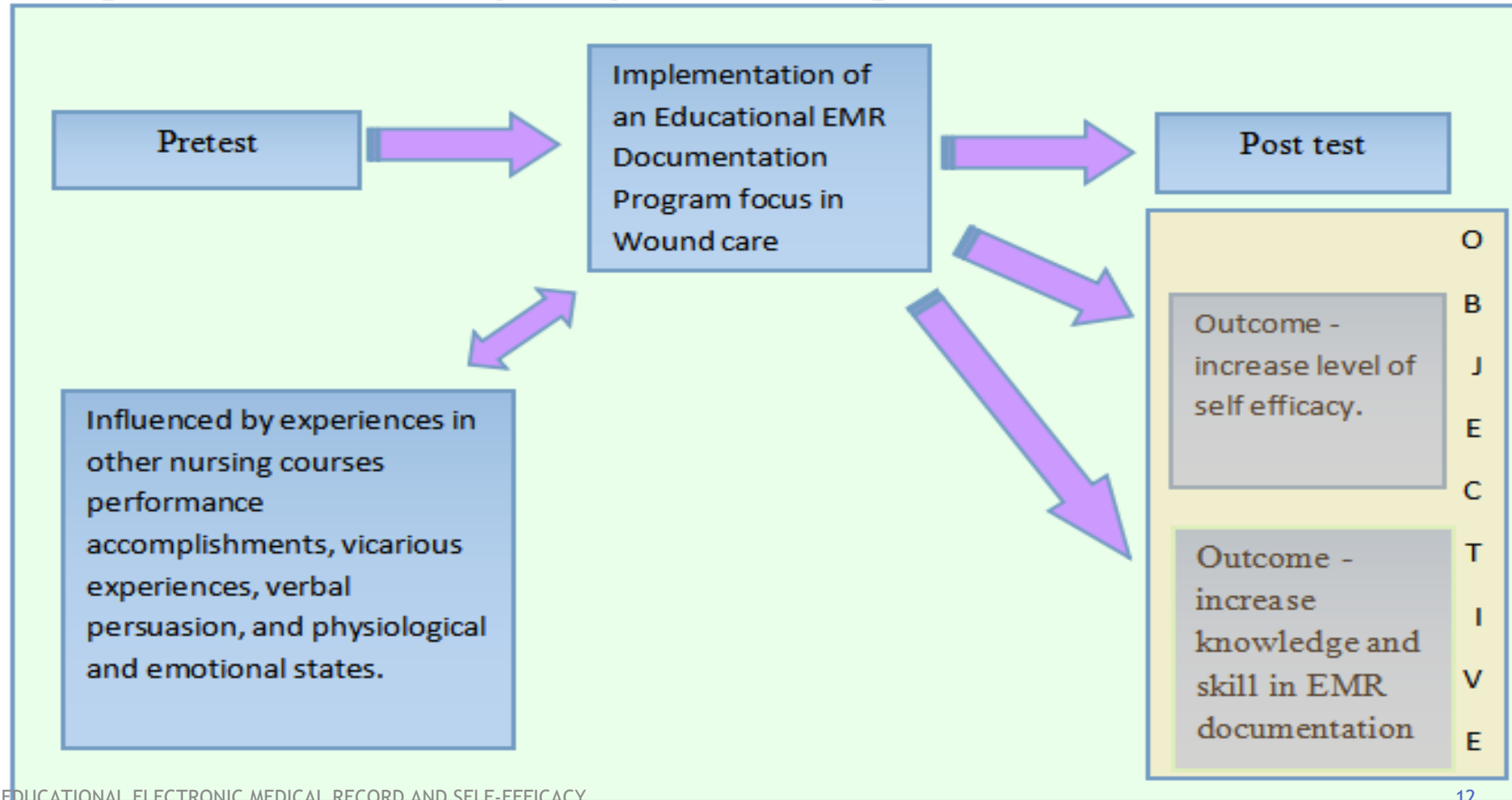
Dunne (2016)

Nursing Students

Increased Self-Efficacy levels after EEMR programs

# Bandura's Social Cognitive Theory (1977)

Figure 1 Self - Efficacy Theory Framework Diagram



# Scope and limitations

- ▶ **Scope**
  - ▶ Senior Nursing Students
  - ▶ Last Year For-Profit University
  - ▶ Enrolled in Community Health Nursing Course
- ▶ Internal and External validity
- ▶ Limitations
  - ▶ EMR software
  - ▶ Effects of Hurricane María

# Project design and Methodology

## Project Design

- ▶ Quantitative
- ▶ quasi-experimental design
- ▶ One group pre- & post-test
- ▶ Pre test General Self-efficacy Scale (GSES) (Schwarzer & Jerusalem, 1979)
- ▶ Educational intervention with EMR
- ▶ Post test General Self-efficacy Scale (GSES)  
Hypothetical cases and images

# Instrument

- ▶ Demographic data
  - ▶ gender
  - ▶ age
  - ▶ previous EMR documentation experience
  - ▶ computer literacy

## General Self-Efficacy Scale

- Schwarzer and Jerusalem (1979)
- assess the strength of individual belief in her or his ability to respond to any situation
- take just three to five minutes to be completed
- easy interpretation
- validity is correlated to emotion, optimism and work satisfaction
- high internal reliability between alpha .75 and .91. For this study, the reported Cronbach's Alpha was .95

# Ethical considerations

- ▶ Approval of the American Sentinel University's IRB
- ▶ Principal Investigator Manifesto (American Sentinel University, 2016)
- ▶ Informed consent
- ▶ Voluntary participation
- ▶ Confidentiality
- ▶ Electronic data securely on a private password-protected, personal computer
- ▶ The data will be destroyed five years after the completion



# Data Collection

**1. Once the student accepted to participate voluntarily and signed the consent form, the researcher administered a demographic survey and the General Self-Efficacy Scale (pre-test).**

**2. Participants received the EEMR with a case studies of patient with pressure ulcers.**

**4. After the educational intervention, the researcher administered the General Self-Efficacy Scale, as a post-test.**

**3. During the Implementation of EEMR documentation program, the researcher asked to the participants to chart a routine note using the DAR format and EEMR software.**

# Sample and Setting

## Inclusion Criteria

- ▶ Nursing students enrolled in a BSN program in selected institution.
- ▶ expected graduation date within a year or less
- ▶ enrolled in a Community Health Nursing course
- ▶ 21 years of age or older

# Sample and Setting

## Exclusion criteria

- Nursing students enrolled in a BSN programs in other institutions.
- Students from the selected institutions enrolled in other programs.
- Expected graduation more than a year.
- Not enrolled in a Community Health Nursing course.

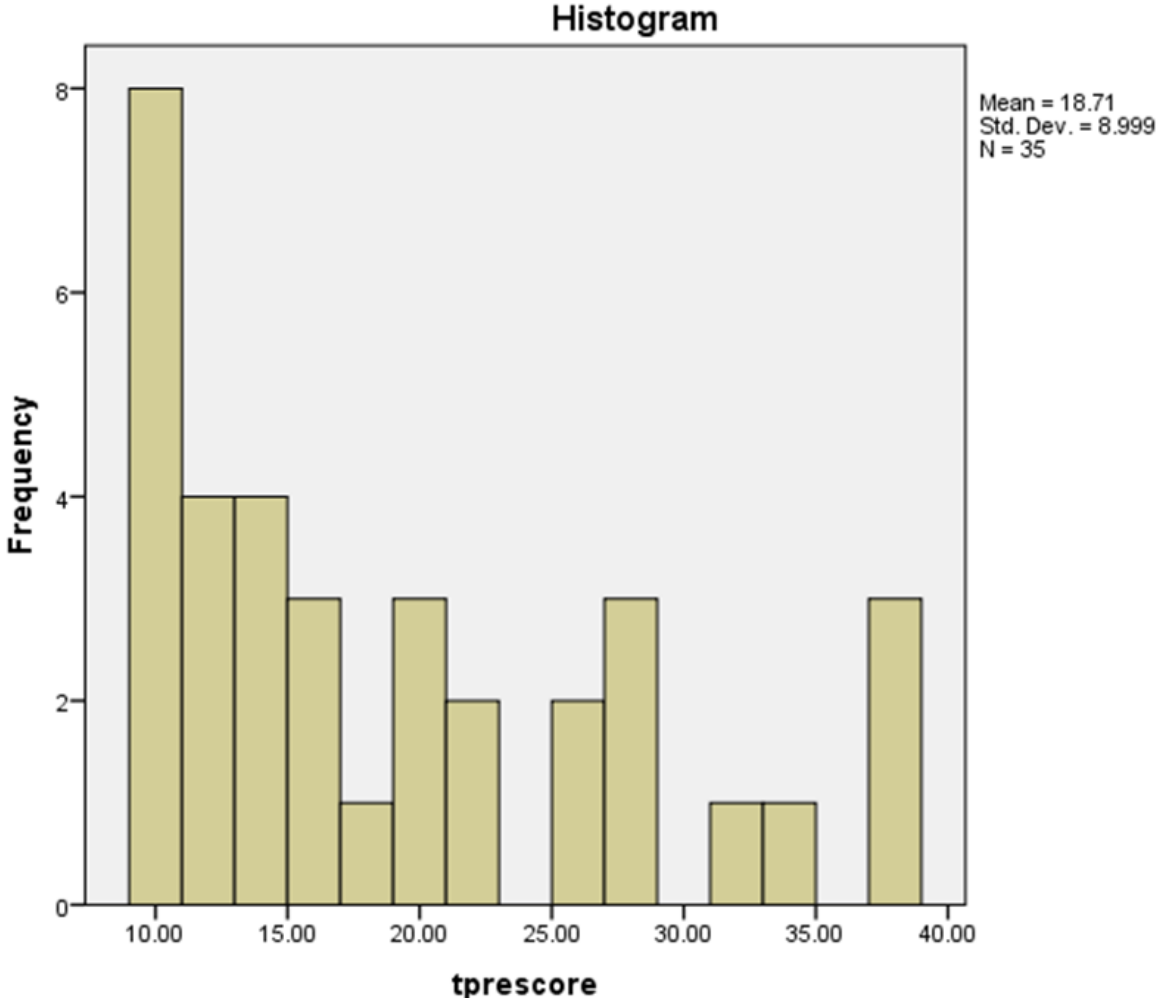
# Sample and Settings

Variables	N	%
<b>Gender</b>		
Female	31	88.6 %
Male	4	11.4 %
TOTAL	35	100 %
<b>Age</b>		
21-29	22	63 %
30-40	9	26 %
41-49	4	11 %
TOTAL	35	100 %

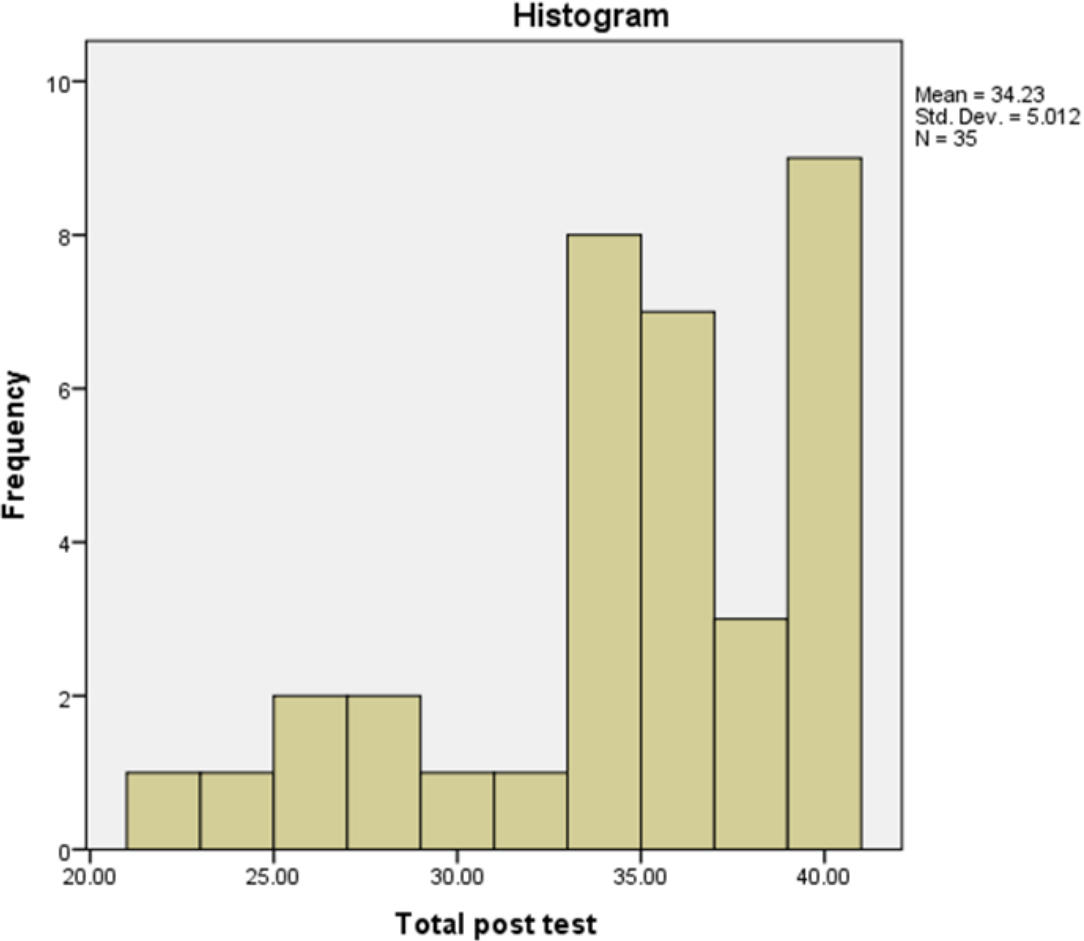
# Sample and Settings

Variables	N	%
<b>Computer Literacy</b>		
Yes	17	48.6%
No	18	51.4 %
TOTAL	35	100 %
<b>Experience with EMR</b>		
A lot	3	8.6 %
Some	2	5.7 %
Very Little	4	11.4 %
None	26	74.3 %
TOTAL	35	100 %
0		

# Data Analysis (Test of Normality)



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# Statistical test: Non-parametric

- ▶ Wilcoxon Signed Rank Test
  - ▶  $z = -5.014, p < .000$
- ▶ large effect size ( $r = .59$ )

# Effect size

▶  $r = z / \text{square root of } N$

$$Z = 5.014$$

$$N = 35 \times 2 = 70$$

$$r = 5.014 / \sqrt{70} =$$

**.59**



# Data Analysis

- ▶ The median score of the Self-Efficacy levels scale increased from pre-program (Md = 15) to post-program (Md = 35).



# Additional Findings

- ▶ Each premise contained in the General Self Efficacy Scale showed a significant increase in the score of their answers when we compared the pre-test with the post test, which fluctuated between 47 to 71 points. The two questions that showed the greatest difference between the response in the pre-test and post-test are related to the persistence to achieve success in the use of EMR.

# Implications for Nursing Practice

## Nursing Students

- Increase self-efficacy
- Development of QSEN competencies

## Academia

- Increase student satisfaction
- Branding position
- Placement of the alumni
- Strategic and fiscal plan.

## Employers

- Prepared nurses
- Quality and safety in nursing care services
- Clear documentation

# Recommendations for future research

- ▶ Modify inclusion criteria
  - ▶ Students in other academic years
  - ▶ Students in other nursing courses
- ▶ Add comments areas to the instrument.

# Summary

- ▶ Quantitative, Quasi-experimental, one group pre-test > intervention > post test.
- ▶ Evaluate the effect of an EEMR documentation program in self-efficacy of electronic documentation among senior nursing students.
- ▶ General Self-Efficacy Scale
- ▶ Non-parametric Wilcoxon Signed Rank Test
- ▶ Statistically significant increase in Self-Efficacy of EMR documentation following participation in the training program,  $Z = -5.014$ ,  $p < .000$ , with a large effect ( $r = .60$ ). The median score on the Self-Efficacy increase from pre-program (Md = 15) to post-program (Md = 35).

# Questions?



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