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

Dr. Yaritza Durán Rosa, DNP, MSN, RN
Puerto Rico,
Sigma Theta Tau – Epsilom Lambda Chapter
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
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.
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.
Educational programs of EMR increased the level of self-efficacy
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

**Pretest**
- Influenced by experiences in other nursing courses performance accomplishments, vicarious experiences, verbal persuasion, and physiological and emotional states.

**Implementation of an Educational EMR Documentation Program focus in Wound care**

**Post test**
- Outcome - increase level of self-efficacy.
- Outcome - increase knowledge and skill in EMR documentation

EDUCATIONAL ELECTRONIC MEDICAL RECORD AND SELF-EFFICACY
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

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**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 study of patient with pressure ulcers.

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.

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

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## Sample and Settings

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Data Analysis (Test of Normality)
Statistical test: Non-parametric

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

- Formula: \( r = \frac{Z}{\sqrt{N}} \)

Given:
- \( Z = 5.014 \)
- \( N = 35 \times 2 = 70 \)

Calculation:
- \( r = \frac{5.014}{\sqrt{70}} = 0.59 \)
Data Analysis

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


References


References


- Department of Health of United States


References


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References


http://search.ebscohost.com/login.aspx?direct=true&AuthType=url,cookie,ip,uid&db=c8


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References


- University of South California. (N.D.). Research Guides: The methodology.