Educational Intervention Effects on Nurses’ Perceived Ability to Implement Evidence-Based Practice

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Background:

An effective evidence-based practice (EBP) educational intervention has not been identified in the clinical settings (Black, Balneaves, Garossino, Puyat, & Qian, 2015; Underhill, Roper, Siefest, Baucher, & Berry, 2015). Lack of effective EBP educational interventions may delay the promotion of EBP in nursing. Nurses’ negative attitudes toward EBP are correlated with lack of skills and knowledge about EBP (Kharrazi, Mahsa, Amani, Rezaeian, & Setoodehzadeh, 2015; Majid et al., 2011). Effective EBP educational training and strategies are needed to improve nurses’ knowledge and skills of EBP, their beliefs about and attitudes toward EBP, and their perceived ability to implement EBP (Melynk & Fineout-Overholt, 2008, 2015).

Purpose:

The first purpose of this study was to examine the effects of a face-to-face educational intervention on nurses’ knowledge of EBP, their beliefs about and attitudes toward EBP, and nurses’ perceived ability to implement EBP. The second purpose was to examine the correlations between nurses’ knowledge of, beliefs about, and attitudes toward EBP and their perception of their ability to implement EBP after implementation of the intervention.

Methods:

A quasi-experimental pretest/posttest random design was conducted. Participants were assigned to the experimental group or control group randomly. Instruments utilized in this study were the knowledge and attitudes subscales of the Evidence Based Practice Questionnaire, the Evidence Based Beliefs Scale, and the Evidence Based Practice Implementation Scale. Wilcoxon’s signed rank test was used for within subject and between subject data comparison to examine the effects of the EBP educational interventions. Multiple coefficient test was planned originally to examine the relationship between the variables. Because of small sample size, Pearson’s correlation coefficient test was employed instead to examine the bivariate relationships of the variables.

Sample and Procedure:

Purposive sampling was used to recruit nurses in a county hospital in California. Forty nurses voluntarily participated in the study from April 2016 to November 2016. One out of the 40 nurses resigned. The 39 participants were assigned randomly to the experimental and control groups. The intervention provided for the experimental group consisted of six-hour educational training and a one-and-half-hour workshop. Out of the 39 participants, ten nurses in the control group completed the survey and nine nurses in the experimental group showed up in the EBP course. Data were collected from the experimental group before the intervention, immediately and one month after the intervention. Among the ten nurses in the control group, one nurse completed the pretest survey only and the data from the participant was excluded from analysis. The nine nurses in the control group completed the pretest and posttest survey without taking any of the EBP educational courses. A web-based survey was used for data collection. A few participants completed the survey four weeks after the intervention. Data from this point were excluded for analysis.
Results:

Data analysis included descriptive statistics, Wilcoxon's signed rank test, and Pearson's correlation coefficient test. Within subject data analysis indicated that the EBP educational intervention significantly improved nurses' beliefs about EBP, knowledge of EBP, and their perceived ability to implement EBP ($p < .05$). Pearson’s r test analysis indicated that there is no relationship between nurses’ knowledge of EBP, beliefs about and attitudes toward EBP, and their perceived ability to implement EBP ($p > .05$).

Conclusion:

The study results could encourage nurse leaders to promote teaching EBP in clinical settings and remove barriers to the application of evidence into nursing practice. Education alone cannot improve nurses’ beliefs about EBP, their EBP knowledge and skills, attitudes toward EBP, and their perceived ability to implement EBP. Organizational culture and readiness for EBP and support from leadership have been identified to improve nurses' beliefs about EBP and attitudes toward EBP (Melnyk & Fineout-Overholt, 2015; Stetler, Damschroder, Helfrich, & Hagedorn, 2011). Availability of EBP mentors, adequate infrastructure and resources are considered as successful strategies to promote nurses engage in implementing EBP in their daily practice (Melnyk et al., 2016).

In addition, the study served as a foundation for future studies on an educational intervention to help nurses adopt EBP. A quasi-experimental pretest and posttest research design with random assignment is a possible study design in education research in clinical settings (Cooper & Schindler, 2014; Cozby & Bates, 2014). One of the strengths of this study included a novel approach to using random assignment to examine the effects of an educational intervention on nurses’ perceived ability to implement EBP. Another strength of this study was the use of power analysis to calculate the necessary sample size for testing the difference of the effects of the intervention between the experimental group and the control group. However, the limitations of this study were a small sample size and purposive sampling. Future studies with a larger sample size and random sampling are highly recommended to obtain significant results for generalization.

Title:
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Keywords:
educational intervention, evidence-based practice and perceived ability to implement EBP

References:


Abstract Summary:
The study aimed to examine the effects of a face-to-face educational intervention on nurses’ knowledge of, beliefs about, and attitudes toward EBP, and their perceived ability to implement EBP. A pretest/posttest quasi-experimental randomized design was used. The results could encourage nurse leaders to promote teaching EBP in clinical settings.

Content Outline:
Introduction

Evidence-based practice (EBP) improves the overall quality of patient care by making health care more dependable, safe, accessible, and patient-centered. However, the gap in the time between when evidence is obtained from research studies and when the evidence gets implemented into practice often takes decades (Melnyk & Fineout-Overholt, 2015).

Regulatory agencies such as the Joint Commission have begun focusing on narrowing the gap between evidence and practice to improve health care quality and safety (Titler, 2008). Transforming evidence into action requires knowledge, action, and the will to accelerate the process of applying research into practice. Melnyk, Fineout-Overholt, Stillwell, and Williamson (2010) defined EBP as a problem-solving approach to the delivery of optimal care to the patients. Evidence-based practice integrates the best research evidence available in the research literature and individual preferences and values with health care professionals’ expertise. Nursing staff plays an integral role in achieving these goals. Nurses require strategies that galvanize, educate, and support them in understanding the process of EBP. Then, nurses will be able to identify clinical questions, explore and implement the evidence-based interventions to develop effective action and improve clinical outcomes. Nurses in a broad range of settings are expected increasingly to use EBP to develop plans care and effective nursing interventions to promote positive patient outcomes (Institute of Medicine [IOM], 2003, 2011).

Body

Background: Several studies have revealed that negative attitudes toward EBP are correlated with lack of knowledge about EBP and lack of skills needed for using EBP (Brown, Wickline, Ecoff, & Glaser, 2009; Linton & Prasun, 2013; Rycroft-Malone, 2004). These two factors are the most cited barriers impeding nurses’ adoption of EBP. The use of several strategies, including an educational intervention with administrative support, is considered as a successful strategy for nurses to actually adopt EBP in their clinical settings.

Purposes of the Study

1st purpose -
Examining the effects of an educational intervention on nurses’ knowledge of EBP, their beliefs about and attitudes toward EBP, and nurses’ perceived ability to implement EBP

2nd purpose -

Examining the correlations between nurses’ knowledge of, beliefs about, and attitudes toward EBP and their perception of their ability to implement EBP after implementation of the intervention

Method: Longitudinal pretest/posttest quasi-experimental study with random assignment

Theoretical Framework: The Promoting Action on Research Implementation in Health Services Model

Participants and Setting: nurses employed in a county hospital in Bay Area, California.

Instruments: Knowledge and attitudes subscales of the Evidence Based Practice Questionnaire, Evidence Based Practice Beliefs Scale, and Evidence Based Practice Implementation Scale

Intervention: 6 hour of didactic training and 1.5 hour workshop

Data Collection: Web-based survey

Data Analysis: Descriptive statistics, Wilcoxon’s signed rank test, and Pearson correlation coefficient test

Results: Within subject data analysis indicated that the EBP educational intervention significantly improved nurses’ beliefs about EBP, knowledge of EBP, and their perceived ability to implement EBP (p < .05). Pearson’s r test analysis indicated that there is no relationship between nurses’ knowledge of EBP, beliefs about and attitudes toward EBP, and their perceived ability to implement EBP (p > .05).

Discussion

Limitations - small sample size, purposive sampling, high attribution rate, maturation and history effects

Implications for leadership, health policy, and nursing

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Professional Experience: I received a nursing diploma in Hong Kong, a Bachelor degree in nursing from University of Hawaii, a Master’s degree in Science from University of California, San Francisco. Currently, I am studying in University of Phoenix and pursuing a doctoral degree in nursing. In the past 18 years after moving to San Francisco from Hawaii, I had years of experience in nursing management and education. I had been an assistant nurse manager, a clinical nurse specialist in a critical care unit, and a teaching faculty in a for-profit private nursing school. Now, I am working as a nurse educator in a county hospital.

Author Summary: The EBP education program was developed for this study to facilitate nurse leaders and researchers to promote evidence-based practice in nursing. The implications of the study to
leaderships, health policy, and nursing provides insightful information to enculture evidence-based nursing practice in various aspects of healthcare organizations.