

"Near Misses in Health Care: Nurses Perceptions and Experiences Associated with Omissions, Commissions, Scheduling Misperceptions and Complications with Adherence through the Investigation of Power Distance and Recovery."

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Introduction

Medication errors continue to be a major problem in the United States (Star, Nordin, Pöder, Edwards, 2013; IOM, 2006).

Many studies have investigated the issue of medication errors since the Institute of Medicine (IOM, 1996) report "To Err Is Human" was published.

- Near misses, on the other hand, are incidents that could potentially cause harm to the patient, but did not.
- Medication errors and near misses are similar but are also very different and little is known about near misses.
- Narrowly avoided errors, titled near misses, have not been studied widely. With early identification of near miss circumstances and influencing factors, the profession of nursing can continue to progress towards a greatly reduced or error-free hospital environment.
- Many factors can contribute to a near miss. Actual and near miss errors in the field of pediatric medicine and nursing can have devastating effects on such a vulnerable population.
- When errors occur in the pediatric population, there is a 3-fold potential for significant harm.
- Poor communication is directly linked to medication errors and near misses (Henneman, 2010).
- One communication variable that relates to errors is the concept of Power Distance (PD) (Hofstede, 1980). The premise of PD is that a perception of inequality exist between individuals influencing communication and may contribute to errors.



Methods

Aim and Research Questions:

The aim of this study was to investigate nurses' reported knowledge, confidence, and skill performance during error prone and error rich high fidelity simulations (live patients) with an element of perceived Power Distance using a error assessment, identification, action and reporting teaching intervention.

1. How does an educational intervention affect BSN students' behaviors in near miss situations, and if so, how?
2. How does an educational intervention reduce the incidence of near misses and errors during simulation?
3. How does confidence, self efficacy and knowledge change after an educational intervention focusing on safety initiatives?
4. How does the safety focused educational intervention influence the time it takes to identify near misses or actual errors during simulation?
5. How does the safety focused educational intervention influence recovery behaviors?

Theoretical Framework:

Ida Orlando's nursing process theory focusing on circular processing of reflection, evaluation and communication using ADPIE.

Are student's more likely to identify near misses and/or avoid near misses?

Preliminary behaviors: Safety sweep (ASSESSMENTS and DIAGNOSIS and PLAN)

Intervention behaviors: Identifying errors/near misses, time it takes (INTERVENTION)

Recovery behaviors: physical and psychological and emotional reactions (EVALUATION)

Operational Definitions

Near Miss

An event or circumstance that has the potential to cause an incident or critical incident but that did not actually occur due to corrective action and/or timely intervention. (Barnard et al., 2006)

An act of commission or omission that could have harmed the patient but was prevented from completion through a planned or unplanned recovery. (Kaplan & Fastman, 2003)

Any event that could have had adverse consequences but did not and was indistinguishable from fully fledged adverse events in all but outcome. (Barach and Small, 2000; Barach et al. 1999)

Errors that had the capacity to cause injury but failed to do so, either by chance or because they were intercepted. (Gurwitz et al., 2000)

An error of commission or omission that could have harmed the patient, but serious harm did not occur as a result of chance, prevention, or mitigation. (Aspden et al., 2004)

Research Design

Prospective quantitative experimental design, single subjects (one group, self control) educational interventional study. Time series design investigates base line data (A) and intervention (B) as a means to identify changes based on the DV for a single group. This proposed single subjects experimental design uses an AB design.

Simulation Scenarios

- #1 Adolescents with acute lymphocytic leukemia, induction with high dose chemo
- #2 Young adults with cystic fibrosis
- #3 Infant with r/o sepsis, urinary tract infection, fever and dehydration

Instrument

Pre-Test/ Post-Test

Demographics data including age, gender, length of time in nursing school, previous degree, number of experiences with near misses, number of personal experiences with actual medical or medication errors,

- Knowledge test
 - Confidence scoring on perception of safety principles
 - Self efficacy
- Simulation scoring sheet

Contribution to Nursing Practice Science

Novice nurses who have been a participant in this study have a comprehensive safety model that can be applied in any setting with any patient population.

This model is especially designed to prevent pediatric injury, accidents and errors in health care settings.

The independent variable being tested includes a three hour safety course which includes approximately 30 safety tips to prevent injury, accidents and errors in clinical settings.

The safety intervention includes:

Clinical safety prompts for 1) sweeps, 2) Tracer, 3) communication, 4) handoffs, 5) error free pediatric rooms, 6) error free medication administration techniques. Snf 7) mnemonics

Mental medical mnemonics have been proved to be instrumental in recalling both sets of behaviors, means of communication and sets of complex information:

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