The Lived Experiences of Undergraduate Nursing Students Learning Drug Dosage Calculation

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Title: The lived experiences of undergraduate nursing students learning drug dosage calculation.

Problem: Competence in dosage calculation represents a challenge that seems to be almost insurmountable for nurses as well as nursing students. The lived experiences of nursing students learning drug dosage calculation have not been explored for description and interpretation.

Purpose: The purpose of this study was to gain more insight about undergraduate nursing students’ lived experiences learning medication dosage calculation.

Sample: The purposive sample consisted of 11 participants (N = 11), who were a group composed of 82% females (n = 9) and 18% males (n = 2). They were at different levels of their nursing education from three universities’ nursing colleges located in South Florida.

Methods: A purposive sample was selected to investigate the following question: What are the lived experiences of undergraduate nursing students studying medication dosage calculation? Data were collected through face-to-face semi-structured interviews, which the researcher transcribed verbatim, and the participants reviewed for validation. The combined interpretive and descriptive method of van Manen guided the characteristics of the thematic data analysis conducted to determine the findings.

Results: The related themes of signifying, repeating, analyzing, maintaining consistency, verifying, and the overarching theme of assuring safety emerged as the essence of the participants’ lived world of learning drug dosage calculation.

Conclusions: This study contributed, to some extent, to filling the empirical gap identified in the literature review. These participants gave rich, in-depth accounts of how they embodied drug dosage calculation in order to attain competence that they need to administer correct dosage of medications to their patients.

Implications for Nursing Practice and Education: Several obstacles in nursing practice are of great concerns in the health care continuum. Access and opportunities for clinical applications conducive to learning are quite challenging. This is mostly due to limited availability of clinical sites. Participants in this study explained that the unit dose system and the computer system of documentation limit opportunities to apply what they learned in the classroom and assignment activities. Encouraging students to verbalize their concerns with the dynamics of the clinical areas facilitates nursing instructors to redirect student attention to what is appropriate. Creating opportunities for the students to practice calculating drug dosage at various levels in the simulation classroom can supplement for what is missing in the clinical settings. Potential for drug dosage errors is a reality that is preventable. The effects of such errors can be detrimental to patients, their families, health care facilities, health care providers, and the community. Errors can lead to emotional anguish and costly malpractice lawsuits. Students need to learn the different factors in the health care environments that can lead to confusion, which can impede their critical reasoning skills needed to accurately calculate dosage problems. The clinical instructors play an important role in addressing the gaps observed between education and practice. To narrow the gap in the medication administration process is to consistently reinforce in the clinical settings the safe medication practice learned in the classroom, and to be creative in finding opportunities in the clinical settings for adequate knowledge application.
**Implications for Nursing Research:** Investigating the experiences of nursing students in learning medication dosage calculation has, in a small way, contributed to the reduction of the paucity identified in current literature for this genre of research. Thus far, empirical studies conducted did not investigate the phenomenon in the same contexts as this hermeneutic phenomenological study did. The findings of this study are representative of the participants’ perspectives on learning drug dosage calculation. The researcher, by being immersed in the narratives of these nursing students, was able to gain knowledge that can lead to other studies to further develop nursing as a science and an art. Research generates crucial empirical evidence for the development of safe practice in a challenging patient care delivery system. Education of nursing students in learning drug dosage calculation skills needs to be further explored to determine other possible factors influencing learning outcomes.

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**Keywords:**
How student nurses dealt with the challenges in learning drug dosage calculation, Importance attributed to learning drug dosage calculation and Student nurses learning drug dosage calculation

**References:**


**Abstract Summary:**
A phenomenological inquiry was conducted on the lived experiences of undergraduate nursing students learning drug dosage calculation. Students from three universities were participants in the study. The narratives of their interviews yielded rich texts from which specific themes emerged. The study identified significances to nursing practice, education, and research.

**Content Outline:**

**Problem identified**

Accurate drug dosage calculation is crucial for the provision of safe care to patients. However being skilled in drug dosage calculation is challenging as seen in academia as well as in clinical practices.

**Purpose**

The purpose was to obtain more insights about the problem identified

**Methods**

A purposive sample was selected to investigate the lived experiences of the phenomenon.

**Results**

The emergence of themes from the analysis of participants' narratives.
Conclusions

Contribution of the study to the gap identified in the literature. Rich narratives show embodiment of phenomenon.

Implications for Nursing Practice and education

Encourage nursing students to verbalize concerns identified in practice. Instructors to seize opportunities to find ways to enhance knowledge through simulation.

Implications for Nursing Research

knowledge that can lead to other studies to further develop nursing as a science and an art.

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Professional Experience: I am a nurse educator. I conducted the study for my doctoral degree earned in December 2016. I have been in academia since 2013. I am currently the Associate Dean of Nursing at St. Thomas University.

Author Summary: Dr. Lazare has been a nurse for over twenty years. She has a diversified background in nursing practice. This presentation is about a study she conducted for her doctoral degree in December 2016. She has many years in academia, and she is now the associate dean of nursing at St. Thomas University.