Capstone Project

Capstone Project Proposal

Student Full Name

Institutional Affiliation

Course Full Title

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Due date

<div align="center">**Unlocking the Potential: Point-of-Care Ultrasound Education for**

Advanced Practice Provider</div>

Background and Significance

Point-of-care ultrasound (POCUS) uses portable ultrasound machines for immediate, real-time diagnostic results wherever a patient is. This type of technology assists in complementing patient assessments while adhering to cost-effectiveness. Unlike conventional ultrasound, POCUS is more accessible and faster since it does not require patients to be referred to different departments (Fourie et al., 2023). This technology has gained popularity over recent years, making it an adoptable standard of care across different disciplines. Currently, there is no standardized education and training of POCUS for Advanced Practice Providers (APPs) (Huang et al., 2022). With its rising popularity, it becomes essential to train APPs on its use to improve patient outcomes and safety and increase efficiency in health delivery.

Purpose

The primary goal of this project will be to determine how practical and beneficial point-of-care ultrasound education for advanced practice providers can be. Calvin states that having APPs who are competent in applying POCUS In healthcare delivery is an essential skill. According to Huang et al. (2022), there are currently no well-laid guidelines and specifications for training on POCUS. Therefore, having training and education programs on POCUS for APPs is fundamental for them to acquire a skill that allows them to offer optimal healthcare.

Theoretical Framework

Considering the nature of this project, the researcher will employ the Technology Acceptance Model (TAM) to guide the research technique. This model looks into factors influencing behavioral intention to use a particular technology (Kalayou et al., 2020). Issues such as ease of use, usefulness, and end users' attitudes guide this model. During the project, this model will help establish if education for APPs alters these factors and if these factors shape how the education is received. Education to APPs will help uncover if these practitioners believe in POCUS for improving job performance. Further, how these individuals believe in the ease of its use or how effortless its implementation is will be in the picture through education. Lastly, this model will shed light on the APPs' attitude toward utilizing this technology after education and training.

A second model that will guide this study is Kirkpatrick's Four-level training model. This model will assess the effectiveness of the training by looking into the APP's response to the training and education, the education outcomes through an increase in knowledge and skill, the APPs' behavior towards the technology after education, and lastly, the impact of the training (Heydari et al., 2019).

Literature Review

Existing literature on the effectiveness of education and training on technology will guide this project. The literature will show the adaptability of new technology after education and shed light on whether education improves perception towards adopting technology. The literature will guide on best practices to adopt in POCUS training.

Method

The project will employ a quasi-experimental study. Through convenience sampling, the project will get a sample population of APPs and employ pre- and post-education surveys. This survey intervention will enable the project to determine the level of confidence in attitude level in using POCUS pre-education and post-education. The project will seek institutional review board approval prior to starting the projects, ensuring subject safety.

Expected Outcomes

After the project's implementation, the expected outcomes are understanding the existing POCUS edition for APPs, identifying gaps in the delivery of this education, and determining how to improve these gaps. Most importantly, the project will discuss how effective education is for advanced practice providers interacting with point-of-care ultrasound.

References

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