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Benner's theory of novice to expert: Explicating the effectiveness of virtual clinical simulation education in enhancing the competence of undergraduate nursing students

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Background & Aim: Benner's Theory of Novice to Expert has yet to be used in application to Virtual Reality Clinical Education. Little evidence is available that discusses the benefits of virtual clinical education to undergraduate students. This presentation will describe the benefits of virtual clinical education through the application of Benner's Novice to Expert theory in relating how theoretically such a learning activity may enhance the clinical performance and level of skill acquisition of undergraduate nursing students.

Methods: After scrupulously examining Benner's theory of Novice to Expert, research must be conducted in how virtual clinical simulation enhances the performance of undergraduate students. Therefore, the research questions based on this theory are as follows: In undergraduate nursing students enrolled in the domain of medical surgical nursing courses, how does participation in virtual clinical education affect such student's perception of their ability to recognize aspects and attributes of a clinical situation, as well as, maxims and salient parts of such situations? Does participation in virtual clinical education develop perceived of competency and experience? Does student engagement in virtual clinical excursions as a learning activity allow them to perceive themselves as having reached the advanced beginner, competent, or proficient level of medical surgical nursing performance? This study aim to describe the medical surgical student nurses conscious experience of virtual clinical education by exploring the aforementioned research questions. The meaning, structure and essence of the lived experience of taking on the role of a nurse avatar during a virtual clinical excursion will be explored. The goal of the researcher is to gain access to the student nurse's life or inner world and subjective experience. Data was collected by survey.

Results: Most students perceived themselves to be an advanced beginner as a result of the VCS experiences. The highest levels of medical surgical nursing performance perceived were competent and proficient in two separate students. Students found the virtual environmental features of patient charts, patient avatars, medication administration records, and electronic health records to assist them in learning how to implement nursing care. It is said to supplement lectures in a dynamic case study format that is "more interesting than just reading information". Students perceived it prepared them better for clinical experiences. Students are enabled to study the patient thoroughly and in a non-intimidating environment. An unexpected finding was that students reported they felt they would be better able to navigate patient charts and electronic health records as a result of the VCE experiences. Students explained that the virtual clinical education experience would be useful if provided to students from the beginning of the semester so that they can integrate their experiences into true clinical practice. Virtual clinical education also is perceived to cause more effective transfer of knowledge in relation to critical thinking. Students perceive the simulated virtual clinical environment to induce less anxiety so they were provided "more time to think" so as to identify salient points of patient conditions. Students find the environment to be realistic possessing "all the aspects of the clinical experience minus the live bodies and interactions with patient, families, and the clinical team".

Conclusions: Virtual clinical reality simulation is perceived by students to be a useful tool to facilitate their transfer of theoretical knowledge to practical knowledge. Nurse educators can attempt to cultivate the awareness of nursing students by presenting them with complex ill-defined, authentic tasks during virtual simulation scenarios. As a result, there is a shift that occurs so that students are able to retrieve relevant information and clinical reasoning occurs. This enables students to perform skills in the context of real world situations. Educators must strike a balance between teaching the cognitive base and enabling students with opportunities to put such knowledge to use, as situated learning theory encourages. As a result, clinical reasoning skills will be able to evolve. When virtual clinical simulation is used within nursing clinical education, a shift of nursing education's paradigm from teaching to learning will truly occur.

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