POSTER ABSTRACT

Computer simulation as a methodology for theoretical learning of clinical skills in nursing

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Introduction: Simulation applied to the practical training of nursing students has shown great effectiveness in the acquisition of skills and competencies such as critical thinking or decision-making. It has been shown that the use of Internship Program Simulation and High Fidelity Simulations shortens the time needed for learning skills, especially since training can be repeated as many times as necessary to acquire the skills and training in less time. However, it is not being proposed that this simulation may be the most theoretical and conceptual style of learning, where the student has to know, analyze and use such theoretical knowledge in clinical cases describing real situations.

That is why we propose designing a conceptual model based on an analysis of the reality offered by the health sector from a computer model recreating a virtualized simulator which will integrate knowledge and pedagogies related to the designs and teaching methods, as well as recreating scenarios and interaction play therein, starting from the scripting of behavior patterns. With this model, we can increase the skills of nursing degree students and evaluate their conceptual learning.

Method: The design will be based on the pathophysiological behavior of a disease, and in this case we will focus on a respiratory pathology chronic obstructive pulmonary disease in which the individual states considered most important for the development of the patient age, medical history, symptoms of revenue, clinical parameters will be described. Progressivity is one of the methodology characteristics used by the simulator, which integrates a learning process guided through the different routes of interaction that the student has decided for a patient with a particular disease. Once immersed in one of the determined routes, the student is presented with a scenario, an evolution which causes responses that require analysis and a critical student response almost immediately. The hypothesis of our proposal is that this computer simulation system increases analytical skills, critical thinking and decision making by giving greater security to nursing degree students.

Progress report: We have defined the health model, and we are working on the design of the pedagogical model simulator.

Discussion: The proposed model has two potential uses in the integration of learning: 1 developing the skills of nursing degree students by designing a conceptual, digital and interactive scenario, 2 evaluating learning through educational resources. With this system we can work on the student-patient safety and also optimizing space and time resources.

Conclussions: Computer simulation allows students to experience real clinical situations in which their clinical practice would involve a high risk to patient safety and which otherwise would be impossible to carry out due to the ethical issues involved. In turn, this facilitates online learning when, for example, it is not easy for the student to attend university. This concept, using computing, encompasses several positive points such as self-assessment, the possibility of using video, sending positive messages and the ability to carry out the task at any time without a teacher present.