

Simulation in the education of health professionals

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Since World War II the importance of simulation arises as scientific evidence, due to the need of having trained pilots with high level of proficiency in complex circumstances. It can be affirmed that trainings for different tasks (fighting, hunting, sports) in the ancient times have been a way of learning and developing skills by simulating real contexts and actions.

Over the last decades, simulation has been used as strategy in the training for health professionals, increasing and refining itself as a methodology. Through simulation, students grow in several dimensions: in knowledge, as developing, deepening and reinforcing it from practical application; in knowing how to do it, by developing abilities in the technique; in knowing how to behave and be, building effective communication strategies and respect for each person; in knowing how to learn, perceiving the strong and weak subjects, or even the mistakes through reflection on the action.

Simulation is a teaching/learning strategy (and not a technology) that through an experiment in a safe environment for the student, professor and patient, it is possible to look, anticipate or expand real situations. These situations are guided through interactive experiences that reflect the action (debriefing) for the consolidation of knowledge. However, simulation uses the most modern sound and image technologies, as well as simulators suitable to objectives, materials, teams and realistic spaces, allowing the student to feel immersed and involved in the center of the action. The degree of fidelity of the simulation is related to the physical, contextual and emotional realism, which permits the students to live the situation with intensity.

Simulation is justified by a number of reasons we cannot forget: patient safety (training in a simulation environment allows making and learning from mistakes, without consequences on a real person); not using people as instruments (it is not ethical or legitimate to use a person as object for a student to learn, without a previous training in a simulation environment when possible); current health settings (with shorter hospitalizations, increasingly complex environments and demand for professionals with high development and specialization); constant technical development (which required continuous updating, flexibility and plasticity of professionals).

Nowadays, numerous advantages of the use of simulation in nursing education are known, but there are also some limitations. Due to the fact that simulation is not real, human interaction is limited and the students may not have the experience as psychological symptoms are incomplete or do not exist.

A simulation can be designed and planned according to different aims: more operational, focusing on a technique, in its steps, handling the material, among others; more relational, focused on the communication with patient, in how to use communication to assess, teach, coach or engage the patient; or a global aim, centered on solving a more or less complex scenario, in the development of critical and structured thinking, decision making and team work.

Simulation is currently understood as a model for promotion of clinical learning and its evaluation. However, in order to simulation be effective as a learning strategy, it is emphasized the time-consuming preparatory work, which leads to a previous need of developing a "draw" of the simulation according to the students demands. It is necessary to clearly de-

fine the objectives, prepare the scenarios previously, organize teaching material, characterize and put makeup on the simulator or real patient, plan the debriefing, define the evaluation tools and evaluate the simulation. In all these steps, the objectives are the ones who lead and guide the professor's work.

Scientific evidence has shown that simulation allows the student be more confident in the action, be more motivated for the learning process and satisfied with it. The student recognizes benefits associated with it, communicates better, makes fewer mistakes when with real patients, among other variables.

The possibilities associated with simulation go beyond nurses' education. This is a strategy that permits the development of research, through which we will be able to improve this strategy, and also evaluate its transferability to practice, development of techniques, technology and educational practices.

More learning, application and research are current challenges for all who are interested in simulation. The book "A simulação no ensino de enfermagem", recently published in Portugal and Brazil, can be an interesting tool.

We cannot forget that simulation represents a complementary modality that does not exclude or substitutes the practical learning in clinical settings. More important that having a simulator or a simulation space is what we do and learn from them.

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