

## Realistic simulation in nursing context

### Simulação realística em contexto de Enfermagem

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In recent times, the teaching process has undergone numerous changes in society and the world, resulting from sociodemographic changes, changes in the pathological profile, technological and scientific evolution, and the progress of the quality of nursing care.

To meet these requirements, the use of new or updated teaching methodologies has been a constant challenge. There are active methodologies known as the construction of knowledge in relation to educational technologies. These include the simulation strategy that, despite not being recent, has undergone a colossal evolution/innovation.

The use of simulation as scientific evidence arises from World War II, with the aim of training pilots for weather adversities, mid-flight breakdowns, safety-related issues, and even the development of skills in the context of war.<sup>1</sup>

The social and organizational transformations, technological developments, and the latest scientific evidence in the context of health care are a challenge, increase greater responsibility

and raise the expectations of health professionals, particularly nurses, who are faced with an increasingly demanding practice, which implies a methodology and a training strategy, also, more demanding, differentiated, and innovative.<sup>2</sup>

A world in constant evolution, characterized by the rapid development of technology, the complexity of the specific contexts of care, and the transformations that have occurred in the current paradigms of health and education, connotes simulation as an innovative teaching/learning strategy and an effective tool.

The realistic simulation is a teaching strategy based on representing a real clinical situation; however, in a simulated scenario in a safe and controlled context.<sup>3</sup> It has been revealed what promotes the construction of skills, the development of critical reasoning, and an even more effective and safe decision-making.<sup>4</sup> The Debriefing is part of the simulation considered by some authors as the "soul and heart" of the simulation. The use of simulation with structured Debriefing in nursing education reveals a very positive impact on developing students' competencies.<sup>2,5</sup>

The evident impact of structured Debriefing on the development of skills in nursing students highlights the motivating potential it has for teachers, constituting a motivating agent and generating their involvement in simulated practices.

Simulation allows students to think spontaneously and more actively than passively; provides opportunities for students to make mistakes in a safe scenario; and, consequently, transforms these errors into learning opportunities; it can be used to assess the acquisition of skills relevant to clinical practice; enables the demonstration of physiological concepts more easily than reading the manuals; improves the ability to visualize physiological responses to medications and nursing interventions, among others. Facilitates learning from decision-making and critical thinking. The effectiveness of student performance improves after simulated experiences.

At this level, the impact is being much more significant in students, far from reducing their participation and interest in being an integral part of simulated practices, increasing the number of volunteers to carry out and participate in these same practices each year.

Therefore, it is evident that this improves self-learning by verifying performance and decreasing the fear of error, understanding that this is an added value that can prevent mistakes from being made in real contexts with potential impact on safety and quality of care.

In this complicated moment that we have been living of social distancing, due to the pandemic of COVID-19, virtual simulation allows us to help reproduce several scenarios on how to cope with the pandemic in the hospital environment, simulating all the complexity of the environment and allowing a thorough study of the cause and effect relationships of the use of various strategies to cope with the disease.

Implementing an informed practice in scientific evidence about simulation improves teaching-

learning in nursing students. Consequently, there is an increase in the quality of care to be provided to patients as the student begins to develop his/her psychomotor decision-making skills, knowledge, leadership, clinical judgment, structured thinking, and attitude towards nursing and being a nurse.

The performance of nurses implies a complex process, so presenting competence, accuracy, and professionalism aiming at a safe practice is important for the better quality of provided care to improve clinical performance. For this, proactivity is needed in searching for appropriate answers, planning and action based on the best available evidence, and continuous improvement with high efficiency and effectiveness.

As "simulation professionals," we recognize that the practice of simulation has an impact on multiple facets of health care. In the light of this responsibility, we must commit ourselves to follow the Code of Ethics.

In 2013, the World Health Organization developed guidelines, explained in the document called "Transforming and scaling up health professionals' education and training," which recommends the use of simulation in the education and training of health professionals, as well as the implementation of interprofessional education in undergraduate and graduate programs (World Health Organization<sup>6</sup>), which has been evidenced.

The simulated in situ training of emergencies with interprofessional teams allows teams that work daily together to train in their work situations that may occur in the future, using their own equipment, which constitutes an added value, to the extent that it allows evaluating and improving the performance of the team and interdisciplinarity, improving communication, increasing changes in order to improve the physical space and increasing the dexterity in the handling of equipment and familiarization with them. Thus, offering an increase in benefits when compared to training in simulation centers.<sup>7</sup>

Investment, reflection, and research on simulation in the context of health professions, particularly nursing, have a crucial character in the training of good professionals.

In short, the use of simulation in the context of continued education becomes an asset regarding the increase in self-confidence, improvement of performance, and development of skills mainly in nursing and, consequently, with an important impact on improving the provision of nursing care and health gains.

### Competing interests

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