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CLINICAL SIMULATION TO CONFRONT COVID-19: COMPLEMENTARY TRAINING OF NURSES
SIMULAÇÃO CLÍNICA PARA ENFRENTAMENTO DA COVID-19: TREINAMENTO COMPLEMENTAR DE ENFERMEIROS
SIMULACIÓN CLÍNICA PARA EL AFRONTAMIENTO DEL COVID-19: FORMACIÓN COMPLEMENTARIA DE ENFERMEROS

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ABSTRACT

Objective*:** report on the experience of building and developing clinical simulation as a pedagogical tool for the complementary training of nurses in the fight against COVID-19. ***Method*:** It is a qualitative, descriptive, experience report type study of professors from the Nursing undergraduate course of a public university. As a teaching strategy, the clinical simulation performed during a course in which the case study served as a script for the development of the experience was used. ***Results*:** it was noted that the construction of the realistic scenario and the development of clinical simulation aimed at the care of patients with suspicion and/or confirmed COVID-19 status were a teaching strategy that favored the interaction between theory and practice, enabling a safe and quality teaching process. ***Conclusion: it is concluded that clinical simulation facilitated the development of critical thinking, communication between professional and patient, technical, affective and psychomotor skills and decision-making capacity, preparing nurses for the actual care of suspected patients and confirmed cases of COVID-19 in Amazonas.

Descriptors: Nursing; Simulation; Training; Covid-19; Strategies; Teaching.

RESUMO

Objetivo*:** relatar a experiência da construção e do desenvolvimento da simulação clínica como ferramenta pedagógica para a formação complementar de enfermeiros no enfrentamento à COVID-19. ***Método*:** trata-se de um estudo qualitativo, descritivo, tipo relato de experiência, de professores do curso de graduação em Enfermagem de uma universidade pública. Utilizou-se, como estratégia de ensino, a simulação clínica realizada durante um curso na qual o estudo de caso serviu como roteiro para o desenvolvimento da experiência. ***Resultados*:** notou-se que a construção do cenário realístico e o desenvolvimento da simulação clínica voltados para o atendimento ao paciente com suspeita e/ou quadro confirmado da COVID-19 foram uma estratégia de ensino que favoreceu a interação entre a teoria e a prática, possibilitando um processo de ensino seguro e de qualidade. ***Conclusão: conclui-se que a simulação clínica facilitou o desenvolvimento do

pensamento crítico, da comunicação entre profissional e paciente, das habilidades técnicas, afetivas e psicomotoras e da capacidade de tomadas de decisão, preparando enfermeiros para o atendimento real de pacientes suspeitos e casos confirmados de COVID-19 no Amazonas. ***Descritores***: Enfermagem; Simulação; Treinamento; Covid-19; Estratégia; Ensino.

RESUMEN

Objetivo: reportar la experiencia de la construcción y desarrollo de la simulación clínica como herramienta pedagógica para la formación complementaria del enfermero en el afrontamiento del COVID-19. ***Método:*** se trata de un estudio cualitativo, descriptivo, tipo relato de experiencia realizado por profesores de la carrera de licenciatura en Enfermería de una universidad pública. Como estrategia didáctica, se utilizó la simulación clínica durante un curso en el que el estudio de caso sirvió como guion para el desarrollo de la experiencia. ***Resultados:*** se observó que la construcción del escenario realista y el desarrollo de la simulación clínica orientada a asistir a pacientes con condiciones sospechosas y / o confirmadas de COVID-19 fueron una estrategia de enseñanza que favoreció la interacción entre teoría y práctica, posibilitando un proceso de enseñanza seguro y de calidad. ***Conclusión:*** se concluye que la simulación clínica facilitó el desarrollo del pensamiento crítico, la comunicación entre el profesional y el paciente, las habilidades técnicas, afectivas y psicomotoras y la capacidad de tomar decisiones, preparando enfermeros para la atención real de los pacientes sospechosos y casos confirmados del COVID-19 en Amazonas.

Descriptores: Enfermería; Simulación; Entrenamiento; Covid-19; Estrategias; Educación.

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INTRODUCTION

It is known that in December 2019, in Wuhan, China, the first case of Sars-Cov-2 was reported and from February 2020, the first reports began in other countries of the world.[1] It is noted that on March 11, the World Health Organization (WHO) recognized the condition of a pandemic and in Brazil the first case was recorded on January 22, 2020, with a progressive increase in cases and consequent deaths, with an impressive 1,344,143 more cases in five months after the first report.[2]

It is informed that, in Brazil, the Ministry of Health (MH) has adopted several strategies to confront COVID-19, such as providing updated information on the subject, the dissemination of daily epidemiological newsletters, the creation and dissemination of mobile phone applications to support the physical and psychological health of the population.[3]

However, in parallel to these confrontation mechanisms, the MH has also invested in strengthening health care and, in this sense, has carried out several actions. One of these actions was the increase of human resources in health and, therefore, there was a call to hire health professionals, mainly doctors and nurses, to act in the care of patients facing the COVID-19 pandemic.[4]

Linked to this and supported by the emergency crisis situation caused by the global pandemic, the Ministry of Education published MEC Ordinance No. 383 of April 9, 2020, and instituted an anticipation of the graduation course for students of Medicine, Nursing, Pharmacy and Physical Therapy as an action to combat the pandemic of the new Coronavirus COVID-19 on the Brazilian scene.[5]

It is worth mentioning that, based on this health scenario experienced in Brazil and in the State of Amazonas, the University of the State of Amazonas (UEA), signing the role of educational institution and exercising the duty of social commitment as a public institution, undertook to anticipate the collation of health students. The goal is to offer public health institutions and users of the system health professionals prepared to fight the front line against COVID-19, and UEA professors have dedicated themselves to training these health students in the care of suspected patients and confirmed cases of COVID-19.

It should be noted that the Nursing undergraduate course used clinical simulation as a teaching strategy for the training of nurses. Studies that affirmed the use of this strategy to minimize the risks of imprudence, malpractice and negligence are worth mentioning.[6-7]

It is known that, through realism, clinical simulation provides the approach and develops the ability of the professional and/or student to communicate with the patient and offers, to the participants, to face the strategy as legitimate, authentic and faithful to the real environment.[8]

It is considered that clinical simulation is a motor instrument in the health teaching scenario in the country, because it is considered an applied practice that favors the initial and complementary training of nurses, since it favors the teaching and learning process, develops the knowledge and critical thinking and provides the opportunity to reflect on the health practice. It is perceived that the use of simulation positively influences the development of cognitive, psychomotor and attitudinal knowledge, thus developing skills for decision-making required in a real clinical setting.[8]

It is emphasized that the use of this methodology is able to offer a safe environment for practice and learning, cooperating to improve criticism, skills and attitudes, in addition to transforming theoretical knowledge into practice in an interactive way. It is considered that the use of this methodology transcends the development of skills and technical abilities only, because it provides the development of leadership and teamwork, situation perception, decision making and awareness of personal limitations.[9]

Clinical simulation was used to develop the complementary training of nurses to work in the care of patients with suspicion and/or confirmed COVID-19 status in secondary health care, especially in emergency and reference hospitals.

OBJECTIVE

Report on the experience of building and developing clinical simulation as a pedagogical tool for the complementary training of nurses in the fight against COVID-19.

METHOD

It is a qualitative, descriptive, experience report type study on the construction and application of clinical simulation for the complementary training of nurses.

The study was carried out at a public higher education institution in Manaus (AM), Brazil, for the complementary training of sixteen newly graduated nurses who benefited from MEC ordinance No. 383 of April 9, 2020.

It is revealed that five professors from the Nursing undergraduate course of the higher education institution, with experience in teaching and nursing assistance to semicritical and critical patients, and an actor who played the role of the patient with a suspect COVID-19 status, participated in the construction of the scenario.

The main objective is to encourage the nurse to assume his role as leader and make decisions before the Nursing team to the patient with a suspicious and/or confirmed COVID-19 in secondary health care. The development of the stages of the Nursing process was also stimulated, being anamnesis, physical examination, Nursing diagnoses, planning or expected results, implementation of Nursing care and evaluation of Nursing care.[10]

The action started with the theoretical basis on the teaching methodology and its stages, besides the necessary elements for a clinical simulation environment and on the care to patients with COVID-19 in secondary care.

A survey of needs was carried out, namely: organizational issues; practical experience of the teachers/authors; target audience and field of action of nurses.[11]

As a reference for the development of clinical simulation, the best practice guidelines for simulation published by the International Nursing Association for Clinical Simulation and Learning were used, structuring it in three moments: briefing, simulated scenario and debriefing.[12]

- ***Briefing***

It is important to emphasize that the briefing is constituted by the basic orientations that the student receives before starting his/her performance in a simulated scenario, clinical picture, for example.[12-7] A clinical case was used in this activity and an actor was also selected to interpret the patient during the simulation, who appropriated the clinical symptoms and physiological responses of COVID-19, from the initial phase of the disease to the critical phase.

The case of the patient V.M.V., male, 35 years old, asthmatic, with obesity grade II was raised. It is described that the patient reported no comorbidities or medication allergies, complaining of dry cough for three days, fever above 37.8 °C, respiratory discomfort and generalized myalgia. The patient complains of dyspnea at rest and muscle pain grade 6/10. It is reported that so far he has not sought hospital care for fear of being contaminated by SARS-CoV-2. It was revealed that he was not respecting social isolation and that he works in a commercial area, with sale and delivery of water and gas, in the region of Vieiralves. Vital signs were verified: BP - 130x90mmhg; RR - 32; HR - 135; Pulse - 136; T - 38°C; Pain - 6/10; focus - generalized myalgia; Saturation - 90%.

During the briefing, Individual Protection Equipment (PPEs), alcohol gel 70% for the participants and other material resources and equipment for Nursing assistance were used. Two nurses and two Nursing Technicians were presented for the scene, which lasted 25 minutes.

The second phase of the clinical simulation was chosen as a simulated scenario and is where the case has an outcome, depending on the intervention.[12-7] It can be observed that, at this moment, the nurses performed the patient care in the simulation of the real scenario according to the clinical management protocol of COVID-19.[13-14]

The scenes were developed listing the skills and abilities expected as results during the simulation, as shown in figure 1.

Scene	Event	Expected action
Scene 1 Anamnesis, physical examination and identification of priority Nursing diagnoses.	BP - 130x90mmhg; RR - 32; HR - 135; Pulse - 136; T - 38°C; Pain - 6/10; Saturation - 94%; respiratory distress and generalized myalgia.	Identify significant clinical data. Assess pain (PQRST*). Investigate respiratory discomfort.

		Request and evaluate arterial gasometry. Establish the Nursing diagnoses.
Scene 2 Establish results and propose Nursing interventions	BP - 130x90mmhg; RR - 32; HR - 135; Pulse - 136; T - 38°C; Pain - 6/10; Saturation - 94%; respiratory distress and generalized myalgia.	Establish result: improvement of respiratory discomfort and pain control. Install non-invasive ventilatory support (3l/min). Perform interventions for pain control. Monitor vital signs. Request medical evaluation for possible orotracheal intubation and patient transfer.
Scene 3 Re-evaluate clinical picture	BP - 120x80mmhg; RR - 24; HR - 105; Pulse - 106; T - 37.5°C; Pain - 3/10; Saturation - 95%; improvement of respiratory discomfort and generalized myalgia.	Re-evaluate respiratory discomfort, pain and clinical picture.

Figure 1 - Clinical simulation scenario, events and expected actions in the care of the patient with a suspicious and/or confirmed COVID-19 condition.

* P - what caused the pain; Q - Quality; R - Radiation; S - Severity (intensity 0 to 10); T - for how long. Figure 1 - Clinical simulation scenario, events and expected actions in the care of the patient with a suspicious and/or confirmed COVID-19 condition.

- ***Debriefing***

The debriefing, which takes place right after the scene and comprises the last stage in which the student and teacher reflect on what has happened, was presented.[12-7] It is observed that this moment allows the development of critical awareness, visualization of the mental schemes used for decision making, definition of emotions and perceptions during practical experiences, identification of positive points and opportunities for improvement of practice.[7-15]

It is confirmed that this report observed and respected the ethical aspects in research with human beings[16] and, by its characterization as an experience report, preserved the anonymity of the institution and the participants of the training.

RESULTS

It is believed that, during the activity, theorization was fundamental for the development of clinical simulation. It is verified that the newly graduated nurses realized the importance of realistic simulation for the care of the patient with COVID-19, since the methodology allowed the approach of the theoretical knowledge of the practice.

It is noted by teachers that clinical simulation facilitated the socialization of knowledge, leadership development, decision making, teamwork, the importance of effective communication, feelings and personal limitations. It is observed that teachers identified a positive and relevant response to the activity developed.

It should be noted that, during and after the development of the activity, it was perceived that clinical simulation was a useful and effective tool for effective, comprehensive care and that it follows a line of resolute care.

DISCUSSION

It is pointed out that, in order to fight COVID-19 in Amazonas, a contingency plan of the pandemic was necessary, which listed strategies, among them, the anticipation of the graduation of health professionals to attend the population.[5] It is perceived that it was necessary to accompany newly trained nurses during the pandemic period from the perspective of continuing education, retrofitting the complementary training in line with the initial training.[17]

It was demonstrated that, with the Coronavirus pandemic, the knowledge of content in the area of these nurses was no longer sufficient for the practice of Nursing in the face of so many doubts and changes about the new disease. It was understood that the development of specific knowledge about the care of patients with COVID-19 was essential to offer the labor market prepared nurses. It is considered that not only this, but the evolution of precise clinical reasoning, effective and rapid decision making in order to conduct safe, qualified, effective and efficient Nursing care in secondary health care was necessary in an emergency moment coming from the COVID-19 pandemic.

It is understood that clinical simulation as a pedagogical strategy for the complementary training of the nurse favored the teaching-learning process, because the teacher was able to follow the development of the student in the cognitive, motor and relational aspects, issuing constructive responses for the improvement of the practice. [7]

It is explained that the simulation can replace up to 50% of clinical practices without prejudice to the quality of the training, because it allows the professional to approach reality in a safe and controlled manner.[7-18]

It is thus a learning method accepted by the participants, because it has a differentiated operationalization proposal, which seeks to experience the practice without risks, an important situation in cases of COVID-19 pandemic. A positive influence on the performance of practical skills without contact with possibly contaminated patients has been shown.

It is evident that the use of clinical scenarios, with clear objectives, allowed the participant to approach the actual clinical situation of the pandemic. It is revealed that this type of teaching method points out that the more faithful and real the simulation, the better the learning.[19-20]

The use of clinical simulation is proven to enable comprehensive training with the acquisition of skills and abilities to deal with the demands of health care. It is trusted that this pedagogical strategy minimizes errors and insecurity, frequent during clinical practice, since it provides the

teaching process based on significant learning, because it allows reflection and attitude, indispensable factors between theory and practice.[21]

A pedagogical strategy is used to enable participants to develop basic Nursing tools such as communication, teamwork, manual dexterity, planning, evaluation, problem solving, observation and creativity. The development of these skills is considered to be generated through the identification of health needs, the elaboration of care plans and the development of cognitive, affective and psychomotor capacities. It is highlighted that the use of clinical simulation as a pedagogical strategy has a positive impact on the formation of health professionals.[18]

It is pointed out, at this stage, that the debriefing was of extreme importance in the activity described, because that is where the feedback happens. It is added that reflection on practice happens and knowledge through reflective experience is developed. The key moment of the simulation is when the participant observed his/her conduct and understood weaknesses in a constructive way. This is understood as a stimulus to the student to understand the different ways to approach the same clinical context.[22]

CONCLUSION

It is believed that building a scenario for the development of clinical simulation has positively influenced the training of newly trained nurses, preparing them for the practice of real Nursing during the COVID-19 pandemic in a safe manner.

It was evident that the pedagogical strategy made it possible to minimize errors and insecurity, allowed the nurses to perceive their own role in the learning process, thus making them active players in this process, besides facilitating reflection on safe, qualified and humanized practice.

It is a complex process, which needs to be open to suggestions and adaptations. It is understood that teachers need to be prepared to work on this teaching method, because the way the teacher conducts the activity is decisive in determining whether it will be a positive or negative experience. It is thus that the participants need to be engaged and committed so that, in fact, there is a process of reflection and change of practice in the real scenario.

It is concluded that it is important to consider previous experiences and the training process of the simulation participants and, therefore, it is considered a limitation of this study not to describe the initial training of these nurses at the most diverse levels of development, particularities and singularities.

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