Original Article

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IN SITU SIMULATION FOR PRESSURE INJURY PREVENTION IN INTENSIVE CARE UNITS: QUASI-EXPERIMENT

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ABSTRACT

Objective: To evaluate the effect of *in situ* simulation as an educational strategy on nurses' performance, satisfaction, and self-confidence in the prevention of pressure injuries in an intensive care unit.
Method: A before-and-after quasi-experimental study with a quantitative approach, conducted in the intensive care unit of a public hospital. Thirty nurses participated and underwent *in situ* simulation with structured debriefing. A performance assessment instrument and the *Satisfaction and Self-Confidence in Learning Scale* (SSCLS) were used. Data were analyzed using descriptive statistics and inferential tests.
Results: There was a statistically significant improvement in participants' performance, with an increase in the mean percentage of correct responses from 75% in the pre-test to 84% in the post-test ($p = 0.001$). Satisfaction (4.7 ± 0.3) and self-confidence (4.6 ± 0.4) scores were high after the intervention. Despite the small effect size, the findings indicate a positive impact of *in situ* simulation on professional qualification.
Conclusion: *In situ* simulation proved effective in training nurses for pressure injury prevention in the ICU, promoting improved performance and high levels of satisfaction and self-confidence. It represents a promising strategy for strengthening continuing health education and improving care quality.

DESCRIPTORS: Nursing. Intensive Care Units. Pressure Injury. Simulation. Health Education.

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SIMULAÇÃO IN SITU PARA PREVENÇÃO DE LESÃO POR PRESSÃO EM UNIDADES DE TERAPIA INTENSIVA: QUASE-EXPERIMENTO

RESUMO

Objetivo: Avaliar efeito da simulação in situ como estratégia educativa na performance, satisfação e autoconfiança de enfermeiros na prevenção de lesão por pressão em unidade de terapia intensiva.
Método: Quase-experimento do tipo antes e depois, com abordagem quantitativa, realizado em uma unidade de terapia intensiva de um hospital público. Participaram 30 enfermeiros, submetidos à simulação in situ com *debriefing* estruturado. Foram utilizados um instrumento de avaliação da performance e a Escala de Satisfação e Autoconfiança na Aprendizagem (ESEAA). Os dados foram analisados por meio de estatística descritiva e testes inferenciais.
Resultados: Houve melhora estatisticamente significativa na performance dos participantes, com aumento do percentual médio de acertos de 75% no pré-teste para 84% no pós-teste (p=0,001). Os escores de satisfação (4,7 ± 0,3) e autoconfiança (4,6 ± 0,4) foram elevados após a intervenção. Apesar do pequeno tamanho do efeito, os resultados indicam impacto positivo da simulação in situ na qualificação dos profissionais.
Conclusão: A simulação *in situ* mostrou-se eficaz na capacitação de enfermeiros para a prevenção de lesão por pressão em UTI, promovendo melhora da performance e altos níveis de satisfação e autoconfiança. Trata-se de uma estratégia promissora para o fortalecimento da educação permanente em saúde e para a melhoria da qualidade assistencial.

DESCRITORES: Enfermagem. Unidades de Terapia Intensiva. Lesão por Pressão. Simulação. Educação em Saúde.

SIMULACIÓN *IN SITU* PARA LA PREVENCIÓN DE LESIONES POR PRESIÓN EN UNIDADES DE CUIDADOS INTENSIVOS: CUASIEXPERIMENTO

RESUMEN

Objetivo: Evaluar el efecto de la simulación in situ como estrategia educativa en el desempeño, la satisfacción y la autoconfianza de los enfermeros en la prevención de lesiones por presión en una unidad de terapia intensiva.
Método: Estudio cuasiexperimental del tipo antes y después, con enfoque cuantitativo, realizado en una unidad de terapia intensiva de un hospital público. Participaron 30 enfermeros, sometidos a simulación in situ con debriefing estructurado. Se utilizaron un instrumento de evaluación del desempeño y la Escala de Satisfacción y Autoconfianza en el Aprendizaje (ESCAA). Los datos fueron analizados mediante estadística descriptiva y pruebas inferenciales.
Resultados: Hubo una mejora estadísticamente significativa en el desempeño de los participantes, con un aumento del porcentaje medio de aciertos del 75% en el pretest al 84% en el postest (p = 0,001). Los puntajes de satisfacción (4,7 ± 0,3) y autoconfianza (4,6 ± 0,4) fueron elevados después de la intervención. A pesar del pequeño tamaño del efecto, los resultados indican un impacto positivo de la simulación in situ en la cualificación profesional.
Conclusión: La simulación in situ demostró ser eficaz en la capacitación de enfermeros para la prevención de lesiones por presión en la UCI, promoviendo una mejora del desempeño y altos niveles de satisfacción y autoconfianza. Se trata de una estrategia prometedora para fortalecer la educación permanente en salud y mejorar la calidad asistencial.

DESCRIPTORES: Enfermería. Unidades de Cuidados Intensivos. Lesión por Presión. Simulación. Educación en Salud.

INTRODUCTION

Pressure injuries (PI) are among the most prevalent and persistent adverse events in hospital settings, especially in intensive care units (ICUs), where patients present a higher degree of clinical vulnerability due to hemodynamic instability, prolonged immobility, use of invasive devices, and

compromised nutritional status. It is estimated that PI prevalence in ICUs ranges from 10% to 41%, and incidence may reach up to 23.1% in certain critical care contexts, highlighting the magnitude of the problem and the need for systematic prevention measures[1,2]. Other national studies indicate that PI incidence may vary between 6% and 62%, depending on the service and units evaluated, with the ICU being the sector with the highest number of these injuries[3].

Preventing pressure injuries is a priority for patient safety and requires a multidisciplinary approach, with particular emphasis on the role of the nursing team. In this context, educational interventions directed at professionals working in ICUs have proven essential for strengthening evidence-based practices and promoting high-quality care.

The National Pressure Ulcer Advisory Panel (NPUAP) has published new international guidelines on the prevention and treatment of pressure injuries, issuing recommendations for the development of public policies, education, and research related to the treatment and prevention of these injuries[4]. The nurse's performance in specialized wound care is known to be closely linked to their training and professional practice, requiring the development of systematic care focused on building skills and scientific knowledge for individuals with wounds[5]. To achieve this, training and capacity-building activities are essential.

Among innovative educational strategies, in situ simulation–based training stands out. This approach consists of conducting simulated clinical scenarios within the actual work environment. It enables the integration of theoretical knowledge with practice, supporting clinical reasoning, decision-making, teamwork, and early risk recognition. This methodology has become an effective tool in health education, particularly because it provides an immersive and realistic experience capable of promoting behavioral changes and improving the quality of care[6].

In addition to its impact on care practices, the implementation of active teaching methods, such as simulation, is associated with increased participant satisfaction with the teaching–learning process, as well as with the development of self-confidence for decision-making and performing actions in critical situations. Assessing these dimensions is essential to validate the effectiveness of the educational strategies adopted and to guide continuous improvements in the training process of nursing professionals[7].

Satisfaction is defined as a feeling of pleasure or disappointment resulting from the comparison between outcomes and an individual's expectations[8,9]. Self-confidence, in turn, represents an element that supports cognition and the development of competencies and may be related to self-efficacy, in which the individual judges their own ability to execute and organize actions, considering behavioral aspects and productivity[8,9].

In this study, performance is understood as the measurable execution of nurses in applying knowledge and skills related to pressure injury prevention, assessed through the percentage of correct answers on the theoretical questionnaire administered before and after the intervention.

From this evaluation perspective, there is a need for a more refined approach to identifying satisfaction with the teaching–learning process and the development of self-confidence among professionals who experience educational strategies such as *in situ* simulation during continuing health education. The integrated analysis of these three constructs — performance, satisfaction, and self-confidence — makes it possible to understand not only technical proficiency but also affective-cognitive dimensions essential for safe and high-quality practice.

Despite scientific and technological advances and the creation of new protocols and guidelines for pressure injury prevention, there are still weaknesses in applying this knowledge in clinical practice, in the use of predictive risk scales, and in the implementation of preventive measures[10,11].

Thus, the aim of this study was to evaluate the effect of *in situ* simulation as an educational strategy on nurses' performance, satisfaction, and self-confidence in the prevention of pressure injuries in an intensive care unit.

METHOD

This is a quasi-experimental pre-test/post-test study with a single group, conducted with nurses from an intensive care unit, in which the intervention consisted of *in situ* simulation training for ICU nurses on pressure injury prevention.

The study was carried out in the ICU of a public university hospital located in the city of Rio de Janeiro, Brazil, between November 2020 and February 2021. Thirty nurses participated, selected by convenience sampling. As an inclusion criterion, participants were required to have previously read the institution's standard operating protocol on preventive measures for pressure injuries.

The intervention was based on the assumptions of the National League for Nursing/Jeffries Simulation Theory[12] and followed the guidelines of the SQUIRE 2.0[13] protocol for studies focused on quality improvement. All stages complied with the Healthcare Simulation Standards of Best Practice™, including pre-briefing, simulated scenario design, and the debriefing process.

The scenario was developed by a faculty researcher with expertise in clinical simulation, based on the guidelines of the National Pressure Ulcer Advisory Panel and recommendations from the Brazilian Ministry of Health and *Anvisa* regarding pressure injury prevention (PIP). The learning objectives were to: identify pressure injuries early, assess skin integrity, recognize risk factors, and implement preventive measures.

The simulation was conducted in a deactivated ICU bed, ensuring environmental and psychological fidelity. The scenario included a semi-structured clinical chart with health history, laboratory tests, and reason for admission. A standardized patient (trained actor) was used, following a predefined script prepared by the research team. The facilitator, the principal investigator, provided additional information upon the participant's request. The scenario was previously pilot-tested.

The intervention lasted 45 minutes: 5 minutes of briefing, 10 minutes for scenario execution, and 30 minutes of structured debriefing. Nurses were organized into groups of up to five participants, with only one volunteer performing the actions in the scenario while the others observed and actively participated in the debriefing.

A structured debriefing was conducted in which participants were invited to identify the feelings experienced during the simulation activity; assess their understanding of the clinical situation; engage in self-assessment and express the positive actions they performed in the scenario; reflect on what they would do differently if given another opportunity; and articulate what they learned from the simulated experience for future clinical practice[14].

Three instruments were used: (1) Sociodemographic questionnaire: developed by the authors, containing variables such as age, sex, years of professional experience, and educational background. (2) Theoretical knowledge questionnaire: composed of 20 multiple-choice items with "true" or "false" answers, administered in the pre- and post-test. The correct answer key was: "true" for items 1 to 10,13,15, and 17; and "false" for items 11,12,14,16, and 18 to 20. (3) Student Satisfaction and Self-Confidence in Learning Scale (SSSCL): validated for Portuguese[9], consisting of 13 items on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), subdivided into two subscales: satisfaction (5 items) and self-confidence (8 items).

Data were organized in a Microsoft Excel spreadsheet, with double data entry performed by two research assistants to ensure consistency. Sample characteristics were presented as relative frequencies.

To assess participant performance, scores on the theoretical tests before and after the intervention were compared. McNemar's test was used to compare responses to each item across time points. The Wilcoxon test compared median total scores. Data distribution was verified using the Shapiro–Wilk test. Effect size was measured using Glass's delta.

Analysis of SSSCL scores was conducted using measures of central tendency and variability. Internal consistency of the scale was verified using Cronbach's alpha. Analyses were performed using IBM SPSS Statistics version 29. The significance level adopted was 5% ($p < 0.05$).

The study was approved by the institution's Research Ethics Committee in accordance with Resolution No. 466/2012 of the *Conselho Nacional de Saúde* (Brazilian National Health Council). All participants signed the Informed Consent Form.

RESULTS

The sample consisted predominantly of women (76.7%), with a predominance of participants aged 31 to 40 years (53.3%). Age ranged from 24 to 57 years, with a mean of 36.8 years (SD = 8.2). Most participants had more than five years since graduation (66.7%), with professional experience ranging from two to 22 years and a mean of 9.7 years (SD = 6.1). Of the total, 70% reported having a *lato sensu* specialization, with only one professional holding specific training in stomatherapy.

The mean score on the theoretical knowledge questionnaire was 75% in the pre-test and 84% in the post-test, with a statistically significant difference ($p = 0.001$). Effect size, calculated using Glass's delta, was classified as small (0.33; CI: –0.18 to 0.84) (Table 1).

Table 1 – Comparison of the percentages of correct answers in nurses' performance assessment before and after the simulated training. Rio de Janeiro, RJ, Brazil, 2021. (n=30)

Variable	Median (%)	Mean (%)	SD	P-value*	Size of effect†
Pre-test score	88,3	75,0	27,21	0,001	0,33
Post-test score	96,7	84,0	23,69	–	–

Source: Research data. *Wilcoxon Test †Delta of Glass

A statistically significant difference was observed between the pre- and post-intervention moments in three items of the questionnaire (Table 2): Item 1: "Digital pressure is applied to the reddened area for 15 seconds" ($p = 0.012$); Item 4: "The Cubbin–Jackson scale is indicated for patients admitted to the ICU" ($p = 0.016$); Item 10: "AGE should be used to remove zinc oxide" ($p = 0.001$).

Table 2 – Nurses' performance on pressure injury prevention questionnaire items before and after simulated training. Rio de Janeiro, RJ, Brazil, 2021. (n=30)

Item	Assertive	Pre-test score n (%)	Post-test score n (%)	P-value*
1	Digital pressure is applied to the reddened area for 15 seconds.	20 (66,67%)	29 (96,67%)	0,012
2	It is necessary to identify any pressure injury that existed prior to the current hospitalization.	30 (100,00%)	30 (100,00%)	–
3	The entire team must assess and document pressure injuries at the time of admission.	28 (93,33%)	30 (100,00%)	0,500
4	The Cubbin–Jackson scale is indicated for patients admitted to the ICU.	23 (76,67%)	30 (100,00%)	0,016

Table 2 – Cont.

Item	Assertive	Pre-test score n (%)	Post-test score n (%)	P-value*
5	Clinical skin assessment must be performed at least twice a day.	30 (100,00%)	30 (100,00%)	–
6	Diapers must be changed whenever moisture is present.	30 (100,00%)	29 (96,67%)	1,000
7	Hygiene should preferably be performed with liquid soap with an acidic pH.	4 (13,79%)	4 (13,33%)	0,750
8	After the third episode of bowel movement, cleanse the skin using only water.	15 (50,00%)	19 (63,33%)	0,219
9	High-technology barrier cream should not be applied more than once a day.	20 (66,67%)	22 (73,33%)	0,727
10	AGE (essential fatty acids) should be used to remove zinc oxide.	9 (31,03%)	22 (73,33%)	0,001
11	The combination of nystatin and zinc oxide is indicated for the prevention of fungal infection.	11 (36,67%)	17 (56,67%)	0,109
12	Only the nutritionist performs the assessment of dehydration and malnutrition.	30 (100,00%)	30 (100,00%)	–
13	Pyramidal mattresses and boots are indicated to relieve and prevent pressure.	29 (96,67%)	29 (96,67%)	1,000
14	Pyramidal boots (“egg-crate” boots) are indicated to relieve and prevent pressure.	23 (76,67%)	25 (83,33%)	0,688
15	The head of the bed should preferably be elevated up to 30°.	28 (93,33%)	30 (100,00%)	0,500
16	The head of the bed should be elevated to 90° for an indefinite period.	25 (89,29%)	28 (96,55%)	0,250
17	The heels must remain elevated 24 hours a day.	28 (100,00%)	29 (100,00%)	–
18	The use of absorbent pads together with diapers is allowed for incontinent patients.	28 (100,00%)	29 (100,00%)	–
19	For female patients with stage 4 pressure injury, the use of an indwelling urinary catheter is indicated.	9 (32,14%)	11 (37,93%)	0,344
20	Urea 10% cream should be used only on the lower limbs.	28 (100,00%)	29 (100,00%)	–

*Wilcoxon Test.

The Student Satisfaction and Self-Confidence in Learning Scale (SSSCL) demonstrated good reliability, with a Cronbach’s alpha of 0.811 and McDonald’s Omega of 0.808.

The analysis of the subscales showed a predominance of responses in the “agree” and “strongly agree” categories (values 4 and 5 on the Likert scale), with means, medians, and modes above 4 for most items. Only item 13 presented a mean below 4. The overall mean satisfaction score was higher than the self-confidence score (4.71 vs. 4.35) (Table 3)

Table 3 – Central tendency statistics of the Student Satisfaction and Self-Confidence in Learning Scale. Rio de Janeiro, RJ, Brazil, 2021. (n=30)

Subscale	Item	Enunciado	Mean	Median	Mode	SD
Satisfaction	1	The teaching methods used in this simulation were useful and effective.	4.77	5	5	0.43
	2	The simulation provided me with a variety of learning materials and activities to support my learning.	4.53	5	5	0.86
	3	I liked the way my instructor taught using the simulation.	4.73	5	5	0.45
	4	The learning materials used in this simulation were motivating and helped me learn.	4.77	5	5	0.43
	5	The way my instructor taught through simulation was appropriate for the way I learn.	4.77	5	5	0.43
Self-confidence	6	I am confident that I have mastered the content of the simulation activity presented.	4.27	4	4	0.58
	7	I am confident that this simulation included the necessary content for mastery of the medical-surgical curriculum.	4.43	4.5	5	0.63
	8	I am confident that I am developing the skills needed to perform procedures in the clinical environment.	4.67	5	5	0.55
	9	My instructor used helpful resources to teach the simulation.	4.7	5	5	0.46
	10	It is my responsibility to learn what I need to know through the simulation activity.	4.43	4	4	0.57
	11	I know how to get help when I do not understand the concepts covered in the simulation.	4.5	5	5	0.68
	12	I know how to use simulation activities to learn skills.	4.37	5	5	0.76
	13	It is the instructor's responsibility to indicate what I need to learn about the simulation topic during class.	3.4	4	4	1.07

DISCUSSION

The results of this study indicate a statistically significant improvement in nurses' performance after the *in situ* simulation focused on pressure injury (PI) prevention in intensive care units (ICUs). An increase was observed in the mean percentage of correct answers, from 75% to 84% ($p = 0.001$), although with a small effect size. While the percentage increase is modest, the practical interpretation of these results must be considered within the context of high-risk clinical environments, where even small improvements in performance may translate into greater patient safety. It is therefore important to discuss whether this effect, even if small, could be enhanced through complementary interventions or repeated training sessions.

Additionally, participants reported high levels of satisfaction and self-confidence following the simulated activity. The literature indicates that these constructs directly influence engagement, motivation, and the perception of professional competence. Self-confidence, understood as the belief in one's ability to perform tasks, is associated with the development of self-efficacy and with strengthened decision-making in highly complex environments. When combined with improved performance, these variables indicate a broader positive effect of simulation, extending beyond the acquisition of technical skills to encompass affective-cognitive dimensions essential for safe and high-quality practice[8].

The positive results may be attributed to the dynamic nature of the strategy employed. *In situ* simulation has become increasingly established as an ally in the health field, especially given the growing demand for high-fidelity training in safe environments[15], without removing professionals from their usual workplace - an additional advantage. This approach enables educational activities to be conducted within the clinical environment itself, reducing barriers associated with the physical and logistical structure typically required by simulation centers[16–19].

The literature indicates that *in situ* simulation has been used for multiple purposes, including health education, assessment, quality improvement, and the promotion of patient safety. Its adoption has increased in recent years, with evidence of positive impact on clinical indicators, the development of professional competencies, and organizational performance[19].

When jointly analyzing the evaluated outcomes - performance, satisfaction, and self-confidence - it is possible to infer that *in situ* simulation operates in an integrated manner, contributing both to the development of technical skills and to the consolidation of affective-cognitive aspects relevant to safe professional practice. In this regard, Kolb's experiential learning model also provides theoretical support for the strategy used, recognizing that knowledge is constructed through experience, reflection, and practical application in meaningful contexts.

The immersive and realistic nature of *in situ* simulation represents an important distinguishing feature, as it takes place in the actual work environment, using the real resources and dynamics of the unit. This characteristic facilitates the identification of gaps, familiarization with institutional protocols, and the reduction of logistical barriers—factors that often limit traditional simulation centers. The literature supports these benefits, indicating that this approach contributes to the improvement of technical competencies, the strengthening of a safety culture, and the enhancement of clinical indicators[18].

The role of structured debriefing stands out as a fundamental component of the simulation, as it promotes critical reflection guided by a facilitator, enhancing learning through the analysis of the actions performed[18]. This strategy supports the learner's active role in the educational process, fostering knowledge internalization and critical self-perception regarding one's own performance.

Regarding the items assessed in the performance evaluation, only one - "it is necessary to change the diaper whenever moisture is present" - showed a reduction in correct responses in the post-test. However, the error was made by only one participant, not representing a statistically significant difference. Two items maintained low accuracy rates, both related to more specialized

knowledge. These findings suggest that *in situ* simulation alone may not be sufficient to address more complex conceptual aspects, making it necessary to incorporate complementary approaches such as microlearning (brief, focused content) and educational artificial intelligence tools capable of reinforcing the retention of critical concepts and personalizing learning[20,21].

The measurement of satisfaction and self-confidence has been widely explored in the literature, as these constructs are relevant in the evaluation of teaching–learning strategies in health education. In this study, the application of the SSSCL revealed high levels in both dimensions after the simulated activity, corroborating findings from previous studies that used the same scale[22,23].

Currently, the constructs of satisfaction and self-confidence have attracted considerable interest in the research field and have been the focus of investigation in different contexts. Measuring these constructs can serve as a strong indicator for evaluating the effectiveness and applicability of new teaching strategies[9].

The assessment of these constructs should consider multiple perspectives, as they involve both affective and cognitive components. Satisfaction is related to the learner's expectations regarding the educational experience and is directly associated with engagement in professional development. Self-confidence, in turn, can be understood as the individual's belief in their own ability to perform a given task, being linked to self-efficacy and the development of practical competencies[9]. Both contribute to strengthening professional practice and are associated with adherence to prevention protocols and improvements in the quality of care.

In the context of simulation, it is plausible to consider that the high levels of satisfaction and self-confidence are related to the opportunity to experience clinical situations in a controlled environment, with space for critical reflection on practices and decision-making. Clinical simulation is recognized as an effective pedagogical strategy, as it promotes awareness of one's own capabilities and supports skill enhancement, contributing to greater patient safety and improved quality of care[24].

Previous studies reinforce the effectiveness of *in situ* simulation in training nurses for the prevention of pressure injuries. One study identified that this strategy provided a safe environment for practicing risk assessment, early identification of injuries, and implementation of preventive measures, resulting in a significant improvement in clinical competence[11]. In another qualitative study, participants reported increased self-confidence after simulation activities, corroborating the findings of the present work[16]. Similarly, an investigation conducted in a trauma context, using regular *in situ* simulation, also revealed a significant increase in the self-confidence levels of participating professionals[17].

One study demonstrated that realistic simulated training significantly increased nurses' self-confidence in preventing pressure injuries in ICUs, in addition to promoting greater satisfaction compared with traditional teaching methods. Another study indicated that high levels of self-confidence are associated with greater adherence to prevention protocols and improvements in care quality, reinforcing the value of these indicators in clinical practice. Despite its promise, *in situ* simulation is still used incipiently in Brazil. Its adoption faces challenges such as limited time, human and material resources, and the need to adapt scenarios to the reality of each unit.

Regarding satisfaction and self-confidence, the central role of nurses in ICU clinical practice is recognized, particularly given that pressure injury prevention is a priority. The use of specific instruments to assess these constructs, such as the SSSCL, provides relevant insights into the effectiveness of the educational strategies employed.

Study Limitations

The main limitation of this study relates to its single-group quasi-experimental design, using a pre- and post-test structure without a control group, which restricts the strength of causal inferences and requires caution when interpreting the results. Additionally, the small sample size (n = 30) limits

the generalizability of the findings to other contexts. Nevertheless, the study contributes to filling an existing gap in the literature by jointly examining the performance, satisfaction, and self-confidence of nurses who participated in *in situ* simulation focused on pressure injury prevention. The findings reinforce the importance of this approach and may encourage its broader adoption in the national context, suggesting that future research employ more robust designs and larger samples, as well as the inclusion of comparative groups.

CONCLUSION

In situ simulation proved to be an effective educational strategy for training nurses in the prevention of pressure injuries in intensive care units, promoting a significant improvement in professional performance, in addition to high levels of satisfaction and self-confidence. These results highlight the potential of this approach to strengthen continuing education in critical care settings.

Although the sample size limits the generalization of the findings, this study contributes to advancing knowledge by exploring, in an integrated manner, the effects of simulation on different dimensions of professional performance. It is recommended that future studies adopt more robust designs and larger samples, as well as incorporate complementary learning strategies that deepen more complex conceptual aspects. The systematic implementation of in situ simulation may represent a distinguishing factor in promoting patient safety and enhancing the quality of care in high-complexity environments.

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NOTES

ORIGIN OF THE ARTICLE

Extracted from the Research Project entitled “Pressure Injury Prevention in Critically Ill Patients: in situ simulation as an educational strategy”, presented to the Multiprofessional Health Residency program, Clementino Fraga Filho University Hospital of the Federal University of Rio de Janeiro, as a requirement for the completion of the Multiprofessional Health Residency in 2020.

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APPROVAL APPROVAL OF ETHICS COMMITTEE IN RESEARCH

Approved by the Research Ethics Committee of the Clementino Fraga Filho University Hospital of the Federal University of Rio de Janeiro, Opinion No. 4.498.649, Certificate of Presentation for Ethical Review 39971120.0.0000.5257.

CONFLICT OF INTERESTS

There is no conflict of interest.

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DATA AVAILABILITY

Access to the data will be permitted upon request to the corresponding author, as it contains the identification of the participants and we need to guarantee the confidentiality of this data.

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