







EDUCATIONAL INTERVENTION ON ACUTE MANAGEMENT OF BURNS BASED ON INNOVATIVE PEDAGOGICAL METHODS: NURSES' PERCEPTIONS

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ABSTRACT

Objective: to analyze the perception of nurses regarding an educational intervention with innovative pedagogical methods on acute management of burns.

Method: a qualitative and exploratory study based on Paulo Freire's sociocultural pedagogical approach. The educational intervention was carried out with 18 nurses who worked in the areas of urgency and emergency. The intervention was centered on active teaching-learning methodologies, in which the main teaching methods were case-based learning, conceptual maps, simulation training, and digital portfolio. Data was collected in November 2017 and October 2018, in the setting of a state public university, by means of a sociodemographic questionnaire, records produced from focus groups, field diaries and portfolios, which were analyzed based on data triangulation, using Bardin's content analysis technique.

Results: four categories were identified: collaborative construction of knowledge based on autonomy and dialog between the students; learning with dynamism and joy; from problematizing reality to critical thinking; and education that leads to professional empowerment and confidence.

Conclusion: the nurses perceived the educational intervention as positive, since the innovative and participatory teaching methods adopted contributed to the development of competences and skills, ensuring more critical thinking, autonomy and empowerment for these professionals. The study represents an advance in the scope of Nursing education and in the orientation of continuing education actions.

DESCRIPTORS: Nursing education. Teaching. Learning. Simulation. Nursing in emergency. Burns.

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INTERVENÇÃO EDUCATIVA SOBRE ATENDIMENTO INICIAL AO QUEIMADO BASEADA EM MÉTODOS PEDAGÓGICOS INOVADORES: PERCEPÇÕES DOS ENFERMEIROS

RESUMO

Objetivo: analisar a percepção de enfermeiros a respeito de uma intervenção educativa com métodos pedagógicos inovadores sobre atendimento inicial ao queimado.

Método: estudo de abordagem qualitativa, do tipo exploratório, ancorado na abordagem pedagógica sociocultural de Paulo Freire. Realizou-se uma intervenção educativa com 18 enfermeiros que atuavam nas áreas de urgência e emergência. A intervenção foi centrada em metodologias ativas de ensino-aprendizagem, em que os principais métodos de ensino foram *case-based learning*, mapas conceituais, simulação realística e portfólio digital. Os dados foram coletados em novembro de 2017 e outubro de 2018, no cenário de uma universidade pública estadual, por meio de questionário sociodemográfico, registros produzidos a partir de grupos focais, diários de campo e portfólios, analisados a partir da triangulação dos dados, por meio da técnica de análise de conteúdo de Bardin.

Resultados: identificaram-se quatro categorias: construção colaborativa do conhecimento a partir da autonomia e do diálogo entre os educandos; aprendendo com dinamismo e alegria; da problematização da realidade à criticidade; educação que leva ao empoderamento e à segurança profissional.

Conclusão: os enfermeiros perceberam a intervenção educativa como positiva, uma vez que os métodos de ensino inovadores e participativos adotados contribuíram para o desenvolvimento de competências e habilidades, garantindo mais criticidade, autonomia e empoderamento a esses profissionais. O estudo representa avanço no âmbito do ensino de enfermagem, na orientação de ações de educação permanente.

DESCRITORES: Educação em enfermagem. Ensino. Aprendizagem. Simulação. Enfermagem em emergência. Queimaduras.

INTERVENCIÓN EDUCATIVA SOBRE PRIMEROS AUXILIOS A VÍCTIMAS DE QUEMADURAS BASADOS EN MÉTODOS PEDAGÓGICOS INNOVADORES: PERCEPCIONES DE LOS PROFESIONALES DE ENFERMERÍA

RESUMEN

Objetivo: analizar la percepción de los profesionales de Enfermería con respecto a una intervención educativa con métodos pedagógicos innovadores sobre primeros auxilios a personas que sufrieron quemaduras.

Método: estudio con enfoque cualitativo, del tipo exploratorio, basado en el enfoque pedagógico sociocultural de Paulo Freire. Se realizó una intervención educativa con 18 profesionales de enfermería que se desempeñaban en las áreas de urgencia y emergencia. La intervención se centró en metodologías activas de enseñanza-aprendizaje, en las que los principales métodos de enseñanza fueron *case-based learning* (aprendizaje basado en casos), mapas conceptuales, simulación realista y portafolio digital. Los datos se recolectaron en noviembre de 2017 y octubre de 2018, en el ámbito de una universidad pública estatal, por medio de un cuestionario sociodemográfico, registros elaborados a partir de grupos focales, diarios de campo y portafolios, analizados a partir de triangulación de datos, por medio de la técnica de análisis de contenido de Bardin.

Resultados: se identificaron cuatro categorías: construcción en colaboración del conocimiento a partir de la autonomía y del diálogo entre los educandos; aprender con dinamismo y alegría; de la problematización de la realidad al pensamiento crítico; y educación que deriva en el empoderamiento y la confianza profesional.

Conclusión: los profesionales de Enfermería percibieron la intervención educativa como positiva, ya que los métodos de enseñanza innovadores y participativos adoptados contribuyeron al desarrollo de competencias y habilidades, garantizando así más pensamiento crítico, autonomía y empoderamiento en dichos profesionales. El estudio representa un avance en el ámbito de la enseñanza de Enfermería, así como en la orientación de acciones de educación permanente.

DESCRIPTORES: Educación en Enfermería. Enseñanza. Aprendizaje. Simulación. Enfermería de emergencia. Quemaduras.

INTRODUCTION

Burn injuries are considered devastating for individuals who suffer them, for their family members and for society, and the treatment is one of the most costly for the health system today. They result in significant additional costs with rehabilitation and can exacerbate the victims' social vulnerability. The magnitude of the problem is greater when initial care is inadequate, which can result in death and disability, often culminating in a lifetime of physical limitations, disfigurement and social exclusion.¹

However, when the initial approach to severely burned patients is carried out in a structured and methodical manner, with appropriate resuscitation measures and timely transfer to a specialized center, there is a decrease in mortality, sequelae and suffering. In this sense, advances have been observed in the care of burn victims in developed countries, resulting from improvements in the education processes of health professionals.²

International studies on professional education in the area of burns have shown that participatory teaching methods such as simulation training are a powerful tool for acquiring knowledge and developing professional skills.³⁻⁴ On the other hand, the Brazilian literature on this subject indicates important gaps in academic training, knowledge and technical-care practices of nurses in the face of Acute Management of Burns (AMB).⁵

In this perspective, it is worth considering the significant changes that have been occurring in higher education in Nursing, seeking to overcome the challenges of the contemporary Nursing practice, among which it is possible to highlight the following: a new curriculum based on competences and skills; innovation in the teaching methods, centered on the students' learning, with alignment between theory and practice; and the new conception of the professor's role in the face of these changes. This new reality has demanded pedagogical and didactic requirements that have been expressed in a timid way in the universities, with emphasis on the absence of student-centered education, capable of preparing them for the complex tasks related to the nurses' professional practice.⁶⁻⁷

Various national and international studies²⁻⁵ indicate the need for efforts to advance in the qualification of health professionals to assist people who have suffered burns. Considering the relevance of this theme, the Brazilian scientific production on the use of innovative teaching methods in Nursing Education is still scarce:⁵ there are gaps to be filled with research studies to evaluate the use of new teaching-learning approaches.

Thus, providing continuing education actions in services that integrate the emergency care network, which adequately meet the demands of the professionals, can produce changes in their daily practices, problematizing the reality for the benefit of the Nursing care provided. This study intends to contribute to the advancement of Brazilian Nursing Education in an area considered critical, as well as to promote greater visibility to a theme that is still little explored.

Thus, in this study it is questioned how nurses perceive innovative educational actions developed in their daily practice of AMB? In view of this, this paper aimed to analyze the perception of nurses regarding an educational intervention with innovative pedagogical methods on AMB.

METHOD

This is an exploratory and qualitative research study, whose conceptual basis of education is supported on the perspective of sociocultural learning by Paulo Freire, combined with the use of Active Methodologies (AMs) of teaching and learning and innovative pedagogical methods, such as the Case-Based Learning (CBL), simulation training, digital portfolio, and Conceptual Map (CM). In this context, an educational intervention called "AMB Theoretical-Practical Course" was created in the extension course modality.

Paulo Freire's sociocultural pedagogical concept, based on historical-dialectical materialism, proposes a pedagogical action based on the articulation between theory and practice (praxis), helping individuals to overcome the immediate view of the phenomena and understanding that it is a project committed with social transformation, anchored in problematizing, critical and emancipatory educational practice.⁸

A total of 18 nurses living in the city of Maringá, state of Paraná, Brazil, participated in the study, divided into two groups. The first (G1) was composed of eight nurses, two of whom worked in Pre-Hospital Care (PHC) and six were students in a multidisciplinary residency training course in urgency and emergency; the second group (G2) consisted of ten nurses: four worked in the Emergency Department (ED) of a teaching hospital that is a reference in the acute management of burns, four in the PHC service and two were residents in urgency and emergency. The choice of these scenarios was justified by previous studies carried out in this region that indicated gaps in the academic training and care practices of nurses on AMB.⁹

The selection of the subjects took place based on their intention to participate in the research, respecting the number of places available for educational intervention. As inclusion criteria, the following were considered: having completed the online registration form; acting, for a period longer than one year, as an interventionist nurse at the PHC or as an assisting nurse at the ED or being regularly enrolled in the multi-professional internship training in urgency and emergency. The exclusion criteria included those individuals who were away from work or from the internship course due to a medical certificate or sick license.

A little about the intervention

The AMB Theoretical-Practical Course educational intervention consisted of four pedagogical workshops that were planned and conducted according to Paulo Freire's theoretical framework. It was held in November 2017, for the G1, and in October 2018, for the G2, following the same guidelines and structure for both groups. The intervention period met the requests of the continuing education service of the institutions to which the participants belonged. The workshops took place over a period of 11 days and lasted for five hours/class, intercalated with online dispersion activities, totaling 20 hours in person and 10 hours of remote activities.

Prior to the intervention, the teaching plans were created for each workshop, as well as a student learning guide. The pedagogical workshops were conducted by the researcher, who played the role of professor-tutor, and by a support team composed of two PhD students in Nursing and four undergraduate Nursing students, who played the role of observers, filling in the field diaries and assisting in the logistics and development of the intervention.

As shown in Chart 1, the workshops were named according to the central themes to be problematized. The selection of the content and skills addressed was based on recommendations from the International Network for Training, Education and Research in Burns (*Interburns*®).¹⁰ The theoretical constructs were guided by the current guideline and consolidated in the area of burns.¹¹

The intention was to vary the teaching methods, opting for modern pedagogical practices of a participatory and problematic nature, following the assumptions of the theoretical framework adopted. To stimulate problematization during the workshops and in the online dispersion activities, the tutor relied on the recommendations proposed in the literature.¹² The following is a summary of the main teaching methods used:

CBL: it happened in a cross-sectional manner, permeating the course from beginning to end. A real clinical case was used, reported in the local media and known to the participants. They should respond critically to guiding questions during the workshops and in the online activities.

CM: it was held in the second and third workshops, as a structuring tool for the participants' knowledge, stimulating meaningful learning. It was created using the *CMap Tools*[®] software

Simulation training: in the fourth workshop, the students were taken to the simulation scenario, which consisted of acute management of burns in an ED. The scenario was created by the researcher and validated by two PhDs students in Nursing, with experience in the area. It was opted for the simulation with *moulaged* actors - a technique that uses makeup and other materials to simulate injuries. After the simulation, the debriefing session was held, which offered an opportunity for reflective learning.

Digital portfolio: it consisted of a virtual space, using the Google Drive tool, aimed at sharing information, which included basic and complementary bibliographies; collaborative construction of knowledge through the discussion of clinical cases; and individual reflections on the teaching-learning process and the course trajectory.

Chart 1 –Title of the pedagogical workshops, knowledge and skills developed, and teaching-learning methods used in the educational intervention. Maringá, PR, Brazil, 2017-2018.

Workshop	Knowledge and skills	Teaching methods/ strategies
“A look beyond the injuries”	Evaluation and initial care in the pre-hospital approach. Classification of the clinical severity of the burn in adult patients. Airway management and treatment of inhalation injuries. Evaluation of shock and fluid infusion in the burn patient.	Case-Based Learning Group problematization Class with active participation
“Dealing with special situations”	Evaluation and treatment of injuries by chemical products. Evaluation and treatment of injuries by electricity. Initial nursing care for children with burns.	Case-Based Learning Group problematization Class with active participation Conceptual map
“Challenges in view of the pain and suffering of the other”	Evaluation, monitoring and control of pain in the burn patient. Injury care and infection prevention. Dealing with emotional aspects of burn patients and their families.	Case-Based Learning Group problematization Class with active participation Conceptual map
“Science and the art of care for burn patients”	Nursing care for the burn patient in the emergency department. Clinical evaluation and ability to make immediate decisions. Stabilization, referral and transport.	Case-Based Learning Group problematization Simulation training

At the end of the educational intervention in each group, data was collected in November 2017 and October 2018, in G1 and G2, respectively, except for the sociodemographic data, which were collected prior to the intervention, at the time of registration. For this, the following techniques were used: application of an online sociodemographic questionnaire; focus group; observation with filling of field diaries by the researcher and the research team; and analysis of portfolios. For each of these techniques, scripts were prepared in accordance with the objective of the study.

In the focus groups, the participants' discussion was guided by a script which questions were based on the theoretical framework adopted. The questions address the teaching-learning process and the pedagogical methods used in the intervention. A single focus group session was held in each group, with a mean duration of 40 minutes due to the saturation of empirical data obtained in each session.

The textual *corpus* was created based on the discussions that emerged in each session, which were registered by audio recording and later transcribed in full, enriched with the reports of the portfolios and field diaries. For data analysis, the combination of the techniques employed enabled triangulation in the analysis process, which was guided by the thematic content analysis technique.¹³

The following stages were conducted: pre-analysis, with transcription of the focus groups' statements; skimming of the material in full; analytical description in light of the theoretical framework and in exhaustive readings of the material obtained (immersion); and organization of the text in thematic categories. The empirical categories that reveal the teaching-learning process related to the educational intervention contain ideological training sessions capable of portraying the reality experienced, especially in the dialogical relationships between the participants.

The study complied with the national and international standards of ethics in research involving human beings and was approved by the Standing Ethics Committee of Research with Human Beings (*Comitê Permanente de Ética em Pesquisa com Seres Humanos*, COPEP) of the State University of Maringá. To guarantee confidentiality and anonymity, comments were identified with the letter "E", followed by Arabic numerals, randomly distributed (E1, E2... E10), and the indication of the group: first group (G1) and second group (G2), resulting in (E1G1); (E1G2).

RESULTS

Among the 18 nurses participating in the study, 16 were women and two were men, aged between 22 and 40. Among those who had an institutional bond, six work in PHC services and four in the ED of a university hospital, with a range of two to 12 years of employment contract with the institution, and all had completed complementary training, highlighting specialization in the urgency and emergency area. The other participants were six students from a multi-professional internship training course in urgency and emergency, located in the city of Maringá, state of Paraná, Brazil.

From the analysis of the focus group transcripts, analysis of the portfolios and observations of the field diaries, the following thematic categories were unveiled: collaborative construction of knowledge based on autonomy and dialog between the students; learning with dynamism and joy; from problematizing reality to critical thinking; and education that leads to professional empowerment and confidence.

Collaborative construction of knowledge based on autonomy and dialog between the students

An educational action, especially when carried out with professionals who already have initial academic training, is more significant if it does not occur in a vertical manner, that is, through the unilateral transmission of knowledge from the educator to the students, as occurs in traditional teaching methods. In this sense, the exchange of experiences and the sharing of previous knowledge among the professionals were pointed out by them as something significant during the intervention:

Together with the team discussion, we are able to think better and, what you missed, the other considers, and so we are able to provide together a much better care for the patient (E2G2).

It is great to hear other professionals who have already been in this situation [care for burn patients], to add to our training (E3G2).

In this course we can exchange knowledge. In addition to learning we can teach, and so we learned a lot more, which was the objective, the focus, but with a much greater exchange of knowledge (E5G1).

For sharing and exchange of knowledge to occur, in a sociocultural approach, it is necessary for the professor to encourage the group's reflexive involvement and to grant autonomy to the students,

allowing them to problematize their experiences. This autonomy is perceived in the participants' statements:

The active methodology used in the course allowed us to bring previous knowledge to the discussion, especially because it is a real clinical case, that the majority of the group treated [referring to the CBL strategy] (E3G1 - extracted from the Portfolio).

It was a positive thing because it was really creating knowledge. In the group, together, everyone managed to talk a little about what we have seen and witnessed (E5G2).

What made the dynamics of the course easier was the composition of the group because we already have a pre-hospital and ED experience. So, we have a luggage to add and everyone had the opportunity to contribute (E7G1).

The paradigm shift from traditional to innovative teaching should be mediated by dialog, which is a basic condition for knowledge. According to Freire, dialog is an existential necessity and it is through dialog that the act of knowing takes place. In this educational intervention, the students had the opportunity to create a network of frequent dialogs:

[...] We were able to talk a lot too, it was a very rich discussion (E1G1).

I think that our prior knowledge facilitated the discussion with the girls [interns] who come with new luggage. It helped to broaden our horizon (E1G2).

The pre-hospital [PHC] team has the ABCDE on the tip of their tongues, which helped a lot in the group discussion (E1G2).

During the problematization of the case (CBL strategy), the tutor encouraged dialog between the students. They reported several cases that they had handled, causing a wide discussion about the behaviors adopted (Field Diary - G2).

The participants' statements demonstrated that the educational intervention, through innovative and participative teaching methods (CBL, conceptual maps, simulation training, and digital portfolio) enabled a collaborative practice in the construction of knowledge, with nurses from different settings and with different professional experiences. This construction took place through dialog and respect for the autonomy of each individual.

Learning with dynamism and joy

The use of participatory pedagogical methods seeks to favor the student's learning and this is essential for the promotion and maintenance of the motivation to learn. Thus, the nurses believe that the variation and innovation in the teaching methods provided a favorable atmosphere for learning, guaranteeing focus on activities and pleasure in learning:

The activity we did yesterday, the Conceptual Map, was very interesting because we created it together and this makes it stick in our minds; we visualize the map and we are thinking about the care, about what we can do (E4G1).

During the process of the Conceptual Map, the participants were excited about the virtual tool for building the map, actively participating in the activity (Field Diary - G1).

You [the tutor] brought several new and different methods that could stimulate different students in different ways (E1G2).

Everyone was focused, no one was daydreaming or using their cell phone. The method you used with us, case-based learning, was something that helped a lot (E3G2).

I thought it was something very well prepared [digital portfolio]; I had seen it before, but on the computer, I had never seen it. I really liked the method (E7G2).

In addition to the teaching methods used, it is worth considering that, for nurses who participated in the intervention, AMB has a lot of meaning, and they attribute relevance to this theme, which in fact motivated them to learn:

We deal with several situations in our work routine, burns in children, patients with airway burns, and I notice that the professionals are not sufficiently prepared (E4G1 - extracted from the portfolio). [...] I see that it is a very complex matter [AMB] (E6G1).

I had a lot of doubts regarding the evaluation of patients, even more when it comes to children (E1G2).

In the nurses' understanding, the educator, who in this intervention assumed the role of professor-tutor, created conditions for the construction of knowledge by the students, by breaking with the still hegemonic pedagogical proposal of monologue and of ready and pre-established contents:

You [the tutor] managed to approach the contents in an enlightening way, you know?! It was not in a dull way, it was in a dynamic way (E2G1).

It wasn't like a professor talking and us not understanding anything, my God... (E1G1).

[...] Not being guided by an expository class made it a lot easier because we kept the dialog, the focus, the discussion of that problem and it made our concentration on that subject a lot easier (E2G2).

It should also be noted that the alignment between theory and practice, an essential element of the sociocultural approach, which was mainly promoted by the simulation training and by CBL, caused great interest in students, who played an active role in the teaching-learning process, making it once again pleasurable:

It is a way of being able to really assimilate the content in theory and in practice, so we can learn it easier. It's very good to memorize it (E1G1).

Because the simulation training, if we repeat it ten times, I believe that in the ten times we will learn something different (E6G1).

The simulation training that we make here makes us learn more. What we did right and what was not so appropriate, and also tests our nerves before that situation, the patient talking, talking [...] (E1G2).

During the simulation training, some of the students' feelings and emotions were evident, such as the concern to properly treat the patients and to calm the family member next to them. At the same time, the other students who watched the simulation observed carefully and commented on the service provided by the others (Field Diary - G2).

Aligning theory, practice and your knowledge [the tutor's knowledge] was really great; you offered modern resources, such as simulation and the contents in the digital platform [Google Drive] that will certainly help us because it is available (E8G1).

From problematizing reality to critical thinking

According to Freire's assumptions, education should lead the student to an awareness and critical attitude that results in a change in reality. The professionals' discourse highlighted a contextualized, conscious and critical educational practice:

It helped a lot, we had the opportunity to study a case that we treated, we experienced. And you [the tutor], through the cases, helped us to better understand it. Made it a lot easier (E3G1).

During the discussions in the class, there were always scenes and situations that had already been experienced and that made me reflect on how unprepared I and the team were, and how important our work and the first care for burns are (E7G1 - extracted from the portfolio).

The methodology used facilitated our memorization, our reflection about the case. It also made us remember cases we treated and think about what could have been done differently. What I did and what I could improve in that case (E2G2).

Human beings, as historical beings, are involved in a space-temporal context and, in this condition, the greater the critical reflection on their reality, the more they can influence it, guaranteeing

themselves more autonomy and freedom. The awareness of reality was corroborated in the nurses' statements:

It was an opportunity for us to learn, so when we go to see this patient, regardless of where we are working, maybe in a place without much resources, we know how to act in that situation and lead the team (E3G1).

I realized now with the class that I had a mistaken view that the burn center would have to take care of the patient, but one of the first items that we discussed at the beginning was the care we [PHC and ED] provided, which are those initial hours that are crucial and in that period we will treat the patient (E1G2).

[In] Our first aid service, public emergency department and SAMU, there is no way to escape [from AMB], we do not choose the patient, we do not choose the incident [the group agrees] (E4G2).

Education that leads to professional empowerment and confidence

The path taken by the nurses in search of the construction of knowledge provided them with increased power and autonomy, leading to empowerment in the decision-making process, especially with regard to inter-professional relationships, as can be seen in the statements:

We always go through that situation where there is the question: what to do with a burn? It depends on who you are working with [physician]! That was the answer... because each one follows a path, each one does it in a different way, but not now [...] (E4G1).

Precisely because we work as a team, you know? There is no way for everyone to act differently, it has to be well aligned, so it is necessary to guide [the team] properly (E4G2).

Some things we already knew [before the course], but on Monday [during the course] that I moved that burn patient, I did it with much more confidence; when the patient arrived I remembered the discussions, it was more fluid, and when I arrived and found [the patient] I had no trouble (E9G2).

After the final evaluation of the educational intervention, the participants praised the role of the tutor, mainly for their creativity in relation to the teaching methods employed. At various times, they reported increased confidence for the care of burned people and that they were motivated to pass on the knowledge acquired to their coworkers (Field Diary - G2).

Finally, it is observed from the participants' statements that the educational intervention, guided by the understanding of education as a political-pedagogical act aimed at the subjects' freedom and emancipation, provided nurses with confidence in carrying out their daily practices:

Wow, my view has changed a lot. Now it is totally different! If I had treated a burn patient [before the course] I would certainly give priority to the injury, I would not focus much on the ABCDE (E3G1).

I think that every professional, when assisting without confidence, for example a burn patient that is very remarkable, and their prognosis is bad, you end up thinking: could I have done something else? And now, after this course, being more prepared, you can be sure, I did everything I could (E6G1).

The course helped us to refine our service, to have more confidence to handle the cases (E4G2 - extracted from the portfolio).

Today I feel much more confident in the face of such situation [AMB], in saying: that is the way I do it! With much more knowledge than before the course, because when it was a burn I always thought: I will do it because I think it is not so wrong, but not now, now I will treat with much more confidence (E8G2).

DISCUSSION

Considering that AMB is a complex and challenging theme in the reality of the nurses working in emergency services, corroborated in the students' statements, it is inferred that the theme itself gives interest and motivation for learning. This motivation, however, was enhanced in this educational intervention by providing opportunities for the students to actively engage in activities, giving pleasure to the teaching and learning process.

In the search to tread new paths for professional training in nursing, AMs have been used and mediated by innovative teaching methods, which seek the integration between theory and practice and between teaching and service.¹⁴ In this perspective, cooperative and collaborative learning stands out, considered one of the pillars of active teaching, with relevant scientific evidence that working in groups enhances learning. When working in groups, the students achieve a synergy that does not happen in individual work, a fact that was corroborated in the participants' statement in this educational intervention, mainly by sharing the experiences brought from the professionals' practice into the educational environment.¹⁵

Essential for group work is the dialogical relationship established between the students, which provided fertile ground for the exchange of knowledge and for the sharing of knowledge and real-life experiences among the participants in this intervention. Considered one of the central points of the Freire's framework, the dialog established in a pedagogical relationship constitutes a challenge to be overcome in the teaching of health professionals, towards an education that stimulates thinking and acting both in theoretical and practical aspects. By assuming a posture aimed at dialog, educators contribute to the strengthening of their pedagogical practice and encourage the students' autonomy.^{8,16}

Another relevant aspect is the motivation for learning, considered essential for the students, since it can transform them into professionals with greater autonomy and critical-reflective deepening. This deepening is essential in the process of unveiling individual and collective problems. In the field of Nursing, studies have emphasized the importance of teaching methods that enhance students' motivation and favor learning.¹⁷

Among the innovative teaching methods employed, simulation training is worth mentioning. This method has shown to be promising in the health area, since it gives the student the opportunity to practice in controlled and safe conditions. It is characterized by the creation of a replica of the desired situation and can be used to simulate the real interactions of the patient and, consequently, improve communication skills, as well as teamwork, management and technical skills.¹⁸ Thus, from the perspective of the sociocultural approach, simulations allow the student to integrate theory and practice and to experience the realities of their social context.

A study carried out in Italy that used simulation training to develop teamwork skills and resource management in crisis in the context of burns with medical professionals showed the achievement of the goals and excellent general satisfaction with the methodology used.¹⁹ This method, in addition to offering an opportunity for reflective learning, allows any significant deviations to be deepened so as to optimize team performance in future simulations and in real situations.

Another important method to be referenced is Case-Based Learning (CBL). This approach helps health professionals to develop analytical and diagnostic thinking skills, and not just a mere accumulation of theoretical content. In this way, it allows the student to be exposed to real situations, capable of helping them to develop analysis skills, as well as to interpret and solve problems, awakening their interest in learning.²⁰

In CBL, the professor-tutor has the role of helping students to solve different problems based on cases that occur in real-world situations, moving from abstract knowledge to practical applications.

Thus, this strategy is a potentially powerful method to enable nurses to act with challenging clinical situations.²¹

Highlighted in the professionals' statements, the CM is an active strategy that favors critical thinking in the students. Nurses face complex problems and decisions that require critical thinking to identify the patient's needs and implement the best practices. An experimental study conducted with Nursing students verified a statistically significant increase in skills related to critical thinking in the intervention group - teaching using conceptual maps - when compared to the Control Group. The authors recommend the insertion of this method in the curricula of Nursing courses.²²

This intervention sought to advance further by promoting collaborative activities in the virtual environment. The creation of a digital portfolio made it possible to share materials, using the Google Drive technological tool, which has the functionality of collaborative writing and file management. Between one pedagogical workshop and another, the students, following the guiding questions, analyzed a clinical case and made reflections on patient care, which allowed deepening and promoting critical thinking. A search carried out in the national Nursing databases revealed only one published scientific article²³ that used this tool as a didactic resource in the collaborative construction of knowledge, providing this study with a pioneering spirit.

An educational action with participative teaching-learning methods that stimulate problematization seen as a political-pedagogical act of intervention in the world is fundamental for the development of awareness and of a liberating perspective. To produce the changes that the current reality demands, awareness is needed, as well as education focused on building a non-oppressive society. This training in Nursing points to the training of professionals and leaders who work within this perspective.^{8,24}

Therefore, this study started from a pedagogical proposal that opposes traditional education and seeks to overcome education based on the unilateral transfer of content, stimulating creative, critical and transforming practices. It was sought to raise awareness, the essence of which is to think about reality in a critical and reflexive way to act towards its transformation, assuming an epistemological position. This process is only possible when reality is questioned and problematized, with problematization being a means of discovering reality through dialog and action-reflection. Through dialog, the individuals learn together and act on their duty to discover what is happening and to transform the world.^{8,13,25}

The teaching-learning methods used are active, dialogical and critical. Therefore, an emancipatory and transformative education was sought, mediated by the dialog between the educator and the students, in a horizontal relationship. The sharing of experiences and reflective deepening around AMB gave nurses autonomy and confidence in carrying out their practices. It is considered that autonomy is a fundamental factor for the development of professional work, especially in the health area, in which the work, carried out by a multidisciplinary team, is both shared and complementary.^{8,26}

In this sense, the appropriation of Nursing knowledge in the care of burn patients enables a more autonomous practice, leading to empowerment of the professionals. The scientific literature evidences that the empowerment of nurses reflects on satisfactory results in their practices. Once empowered, these professionals tend to show greater commitment to the work organization, greater professional satisfaction, and less tension in carrying out their activities.²⁷

This study was limited to describing the nurses' perception on an educational intervention with innovative teaching methods, which was directed to the care of people who suffered burns. Considering that the participants worked in pre- and intra-hospital emergency scenarios in a single city, the results cannot be generalized to populations with different characteristics. Although specifically related to AMB, it may constitute a reference in other areas of Nursing education in the future, leading the teachers to reflect on the teaching-learning process and curriculum development in academic and continuing education.

CONCLUSION

The nurses perceived the educational intervention as positive. Thus, they pointed out that the methodology used, with the valorization of dialog, gave them autonomy, allowing for the exchange of experiences, with the opportunity for them to teach and learn collaboratively. The innovation and variation of the teaching methods allowed the students to combine theory and practice and to problematize real situations experienced by them, which gave motivation, focus and pleasure to the teaching-learning process.

During the intervention, knowledge was gradually built and the reflections contributed to increase the participants' critical thinking about reality. Considering that the nurses felt more empowered and confident to perform AMB, it is concluded that the intervention fulfilled its role as regards critical and emancipatory education.

Innovative pedagogical methods, such as simulation training, and the others covered in this educational intervention, constitute an effective tool to prepare health teams for urgent and emergency care in acute, complex and stressful situations, such as burn cases. Recreating the teaching-learning model in Nursing is crucial to optimize assistance in AMB.

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NOTES

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CONFLICT OF INTEREST

There is no conflict of interests.

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