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Debriefing, a dialogical space for the development of reflective thinking in nursing

Debriefing, espaço dialógico para o desenvolvimento do pensamento reflexivo na enfermagem

Debriefing, un espacio dialogico para el desarrollo del pensamiento reflexivo en enfermería

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ABSTRACT

Objective: To understand the pedagogical elements necessary for the debriefing to favor the development of reflective thinking.

Method: A single case study developed at the Centro de Simulación en Salud of the Escuela de Enfermería of the Universidad de Costa Rica in October 2018. Data were collected through interviews, observation and document analysis. For data analysis, the strategy of theoretical propositions and the construction of explanation technique were used.

Results: The data originated two categories: 1) pedagogy of the organization, addressed elements thought by the professor to facilitate the dialogue; 2) facilitation pedagogy, brought elements from the dialogue itself that enrich the discussion, mobilize the group, provoke reflection and engagement.

Final considerations: It is essential to include the following as pedagogical elements in order to favor the development of reflective thinking: prior planning, adequate environment, systematization, pedagogical training in facilitating debriefing, openness to dialogue, pedagogical respect, valorization of positive aspects, patience, and motivation.

Descriptors: Simulation exercise. Teaching. Nursing. Thinking. Formative feedback.

RESUMO

Objetivo: Compreender os elementos pedagógicos necessários para que o *debriefing* favoreça o desenvolvimento do pensamento reflexivo.

Método: Estudo de caso único desenvolvido no *Centro de Simulaciónen Salud da Escuela de Enfermería da Universidad de Costa Rica* em outubro de 2018. Os dados foram coletados por meio de entrevistas, observação e análise documental. Utilizaram-se a estratégia de proposições teóricas e a técnica de construção de explanação para a análise dos dados.

Resultados: Os dados originaram duas categorias: 1) pedagogia da organização, a qual abordou elementos pensados pelo docente para facilitar o diálogo; 2) pedagogia da facilitação, a qual trouxe elementos do próprio diálogo que enriquecem a discussão, mobilizam o grupo, provocam a reflexão e o engajamento.

Considerações finais: Torna-se imprescindível incluir como elementos pedagógicos que favoreçam o desenvolvimento do pensamento reflexivo os seguintes: planejamento prévio, ambiente adequado, sistematização, formação pedagógica em facilitação de *debriefing*, abertura ao diálogo, respeito pedagógico, valorização do positivo, paciência e motivação.

Descritores: Exercício de simulação. Ensino. Enfermagem. Pensamento. Feedback formativo.

RESUMEN

Objetivo: Comprender los elementos pedagógicos necesarios para que el debriefing favorezca el desarrollo del pensamiento reflexivo.

Método: La información sobre el tipo de estudio, muestra, período, lugar de la investigación, recolección y análisis de datos debe presentarse de manera clara y objetiva, sin excesivos detalles. El método debe alinearse con la sección de métodos del artículo completo, brindando información más detallada sobre el diseño del estudio y los procedimientos utilizados.

Resultados: Los datos originaron dos categorías: 1) pedagogía de la organización, en que los elementos abordados pensados por el profesor para facilitar el diálogo; 2) pedagogía de la facilitación, en que el trajo elementos del propio diálogo que enriquecen la discusión, movilizan al grupo, provocan la reflexión y el compromiso.

Consideraciones finales: Es imprescindible incluir como elementos pedagógicos que favorezcan el desarrollo del pensamiento reflexivo los siguientes: planeamiento previo, ambiente adecuado, sistematización, formación pedagógica en la facilitación del debriefing, apertura al diálogo, respeto pedagógico, valorización de los aspectos positivos, paciencia y motivación.

Descriptores: Ejercicio de simulación. Enseñanza. Enfermeria. Pensamiento. Retroalimentación formativa.

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INTRODUCTION

American philosopher, psychologist and liberal pedagogue John Dewey pioneered the discussion on reflective thinking. The author emphasizes that reflective thinking is the best way of thinking and that this exercise consists of "mentally examining a subject and giving it active, persistent and careful consideration"[1]. He also states that doubt is necessary for thoughtful reflection, as it motivates investigation to find out what motivates a given idea. According to Dewey, reflective thinking is something conscious, deliberate, strategic, triggered by a stimulus, as something to be resolved and with clear objectives to be achieved[2].

In their training process, nurses need to develop reflective thinking, as they will have to make decisions based on scientific evidence, critically analyzing the clinical and social context. Their assertiveness depends on their ability to question and learn every day with each new experience.

From this perspective, Paulo Freire advocates an education based on dialogue, love and problematization. Dialogue allows action-reflection-action, aiming at transformation, exchanging experiences, learning, reflecting, acting and being humble[3]. In debriefing, in simulation, praxis is sought, theoretical application in practice, and debriefing is aligned with Freire's ideas, stating that: "Humans exist because they are in a given situation. And the more significant will be their lives, if in addition to thinking critically about their situation, they also act on the situation they face[4].

Various pedagogical resources have been used to promote the development of this reflective thinking in nursing, including clinical simulation.

Clinical simulation has been increasingly adopted as a teaching method in the healthcare field. It is an active methodology that recreates clinical situations in a controlled environment, using simulators or actors for its execution. It has clear learning objectives, is carried out after analysis of the theoretical content and the technical skills and attitudinal skills are previously practiced[5]. It is divided into 3 stages: preparation, participation and debriefing[6].

The preparation stage includes the distribution of material for prior study and pre-briefing or briefing guidelines, a moment of adaptation in which the facilitator guides participants on the characteristics of the simulation, the process and the steps, as well as on the resources available and the learning objectives[6].

Participation is the immersion stage in the scenario, which was previously planned based on a clinical case based on the experience and skill of the instructor, the profile of the target audience, the number of participants, among other essential fundamentals for its applicability in teaching. At this point, the facilitator observes the students' behavior, intervening only to modify vital parameters of the simulator based on the actions taken by the team and/or additional information via exam results. And finally, after the scene is over, students participate in the last stage, which concerns debriefing[6].

Debriefing is a meeting between participants in the simulation or real situation, which aims to reflect on what happened, understand the line of reasoning behind decision-making, whether successful or not, correct the strategy and re-elaborate a line of action for future cases similar to the one that was experienced. Debriefing is considered a crucial part of clinical simulation. It is the moment when practice and theory are confronted and, in a metacognitive exercise, learning is materialized[7].

The facilitator of this discussion must be someone who witnessed the development of the scene, knows the learning objectives and is capable of leading the activity, developing questions that trigger the debate. This individual plays an essential role in motivating the group, proposing reflective analyzes and connecting theory with practice, transposing the learning generated to other situations that can be experienced in the real clinical context[8].

For debriefing to be successful, students need to be open to learning, in order to recognize hits and misses, expose their doubts and compare different points of view. To achieve this, confidentiality must be agreed in advance and respect, ethics and professionalism must prevail[8].

Clinical simulation allows participants to have a better perception of a given knowledge, evaluating multiple facets, listening to peers who disagree with them, developing a convincing argument, based on theory, often accepting that their line of reasoning was wrong and that it is necessary to change their opinion. Facilitators who promote this reflection are supposed to provide assistance in this learning process[9].

To support the facilitator in conducting the debriefing, different techniques can be used: Debriefing with good judgment[10];PEARS[11]; Plus-Delta[12]; Outcome-Present-State Test (OPT) [13]; model; the Gather-Analyze-Summarize (GAS) [14], among others.

The GAS is a kind of guide that provides a structure to define the beginning, middle and conclusion of the process. In the first phase, represented by letter G (gather), information and reactions are gathered; In the first stage, represented by letter G (gather), information and reactions are gathered; in the second stage, represented by letter A (analyze), the analysis of the highlighted points is carried out; and in the

last phase, represented by letter S (summarize), a summary of the learning is prepared[14].

The use of the GAS technique is justified for several reasons. First, it is a systematic way of gathering data about what happened during an event or experience. This is important because there may be multiple perspectives and experiences that have not been shared or recognized before. Secondly, the GAS technique is recognized and used widely throughout the world because it allows you to analyze and reflect on what happened in a structured and rigorous way[15]. Then, patterns and trends can be identified, as well as areas for improvement and strengthening. This helps individuals and the team learn from the experience and improve their performance in the future. This helps individuals and the team learn from the experience and improve their performance in the future. Finally, the GAS technique helps you summarize key learning points and communicate them clearly and concisely. This is essential to ensure that everyone involved understands the key points and knows what to do with the information obtained.

It is not enough to rely on a step-by-step scheme, as the simulations differ from each other, as each of them will have the outcome decided by the participants, according to their decision-making at the time of the scene. Understanding how a professor effectively carries out dialogical debriefing can help other professors in the planning and assertive execution of this pedagogical method, with the choice of the model that best adapts to their reality. A recent review study points out that in the literature there are few publications on debriefing techniques and methods for simulation in nursing education[16].

Studies have demonstrated that debriefing is in fact the most important stage of a clinical simulation, being considered a cornerstone of the reflective process in simulated educational activities, and that the debriefer plays a fundamental role in conducting and facilitating this process of metacognitive development[16,17].

It can be seen that the focus of the studies is still more concentrated on action, to the detriment of reflection, with few discussions on the pedagogical elements for conducting the debriefing. A scoping review that analyzed 140 studies on simulation debriefing in nursing identified a gap in the consensus on the theoretical or methodological references that characterize simulation debriefing in nursing education[18].

Thus, the present study aims to understand what pedagogical elements are necessary for debriefing to promote the development of reflective thinking.

METHOD

Type of study design

Single case study with a qualitative approach, carried out according to Yin's framework[19]. It is the ideal method when one intends to study in depth a contemporary phenomenon in its real context, especially when the boundaries between the phenomenon and the context are not clearly defined. Multiple sources of evidence are used (interview, document analysis, observation), with convergence of data through triangulation, thus increasing the validity of the findings[19].

Site

Centro de Simulación em Salud – CESISA, from *Escuela de Enfermería of the Universidad de Costa Rica*, – in San José, capital of Costa Rica, simulation teaching space, where activities such as skills training, clinical simulations, assessments, continuing education, individual monitored studies, research and extension are carried out.

Study participants

Intentional sampling was considered in this research, as the aim was to understand a phenomenon from the perspective of the different actors that made up this case. Representatives of the following categories were sought: professor, students, laboratory technicians, coordinators and administrative personnel. The invitation was made to the entire group that, during the collection period, was developing activities at CESISA. Representatives from each of the above occupations who demonstrated interest in sharing their experiences with simulation during the period of observation of the activities in loco by the researcher and who performed essential functions for understanding the phenomenon were selected for interviews.

Four CESISA professors who were dedicated exclusively to the simulation laboratories, five professors from the undergraduate nursing course (covering the six modules of the course) who followed the simulated activities at CESISA, four students: one attending the first year of the course, two in the middle of the course and one in the final year of the course, a laboratory technician who helped with setting up the scenarios, maintenance of equipment and technical support for professor, a secretary, responsible for all administrative aspects of CESISA, a course coordinator, who has been

the first coordinator of CESISA, and the current coordinator of the simulation center participated in the study, totaling 17 participants.

Data collection and analysis

Data was collected through triangulation of multiple sources, including document analysis, non-participant observation and semi-structured interviews.

For the collection of documentary data, documents from the course and the Simulation Center were previously made available, in August 2018, by email. The teaching plans for the subjects, the guidelines for the simulated practical part, the course curriculum, the simulation guides and the CESISA regulations were analyzed. Examination of the documents helped to understand the organization of the course and the insertion of CESISA into curricular activities, facilitating subsequent on-site observation.

The activities developed at the CESISA were recorded through non-participant observation during the month of October 2018, totaling 90 hours of observation. In this research, although the researcher was immersed in all activities carried out during the data collection period, the focus of observation was the simulated activity followed by debriefing. Observation data were recorded in a field diary, audio and images. To observe the scenarios, the researcher remained in the control room together with the CESISA professors, observing the scene through a one-way mirror glass. During the debriefing, the researcher remained with the group of students and professors in the debriefing room, without interfering in the discussions.

The interviews were carried out at a previously agreed time and place, audio-recorded, and lasted 30 to 60 minutes. They were transcribed in the original language and sent to the participants for validation. A guide with open-ended questions adapted for each group of participants was used. The questions aimed to identify the participants' understanding of the clinical simulation, in each of its stages, the importance of debriefing, the role of the professor, upsides and downsides in performing the debriefing.

For data sources, the following coding was used: Documentary Data (DDs), Observation Data (OD); and, in the interviews, alphanumeric codes were used in which the letter represents the group interviewed and the number, the sequence in which the interview was carried out: Students (S1, S2...); coordinators (C1, C2...); technicians (T1, T2…), simulation educators (ST1, ST2…), module educators (MT1, MT2…).

Data from multiple sources were organized into text files and subsequently coded, using the free version of the QDA Miner Lite software.

This software allows text excerpts to be grouped into one or more thematic categories and subcategories. It has a resource that generates reports by categories, which brings together all previously categorized excerpts into a single list, facilitating data analysis.

From the interview texts, transcribed debriefings and field diary notes, a database was created that was fed with excerpts of texts corresponding to previously established categories: Debriefing; Clinical Simulation; CESISA; Simulation Instructor; Student; Reflective Thinking; Clinical Field; Module Educator.

Data analysis was carried out in accordance with the strategy of theoretical propositions and the technique of constructing explanations, comparing the findings with the literature and perceiving, with much more clarity, the similarities and discrepancies of the theme in the case investigated[19]. The data that emerged from the different data collection strategies could be compared by grouping them into categories within the QDA Miner Lite software.

Ethical aspects

The present study was submitted to the Human Research Ethics Committee (CEPSH) through registration on *Plataforma Brasil*, and to the Research Committee of *Escuela de Enfermería* of *Universidad de Costa Rica*, being approved under Protocol No 2,675,941.

RESULTS

The analysis gave rise to two categories: Pedagogy of the organization and Facilitation pedagogy.

In the category Pedagogy of the organization, elements previously considered by the professor were brought together to facilitate dialogue, such as the arrangement of the participants in the room, the choice of a debriefing model, the planned time, support materials, among others. Within this category, the following subcategories emerged: Discussion circle – circularity; Negotiation of rules – presentation of the debriefing model; and Systematization of points of discussion – genuinely interested observation.

In the category Facilitation pedagogy, the elements of the dialogue that enrich the discussion, mobilize the group, provoke reflection and engagement are explored. The following subcategories emerged from the referred category: Reflective inquiry – promoting reflection on action; Acknowledging

incompleteness – Sensitivity in addressing what is wrong; Dialogicality – learning in communion; and Appreciation of what was learned – promoting self-esteem.

Pedagogy of the organization

Reflection circle – circularity

The organization of the spaces is designed pedagogically to provide more confidence to the participants. The educator plans the environment to facilitate learning, creating an environment of trust. Seating arrangement at a round table is used because in a circle relative to each other, people are sitting in the same position. For this reason and also to provide greater visual contact with the facilitators, educators seat among the students. Viewing the group from more than one angle also helps in identifying reactions and interpreting the non-verbal communication presented.

At the debriefing table, teachers try to sit among the students. (DOs)

> [...] *it's always like this, all of this obviously also generates a lot of confidence because even this number one step, of sitting in a circle, is essential for me, because otherwise* [...] *you are here and the professors are there in front of you, correcting you: "You made a mistake!". We sit in a circle and it relaxes us a lot.* (S2)

Negotiation of rules–presentation of the debriefing model

The model used to perform the debriefing is presented to the students. At CESISA, GAS is used to facilitate the discussion, and teachers present the model so that students know how each step will occur.

> *Yes. We use the GAS model. I like being here as an educator with the GAS board on the table and explaining to the students how I am doing the debriefing. I explain what the GAS model is, what G, A, S mean, then I tell them where we are exactly. This allows students to also know what I'm saying and what I'm asking and why I'm asking this opinion.(*ME4*)*
>
> *First we explore each person's perception of what was done well, how they felt, what was not done well, what could have been changed… and at the end we recap all this with them, so that they realize that, even if they think they don't know anything or that they did everything wrong, we actually managed to build something together based on what each one said. Then he/she says: "I did this wrong, I did that wrong, I did that other thing wrong. Okay, so, in short we did it wrong: this, this and this. Do we agree?" Someone else says, "Ah, well, I would add that." So, it is basically a construction made by individuals that in the end adds knowledge to the group* (SE3)

Systematization of points for discussion – genuinely interested observation

The educators that facilitate the debriefing pay close attention to all the students' statements and take note of positive and negative points that they want to work on in the analysis stage. They make it clear to students that this note is only for the purpose of reminding students of the need to revisit certain points. In general, a CESISA facilitator educator and a professor of the discipline participated in the debriefing.

> *Professor: First we will analyze everything that happened in the entire scenario, then we will do an analysis, I will take notes to have data for this analysis, and then we will make a summary. So, to begin with, we would love to know how you feel, how you felt during the scenario?* (OD – Debriefing 1)
>
> *While interacting with students talking about how they feel, the CESISA professor writes down some questions on a sheet of paper according to what she sees.* (OD)
>
> [...] *and, sometimes, one of the biggest challenges is writing down what they do well, not even because we are not constantly writing it down, but because as it is an assessment, we tend to take away from the evaluation part what we do well, So let's go to the other extreme, shall we?So, to avoid forgetting, I1d rather write down what they do well, so I can come back to it at the end, as it takes them longer to identify what they did well.*(SE2)

Facilitation pedagogy

Reflective inquiry – promoting reflection on action

An element present in the dialogue between students and educators, and that enriches the discussion, concerns the way in which the reflective process is stimulated in the group, that is, how questions are asked. The educators who facilitate the debriefing have specific training for this role and learn about the different types of questions. They avoid

questions with negative statements so that the student does not adopt a defensive stance. Instead, they question, in a truly curious way, what the student took into account when making a decision. Close-ended questions are also avoided, as well as questions directed to a specific participant. They are used in some situations where you want to encourage the participation of a quieter student or prevent another more outgoing student from hindering the participation of others.

> [...] *we understand that there are questions that must be formulated in a positive way: "How did you feel?". We should start from the assumption that you are very intelligent, that you are not evaluating your competence, but rather your learning. That we all learn, that we are there to help, and this facilitates a learning and pedagogical environment, an effective, more effective pedagogical mediation.*(SE4)

> [...] *do not ask negative questions, in a way that may put the student in an uncomfortable position, for example: "Why didn't you do that well?. Or questions that are very confrontational or that generate anxiety and stress, but rather ask questions that allow for self-criticism, reflective self-analysis such as "How can we improve together?", "How was the experience?", "What did you learn?". Then little by little, aspects related to opportunity and improvement appear and never in the form of destructive or threatening criticism, because the student becomes nervous, does not learn, refuses to talk,, and becomes very suspicious.* (ME3)

> *The educator asks questions that encourage the participation of all students. She asks what happened in the scenario. One student mentions that she sought to incorporate knowledge from the previous scenario. The educator provides a counterpoint, recognizing the students' notes and offering other possibilities.* (OD)

> *She uses the synthesis of students' speech to make pertinent comments, thus valuing their participation. She makes a statement and then asks why. She poses a question so that students can research it at home and bring back the answer the next day* (this is therapeutic hypothermia). (OD)

Acknowledging incompleteness – Sensitivity in addressing what is wrong

The educators who facilitate debriefing treat mistakes as an opportunity to learn, without punitive or judgmental tones. They seek to identify the failure of understanding that led to the mistake and encourage students to reflect on the necessary adjustment.

> *People here have to have charisma and tact to say things. Because if someone here doesn't have tact, the debriefing won't be something natural and well done, so I believe this is very important.* (S4)

> *So I feel that we are not judged very harshly, because here at CESISA they don't put so much emphasis on mistakes, in other words, it's as if you made a mistake, but this mistake is very underestimated. I even think that if they could not mention your mistake, they wouldn't, because they rely on this approach to build student learning. They mention the error to let you know where you went wrong, but they do so in order to provoke a mental process that we are always subject to making mistakes* [...]*and so the importance of the error is diminished, and we adopt a more positive view of how we are going to improve this, so to speak. And, I believe, that is always the focus here.* (S2)

Dialogicality–learning in communion

The educators take on the role of apprentices and establish a climate of trust and companionship within the group.

> [...] *It's a process where we all grow. Both teachers and students, in one way or another, benefit from the contributions made by participant, So, I believe that this is perhaps one of the greatest benefits, self-discovery, reflection on practice, and being able to build new knowledge together, a new perspective when faced with a new situation.* (SE1)

> [...] *the simulation not only teaches the student, but also the educator, and, in each simulation there will be differences, and we can make mistakes when planning, executing the simulation or evaluating, or debriefing. So, we also have to be careful to learn to put ourselves in the position of students during the simulation.* (SE3)

Appreciation of what was learned – promoting self-esteem

The discomfort caused by poor performance is mitigated by a positive reinforcement stimulated by the educator. This allows students to develop pleasurable and healthy learning, which does not destroy their self-esteem and which can be incorporated into daily life, in order to transform mistakes into opportunities to overcome and positively address the mistakes of their future team.

> *The educator highlights positive aspects. She asks students to point out positive aspects of their classmates.* (OD)

> [...] *the educator asks everyone to mention something positive that happened in the scenario. After the students*

speak, the educator highlights several other positive things. Then, she asks what each person believes they could do to improve performance in a similar situation next time. (OD)

For me, it is very important to reinforce the positive things that have been done. In these moments, learning takes place in many situations that are pleasurable and others that are threatening, but I always think that learning should be a pleasurable process that can be useful to the student, so that he realizes that he did something well, that all things considered this student did the best he could have done, and he did something very well. (ME4)

[...] *I believe that this is the time to say good things to our coworkers because this strengthens relationships and, in real life, relationships between nurses are not like that* [...] *I believe that this is important for our training, because we recognize our capabilities and the capabilities of others and we feel safer with the people we are going to work with.*. (S4)

DISCUSSION

Debriefing, as one of the stages of clinical simulation, consists of a fundamental dialogical space for the development of reflective thinking, as it promotes reflection on action – the students' performance in the controlled clinical scenario. To be dialogical, this space must be democratic, promote participation and cooperation, in which teachers and students are learners. A dialogical space requires an attitude of openness, sharing, exchanging experiences, feelings and thoughts, where respect and collective commitment are fundamental to interpersonal relationships[4,20].

Other authors corroborate the findings of this study by reporting the importance of debriefing in the simulation scenario, by providing opportunities for the exchange of knowledge between students and teachers themselves, in addition to improving learning among peers to formulate best practices[21].

Thus, according to the results, to guarantee a space that meets these requirements, educators must recognize fundamental elements in their pedagogical planning process. Pedagogical planning is an extremely important component for the development of simulation activities in a curriculum. The number of students, the phase/step of the course in which the activities will be inserted, the physical space, the number and the training of educators, the available resources, the type of simulation and the specific demand of the curriculum, the pedagogical objectives, among others, must be mapped in advance, so that the use of the technique is maximized[22].

In this study, the category "Pedagogy of organization" alludes to such elements and highlights strategies that favor the development of debriefing as a space for dialogue, such as circularity, represented by the arrangement of participants in a circle. Circularity – as well as the Culture circle proposed by Freire as a fundamental element in the educational process, establishes a critical and problematizing education. The circle allows people to discuss, perceive and understand the simulated scenario, the skills improved, as well as the learning acquired. Other authors reinforce the importance of the circle in debriefing as a dialogical, active, horizontal group process that problematizes the participants' experiences, aimed at forming critical and reflective subjects. The circle encourages empowerment on the subject and active participation in dialogue[4,23]

The act of sitting in a circle, among students, creates an environment of horizontality in which everyone is at the same level and can debate ideas and grow together. The culture circle establishes a horizontal dialogue: it is about stopping saying things to people and talk to people. It creates the possibility of validating words, feelings, preferences and even decision-making, as there cannot be a true word that is not a solidary set of two indichotomizable dimensions: reflection and action, therefore, praxis[4,23].

There are similarities between debriefing and the culture circle. In the culture circle, the main focus was not on literacy itself, but on expanding people's view of their own reality. In debriefing, the focus is not on delivering proper care without errors, but on developing the ability, through reflection on the action, to identify a mismatch in one's own mental scheme and correct it. The stages of the culture circle (investigation of the vocabulary universe; thematization with coding and decoding; problematization that seeks to overcome the naive view through a critical view[4] are also similar to the stages of the model used for debriefing in this study, the GAS: Gather, Analyze, Summarize[14].

The entire educational process begins with generating themes, understood as those that mobilize interest in learning, which emerge from the learners' experiences. In debriefing, the "generating words" are evidenced by the systematization of points for discussion, the genuinely interested observation of the educator, which arise from the significant experiences reported by the participants at the beginning of the debriefing, when the emotion is still emerging, and they report what happened in the scenario and how they felt[24]. At this point, the educator realizes what was significant for these individuals and can exploreaspects of the content that are related to this.

Meaningful learning needs two factors to happen: the learner's willingness to learn something new and logically and psychologically significant content for the learner. Realizing the practical applicability of knowledge is essential to awaken the motivation to learn, and finding new content anchored in previous knowledge facilitates the long-term retention of knowledge[25].

In this regard, simulation allows for meaningful learning and it is in the debriefing that the educator identifies the prior knowledge that can anchor the new knowledge to be worked on. Studies corroborate that debriefing enhances the lived experience and brings meaning to what was experienced, as it allows participants to reflect on the action, improving learning for future situations. Active student participation in the process has proven to be a strategy with greater impact when compared to more traditional strategies[22,26].

Thus, debriefing is the most important moment to develop reflective thinking, and the figure of the educator/facilitator is essential to guide participants in encoding and decoding the meaning of their experiences in the simulation scene. During the decoding process, the facilitator is responsible for welcoming students and discussing the coded scene, as well as encouraging participants to find their own solutions, which emerge during the reflective dialogue[4].

Therefore, facilitating reflection through debriefing is essential for student learning[27]. To achieve this, educators must acquire and exercise the necessary skills and competencies to facilitate debriefing, otherwise this process may be hampered and compromise the quality of the pedagogical experience[22]. To achieve its pedagogical purpose, the process requires strategic questions, recognizing incompleteness, dialogicality and valuing the positive, elements that constitute the organization's Pedagogy category.

The reflective process, which is promoted through the analysis of what one did, how one thought and why one thought that way, leads the students to expand their understanding of the phenomenon investigated. Thus, students are able to perceive how they acted in the situation of the simulation experienced, and are able to see reality from another perspective, deepening the relationships between the scene experienced and reality[4]. Fundamental elements in the management of the reflective process are as follows: it should occur in a loving, empathetic way, which encourages questions, and does not arouse violence or fear. It is important to create a safe space and be consistent in pedagogical action, without losing rigor or commitment to the educational process[3].

A study carried out in Canada[28] found that a psychologically safe learning environment in simulation contains three attributes: 1) ability to make mistakes without consequences; 2) the qualities of the facilitator and; 3) fundamental activities such as guidance, preparation, objectives and expectations. This is in line with the findings of another study carried out in the United States[29], where nursing students perceive a safe environment in simulation to be one in which the facilitator supports without judgment, where there is no problem in making mistakes, expectations are clear, collaboration is encouraged and positive conversations happen.

Positive feedback stimulates students' ability to regulate their learning, facilitates learning and improves performance, which does not occur when feedback is negative, heavy, vague or limited to praise, as it becomes incomprehensible. Dialogicality, or "bidirectional feedback" is necessary, as reported in a study from Western Australia[30], so that metacognition is stimulated. A supportive environment and interpersonal relationships facilitate autonomous self-regulation and favor optimal performance.

Therefore, debriefing is a pedagogical instrument capable of facilitating convergence between the actions and reflections of each student and the team – the collective, identifying its members as subjects – nurses under construction. These subjects come together in an intentional practice, where they have the opportunity to combine action and reflection to develop reflective thinking.

A limitation of this study is the scarce time spent by the researcher in the field. Further studies should be carried out to obtain new evidence related to debriefing in different training contexts. Also, considering the evidence presented here, this practice should be encouraged in curricula of the nursing course and other health courses.

FINAL CONSIDERATIONS

The present study provides evidence that the essential pedagogical elements for debriefing are based on the Pedagogy of Organization and Facilitation Pedagogy. These elements contribute to the development of reflective thinking, as they promote reflective inquiry and the mental process of reflection on action, accepting error as a learning opportunity, recognizing the incompleteness of knowledge. Prior planning, adequate environment, systematization, pedagogical training in facilitating debriefing, openness to dialogue, pedagogical respect, valuing the positive, patience and motivation are worth highlighting.

It was recognized that debriefing is a pedagogical action that contributes to the development of reflective thinking in nursing and to meaningful learning, which helps students to transpose knowledge into the real context, directly impacting the quality of nursing practice.

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