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SIMULAÇÃO E COMPETÊNCIAS NÃO-TÉCNICAS NO CONTEXTO DE EMERGÊNCIA PRÉ-HOSPITALAR: ESTUDO QUALITATIVO

Simulation And Non-Techical Skills In Pre-hospital Emergency Context: Qualitative Study

Simulación y competencias no técnicas en el contexto de emergencia pre-hospitalar: estudio cualitativo

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RESUMO: Compreender a importância que os enfermeiros atribuem à simulação no desenvolvimento de competências não técnicas no evento paragem cardíaca em ambiente pré-hospitalar. **Enquadramento** A enfermagem é projetada no futuro, desenvolvendo uma abordagem centrada na pessoa consistente com a valorização de valores, necessidades e desejos destes, considerando o processo de cuidados como intervenção complexa. A simulação baseada em cenários é uma oportunidade para recriar essa complexidade de forma virtual, no desenvolvimento de competências não-técnicas. **Metodologia** Este estudo utiliza uma pesquisa qualitativa indutiva, interpretativa e construtivista. Foram entrevistados 7 enfermeiros. Foi desenvolvida análise de conteúdo temática. **Resultados** Foram identificados três temas: cenários de simulação em emergências pré-hospitalares; A aquisição de conhecimento para o desenvolvimento de habilidades e Construção do virtual a partir do real. **Conclusões** Os enfermeiros entrevistados apresentam conhecimentos a melhorar em relação aos tipos de simulação. Consideram o *Debriefing* relevante para as habilidades de aprendizagem: pensamento crítico, julgamento clínico e a tomada de decisão.

Palavras-chave: **Competências Não-técnicas, *Debriefing,* Enfermagem, Pesquisa Qualitativa, Simulação**

Resumen: Comprender la importancia que los enfermeros atribuyen a la simulación en el desarrollo de competencias no técnicas en el evento paro cardíaco en ambiente prehospitalario. **Background** La enfermería se proyecta en el futuro, desarrollando un enfoque centrado en la persona consistente con la valorización de valores, necesidades y deseos de éstos, considerando

el proceso de cuidar como intervención compleja. La simulación basada en escenarios es una oportunidad para recrear esta complejidad de forma virtual, en el desarrollo de competencias no técnicas. **Metodología** Este estudio utiliza una investigación cualitativa inductiva, interpretativa y constructivista. Se entrevistaron a 7 enfermeros. Se desarrolló un análisis de contenido temático. **Resultados** Se identificaron tres temas: escenarios de simulación en emergencias prehospitalarias; La adquisición de conocimiento para el desarrollo de habilidades y la construcción del virtual a partir del real. **Conclusiones** Los enfermeros entrevistados presentan conocimientos a mejorar en relación a los tipos de simulación. El Debriefing es considerado como relevante para las habilidades de aprendizaje: el pensamiento crítico, el juicio clínico y la toma de decisiones.

Palabras clave: **Competencias No Técnicas, Debriefing, Enfermería, Investigación cualitativa, Simulación**

ABSTRACT: To understand the importance that nurses assign to simulation in the development of non-technical skills in cardiac arrest event in pre-hospital setting. **Background** Nursing is projected in the future, developing a patient centred approach consistent with the values, needs and desires of patients, considering process of care as a complex intervention. Simulation based on scenarios is an opportunity to recreate this complexity in a virtual way, to develop the non-technical skills. **Methods** This study uses an inductive, interpretative and constructivist qualitative research. 7 nurses were interviewed. It was developed a thematic analysis content. **Results** Three themes were identified: Simulation scenarios in pre-hospital emergencies; The acquisition of knowledge to skills development and Construction of the virtual from the real **Conclusions** The interviewed nurses present weakness of knowledge about simulation types. Debriefing is relevant to the learning skills: critical thinking. thinking, clinical judgement and decision making.

Keywords: Debriefing, Non-technical skills, Nursing, Qualitative research, Simulation

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1 INTRODUCTION

The Advanced Nursing develops from the specialization of knowledge in support of evidence-based practice, from their own theoretical models (Christensen, 2011). It is from this perspective that it seeks to mediate the use of theories and nursing models that values the centrality of the person in the process of care, provided by holistic nursing, patient-centred care (PCC) (Cordeau, 2013). The process of care (Amendoeira J. et al 2014) consider complexity of intervention, as an interaction process considering the complex singularity of each person, in nature insofar as it values the basic tools in nursing, supported by the scientific method of care, acquiring those with the status of soft skills, or as we have been considering: non-technical skills.

The literature suggests that the simulation based on the development scenarios that seek to recreate the complexity of the close proximity situations which are only possible using one or more simulation types, from low to high fidelity (Galloway, 2009).

Simulation scenarios can be low-fidelity, medium-fidelity, high fidelity, or computer based. Since beginning, nursing students usually benefit the most from low-fidelity simulations, simulations often increase in fidelity throughout a nursing program (Gaberson & Oermann, 2010). In this paper the concept of non-technical skills is clarified as one that supported the reflection from the analytical model, which is proposed and reproduced here, and allows us to substantiate the content inherent in defined goals and issues.

Debriefing as teaching strategy supports a constructivist theoretical framework within problem-based learning experiences. With the preponderance of simulation used throughout the nursing curriculum,

educators need to understand and develop best practice for debriefing to facilitate significant student learning during these experiences (Dreifuerst, 2009).

Patient centred care (PCC) in healthcare is defined as care provision that is consistent with the values, needs and desires of patients and it is achieved when clinicians involve patients in health care discussion and decision, considering namely the three assumptions of PCC: Communication, partnership and health promotion (Constand, 2014).

2 ETHICAL CONSIDERATIONS

All participants were given sufficient explanation regarding the purposes and the process of the study. They were informed that they could withdraw from the study at any time without any penalization. Nurses who voluntarily signed informed consent forms were able to participate in this study. Participants recognized that if they did not want to respond to any question, they were not required to respond. The participants' personal information was kept confidential. This research was approved by the ethical committee of Higher Health School of Viseu, Portugal.

3 MATERIAL AND METHODS

The aim is to understand the importance that nurses assign to simulation in the development of non-technical skills in cardiac arrest event in pre-hospital setting.

This study uses an inductive, interpretative and constructivist qualitative research. This approach permits exploring subjective experiences, to examine and compare the meanings of the experiences, and to construct themes illustrating the unique experiences of participants, (Bardin, 2013).

Participants

Participants were selected for their knowledge and by having a relevant jurisdiction with regard to the phenomenon under study.

Up to this point, the research was consciously aware of the nurses option to have simulation in the development of non-technical skills, for the event of cardiac arrest in adults, in a pre-hospital setting. Seven nurses were interviewed as (VMER)[1] coordinators.

Data collection

Interviews were used as techniques to collect data, with the participants - Nurses identified from an intentional sample, that take place individually with each participant in a place choose by them (Galletta, 2013).

An interview guide was developed with five questions addressed to the respective target audience, towards the achievement of expected results. Initial questions were as follows:

a) Can you describe a situation in which you acted as a member of the multidisciplinary/interdisciplinary team, during a cardiac arrest in the pre hospital context?

b) Can you tell me the importance it attaches to the training that has been involved, regarding the acquisition and development of professional competence in nursing intervention area?; c)Can you reflect and share with me the importance of simulation in the development of skills in the scenario considered in the 1st question? d) What is the relevance attributed to the non-technical skills learning by simulation as a

[1] Viatura Médica de Emergência e Reanimação | Medical Emergency and Resuscitation Vehicle

strategy for training/education in the context? e) Do you want to finalize some of the aspect(s) which seem appropriate to mobilization? Each interview lasted between 35 and 60 minutes; all interviews were recorded in audio, completed between December 2014 and March 2015, after the respective authorization by the respondent informed consent duly signed and guaranteeing anonymity and transcribed for later analysis.

Data Analysis

The technique of content analysis was used (Bardin, 2013) to analyse the data, then a system was built which went back over categories of the selected documents.

The recorded audio content was subsequently introduced into NVIVO 10 and subjected to processing audio that resulted in memos as a support tool for analysis by categorical matrix resulting text encoding process by the analysis units (Bardin, 2013).

Considering each memo as the context unit, words and phrases are sought towards understanding, considering the objectives, assigning meanings to the registration units, respecting the guidance for defining a category, continuing with an inductive approach within each category, a posteriori.

The systematic and repeated reading of the texts of memos under those categories enabled the definition of dimensions as broader address spaces organizing the categories and later dimension groups, organized on topics such as theoretical propositions that enable a holistic characterization of the phenomenon under study.

The analytical process of interviews occurred from: Pre-analysis, exploration of the material and treatment of results. The constituted categories, in accordance with an encoding process, which allowed conceptualization of the analysis units (Bardin, 2013): Context unit, the largest segment which includes the registration units, in the study by reference to the expression, whose count is identified as enumeration units. The result of this process is resumed in Table 1 and demonstrated in Results and Discussion section.

Table 1 – *Thematic analysis matrix of interviews*

	CATHEGORIES	ENUMERATION UNITS
Simulation scenarios in pre-hospital emergencies	Scenarios	56
	Intervention	32
The acquisition of knowledge to skills development	Training for skills	24
	Skills profiles	44
	Contexts for skills	30
	The simulation	39
	Debriefing from scenarios	19

4 RESULTS AND DISCUSSION

The overall array analysis of interviews and the main results are identified, considering the relationship between the themes and emerging dimensions of content analysis.

4.1 SIMULATION SCENARIOS IN PRE-HOSPITAL EMERGENCY.

This approach allows us to understand the action of these professionals.

The Scenarios

Pre-clinical scenarios are referred to as an essential organization for the development of simulation, establishing itself as a strategy that allows reflection on virtual situations which sometimes approach the real, while ensuring the security that no patient is harmed.

"*We created an hypothetical scenario: Follow up the situation well and on arriving at the victim, consider what your procedures are and how they will be changing either (…)the patient's response(...).*"(EE1)

Teamwork, as a category, is mentioned as relevant in cardiac arrest where nurses live dilemmatic confrontations between their own values and the patient's values and real needs. This requires the work of professional staff as a team, this being an essential condition to the quality of care and patient's safety.

This team can have a wider composition, depending on the referral situation which people claim to find, as well as the assumption of specific responsibilities for various elements of the emergency team,

"*In the pre-hospital I think it's more diluted. How are two people end up doing (...)sometimes pulls more nurses: Well let's do this so well.(…)but as it is(...)a team more(...)small, it is easier to do this.*"(EE1)

One of the characteristics valued by responding nurses is the confidence that from their perspective thereof, constitutes an essential tool for the development of quality work,

"(...)*Mutual trust, commitment, and the knowledge of what the other is capable of doing (…)aware that the transfer of communication, will not hurt sensibilities of anyone,(...)It is different when I'm with a physician in whom I have a lot of confidence(…)."(EE3)*

And with regard to nurses, how to build professional perspective cohesion of a group that does not interact in common in this particular context? VMER is not a service with common characteristics to other services.

"What I know of nurses is what we will talk to each other about what the physicians say. Because the physician talks about how I drive, how I act, speak of me to others.(…)informal point of view"(EE4)

This is an interesting issue when ruling on the composition of the team, that nurses consider being essential for the development of this activity.

"(...)I think it should be the profile of a pre hospital emergency nurse, and would be desirable that everyone was training in emergency and had experience in the pre hospital medical training."(EE4)

From the perspective of nurses, skills development is achieved more from real scenarios. Considering an aspect which is still little experienced by the participants, it was not very clear the importance attached to simulation, but on the other hand it was considered as essential in the training, primarily for non-technical skills.

"It's the time that physicians and nurses already have the skills and the all clear protocols in their minds, which should make the 'shaker' and play it in high fidelity."(EE3)

Intervention

Related with professional experience, it is particularly relevant to reflect analysis around those experiences assuming the central role in the professional activity or valorising the ability to intervene considering the uniqueness of the person as the centre of care.

The level of standardization characterizes the complexity of intervention and supports a central role of logic in professional action. The main concern is to intervene towards patient safety, seeking to reach care quality level to often allow the difference between life and death,

"*I know perfectly what it is to follow.(...)In a cardiac arrest situation where the physician and the nurse know what they have to do in that silence, is deafening!"(EE3)*

From the nurse's perspective, communication constitutes one of the essential tools for the quality of care,

"I can confirm that I will always cause transparent communication, always addressed to the leader(…)"(EE3)

When nurses develop their action under the address to a person in cardiorespiratory arrest, it also enables the development of attitudes centred on people and on their singularities.

"Essentially the approach to the patient (…)in cardiac arrest, there are likely to be an asset in a first approach, could potentially have a greater preparation in a second or third stage, an approach to family."(EE2)

4.2 THE ACQUISITION OF KNOWLEDGE TO SKILLS DEVELOPMENT

One of the issues inherent in the construction and development of a discipline is theoretical and practical knowledge.

Training for skills

Nursing training is developed according to the criteria of Bologna Process (Spínola & Amendoeira, 2014), a guide to the skills, mediating their evaluation in the training path from the expected results with measurability of content.

"*We are trained primarily over a number of years since the course(...)we are sheltered (in hospital) and this is perhaps the greatest difficulty will be to manage the extra-hospital setting."(EE2)*

The training is recognized by the nurses as a requisite condition for competent intervention in complex situations, as they re-live the importance of simulation,

"(...)We have specialist nurses of the critical diseased area, but we also have the diseased area specialists; not critical, mental health and other areas, that eventually are capital gains on certain aspects or items of our intervention."(EE2)

"(…)*We periodically trained in Advanced Life Support Area in basic life support and case discussion area, critical cases*(…)".(EE5)

Clinical experience and training in work context is considered important by nurses, "*The nurses of pre hospital(…)working with different victims, more serious, more critical, than nurses in hospital.(…)there will be some recognition in the academic field(...)*"(EE1)

In VMER nurses must be experts and if so, with a specialization,

"Right now it is the medical-surgical I would say, that would make the most sense for an emergency specialty."

Skills profiles

Competence can be understood as transferring knowledge in action, which becomes easily recognizable in nurses whose action is mediated by specific knowledge (theoretical and practical) making up the contents related with the complexity of intervention, particularly relevant to the development of technical skills, emphasized in the context studied,

"(...)Strengths essentially the knowledge that we have about the material and the technique, the technique itself in terms of resuscitation and general knowledge of drug action and all the technical algorithm(...)"(EE2)

"In these simulations (...)The technical part is always the most important, even one that is most talked about in debriefings."(EE2)

Apparently it has not yet occurred the awareness of the importance of training and simulation of non-technical skills, not as a waste of time, but as a contribution to a higher performance within the performance of technical skills.

There is no consensus among interviewees and even in literature about translation of the concept “The non-technical skills", being a virtually silent concept in science of nursing. Using an epistemological perspective, the concept can be rooted in the set of skills that are in the integration/convergence between dimensions: cognitive (Critical thinking, Clinical Trial), relational (Communication, Relationship Interpersonal) and behavioural (Leadership, Making decision and Teamwork).

Nurses assume a greater predisposition to the conscious use of non-technical skills, though not considering that the same will happen universally,

"...I think it's a concern of nursing as a whole. I have some doubts if it is applied by all nurses, the majority of nurses.(…)[concerning nontechnical skills](...)In terms of hospital is most noticeable the difference between the nurse and the physician in the hospital(…)." (EE1; EE7)

"(…)with various scenarios of greater and lesser complexity, which highlights(…)clinical judgment and decision making, focusing on inter-relationship and considering the guidance to the patient as target of care." (EE4)

It is also interesting to understand how nurses consider the suitability of learning and deepening of non-technical skills in the context of learning both from the reflection on real scenarios, such as from the simulation,

"It will be always cut at the end, because the first part is always done. As such it would be the final time for this part of the exercise to train the non-technical part(…)"(EE2)

The non-technical skills identified in this research, are: Communication; Leadership; Critical thinking; Team work; Clinical Judgement and Decision Making.

Contexts for skills

The contexts for skills (technical or non-technical) are also different from how nurses reflect on this reality.

With regard to training as a condition for conducting the activity in VMER, this must occur in the INEM[2] and is developed using the simulation,

"The formation of VMER course itself is all done on the basis of simulation."(EE2)

"We should provide key moments of recertification of these non-technical skills."(EE3)

This consideration is particularly important in pre hospital area considering the complexity of intervention in nursing, involving both a solid foundation of knowledge such as including professional development in the clinical context, whose complexity and diversity acknowledges the health professional (including nurses).

The clinical setting, as care production space and the implementation of learning from reflection to action, during the action and with the action (Schönn, 1983), constitutes a privileged space in which both the technical and non-technical skills can be developed and deepened, considering them as outcomes of the quality of care and patient safety,

"(...)How I will play an algorithm in a particular activity in a particular protocol, has much underlying clinical experience that I have or have not."(EE3)

2

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For nurses VMER coordinators, non-technical skills apparently acquire a higher value on training and preparation, from that which is visible from the intervention of the Team Leader and teamwork, valuing the concrete situations in which learning occurs,

"(…)if you hear one team leader shouting, or arguing, he's arguing because of his own insecurity and not the team"(EE4)

"I do not need the physician tell me to administer the drug and he knows he does not need me to say."(EE4)

4.3 CONSTRUCTION OF THE VIRTUAL FROM THE REAL

Considering the nursing discipline, in that it allows putting into action the simulation as an educational strategy, that mobilizes clinical contexts, transporting them to the virtual environment where it can develop scenarios supported in different research designs.

Simulation

The simulation is positive and in this circumstance is able to promote the patient safety, enhanced by exercise and acquisition of skills by developing complex activities, but without the presence of the patient. In addition, the importance attached to debriefing as space and context of reflexivity per excellence, regardless of the orientation that is assigned to it.

Thus, it is revealed the importance attached to different types of simulation by the participants and the reference to real situations that demonstrate how to use this increasingly evident strategy.

Nurses' discourse is not clear about the distinction between different types of simulation, considering low fidelity,

"(...)I think using the mannequins can go beyond the intended training skills, at least if I were the actor of the simulation, I would not accept well having chest compressions, or if they were trying to intubate me for ventilation if I was conscious."(EE2)

Some nurses characterize the medium fidelity simulation using mannequins allowing the development of a different kind of interaction, recreating reality controlled in a virtual context, particularly with regard to skills training techniques from prebuilt clinical settings,

"(...)We do training room with advanced support mannequins of life, that actually simulates(...)all the situations that can happen in a victim, particularly in the context of cardiac arrest, or peri cardiac arrest"(EE1)"(...)Simulation own team, we try to do it once a year."(EE1)

Whenever feasible, the High Fidelity simulation for those who lived the experience translates into added value for learning, as referred to

"(…)A high-fidelity mannequin, is different because we do have the answers of our work and we can feel the pulse, breathing(…)when it causes changes in the layout, change it causes in the wrist, and test it over our own sensibility, even closer to a real situation."(EE1).

Also the purpose of the simulated training of non-technical skills seems to be damaged by the time assigned to the simulation, considering the time that is necessary to absorb the preparation of scenarios allowing an adequate space for debriefing, as we shall also propose.

But the decision to use the simulation of high-fidelity must consider,

"It is difficult even for professionals who like to mobilize high-fidelity to learn, being able to find resources to do so, and that clearly involves more expensive training, number of trainers who calls and are present, and the back-up administration you need to prepare their own training."(EE3)

Whatever type of simulation, nurses consider that this is configured as an elected strategy for the acquisition of knowledge and skills development,

"(…)I see the simulation as the only possible answer, honestly!"(EE3)

Debriefing from scenarios

The questions that arise in the preparation of simulation inevitably pass through the discussion about the use of real or/and pre-built scenarios. When real scenarios are used, debriefing is given importance, as it is revealed at this point the length of time to complete the simulation, and information about the learning and development of professional skills.

According to the literature, various statutes to the debriefing are assigned, however it is becoming a priority to use this as a forum for discussion for events that occured during the scenario,

"In the debriefing of the situations, we try to do and in general we always do between the team always talk about the situation: what went well, what could have gone better! What went well, but we always try to do! The team has this concern."(EE1)

To build a scenario simulation is complex and time-consuming, in that it can configure different types of development (Decker et al, 2008) demonstrate identical configuration with attributed importance as a learning module.

Scenarios can use modules consisting solely of task sets that develop in a logical sequence, typically configured of a lower level to a higher degree of difficulty; or may be configured as learning modules in which the relationship between the mannequin and the learner does not allow any co reaction built; or be configured as a backdrop in which the relationship between the mannequin and the learner is mediated by software that allows you to recreate in virtual mode, very close to real situations.

"(…)As it is difficult to create a scenario, the scenario is hypothetical, we have no manikin, it's a little harder to do."(EE1)

But they also consider important, *"The debriefing is a privileged moment of learning, the goal is for the instructor to identify the error, but it takes the trainee, the trainee to go, that's why the debriefing has very strict steps or at least should be respected(...)"(EE3)*

"Anyway I think mistakes in high-fidelity scenarios should be identified in the debriefing"(EE3)

5 CONCLUSIONS

Appreciating the results exclusively in the light of the context studied, apparently the nurses interviewed present weakness of knowledge with respect to the simulation types with identical values, almost overlapping among those who refer high fidelity (11) and those who do not specify any of the types thereof (10). Low-fidelity (2) references and medium-fidelity simulation (6) can reveal the absence of using the patient simulation.

In what concerns the intervention, nurses valorize the centrality of the person in the process of care, for reasons that relate to his uniqueness.

Apparently awareness has not occurred yet as to the importance of simulation of non-technical skills, not as a waste of time, but as a contribution to a higher performance of technical skills.

Clinical experience and training in work context is considered important by nurses.

More simulation activities must be planned, mobilizing clinical experience in work context considering the accommodation of knowledge in pre -hospital emergency for both technical and non-technical competencies.

Nurses consider the suitability of learning and deepening of non-technical skills in the context of learning both from the reflection on real scenarios, such as from the simulation.

Nurses assume a greater predisposition to the conscious use of non-technical skills however not universally.

Debriefing is relevant to learn non-technical skills and can be constituted as a learning tool promoting critical thinking, clinical judgement and decision making, even while using the technical skills.

REFERENCES

Amendoeira J. et al (2014). Enfermagem avançada. Contributo para o processo de teorização em enfermagem. Revista da UI-IPSantarém, 5 (2), 232-249, acessível em http://www.ipsantarem.pt/wp-content/uploads/2014/03/Revista-da-UIIPS_N5_Vol2_ESSS_2014.pdf

Bardin, L. (2013). Análise de conteúdo. 5th ed. Lisboa: Edições 70.

Christensen, M. (2011). Advancing nursing practice: redefining the theoretical and practical integration of knowledge. Journal of Clinical Nursing, 20: 873–881. DOI: 10.1111/j.1365-2702.2010.03392.x

Constand, M. K., MacDermid, J. C., Bello-Haas, V.D., Law, M. (2014). Health Services Research, (14:271), 2-9, DOI:10.1186/1472-6963-14-271. Accessed 11-10-2015 from http://www.biomedcentral.com/1472-6963/14/271 .

Cordeau, M. A. (2013). Teaching holistic nursing using clinical simulation: a pedagogical essay. Journal of Nursing Education and Practice, 3(4), 40-50.

Decker, S., Sporstman, S., Puetz, L., Billings, L. (2008). The evolution of simulation and its contribution to competency. The Journal of Continuing Education in Nursing. 39(2), 74-80

Dreifuerst, K.T. (2009). The essentials of debriefing: A concept analysis. Nursing Education Perspectives, 30(2), 109-114.

Gaberson, K.B., & Oermann, M.H. (2010). Clinical teaching strategies in nursing. 3rd ed.. New York, NY: Spring Publishing Company.

Galletta, A. (2013). Mastering the semi-structured interview and beyond. From Research Design to Analysis and Publication. New York, NYU Press, 258 p.

Galloway, S. (2009). Simulation techniques to bridge the gap between novice and competent healthcare professionals. OJIN: The Online Journal of Issues in Nursing, 14(2). 3rd Manuscript. Accessed 28-09-2015 from http://www.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol142009/No2May09/Simulation-Techniques.aspx

Schön, D.A. (1983). The Reflective Practicioner. How professionals think in action. United States of America. Basic Books.

Spínola, A., & Amendoeira, J. (2014). The Care Process: analysis in nursing student's conceptions. Revista de Enfermagem Referência, IV(2), 163-170.