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ORIGINAL ARTICLE

IN-SERVICE EDUCATION IN A NEONATAL UNIT OF PROGRESSIVE CARE EDUCAÇÃO EM SERVIÇO EM UMA UNIDADE NEONATAL DE CUIDADOS PROGRESSIVOS EDUCACIÓN EN SERVICIO EN UNA UNIDAD NEONATAL DE CUIDADOS PROGRESIVOS

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ABSTRACT

Objective: to conduct focus groups with the nursing professionals in the neonatal unit. **Method:** it is a qualitative study, guided by the theoretical framework of the research-action, performed in the Neonatal Unit of Progressive Care, with nursing professionals who worked there for at least three months. Information was collected through participant observation, with registration in a field journal. Later, we constituted the study and discussion groups. The data were analyzed according to the Technique of Content Analysis, after the research project being approved by the Ethics Research Committee of the Santa Casa de Belo Horizonte, nº 011/2011. **Results:** the following categories have emerged: << Peripherally Inserted Central Catheter (PICC) >>, << Reality of the PICC at the unit >> and << Interventions to minimize the adverse events related to the PICC >>. **Conclusion:** the in-service education is an effective strategy in promoting the health of newborns at high risk and promoter of qualitative transformations for the integrality of the care. **Descriptors:** Health Education; Nursing; Catheter; Neonate.

RESUMO

Objetivo: realizar grupos de discussão com os profissionais de enfermagem na unidade neonatal. **Método:** estudo qualitativo, norteado pelo referencial teórico da pesquisa-ação, realizado na Unidade Neonatal de Cuidados Progressivos, com profissionais de enfermagem que lá atuavam há pelo menos três meses. As informações foram coletadas pela observação participante, com registro no diário de campo. Posteriormente, foram constituídos os grupos de estudos e de discussão. As informações foram analisadas de acordo com a Técnica da Análise de Conteúdo, depois de aprovado o projeto de pesquisa pelo Comitê de Ética da Santa Casa de Belo Horizonte, n. 011/2011. **Resultados:** emergiram as seguintes categorias: << Cateter central de inserção periférica (PICC)>>, << Realidade do PICC na unidade >> e << Intervenções para minimizar os eventos adversos relacionados ao PICC >>. **Conclusão:** a educação em serviço é estratégia efetiva na promoção da saúde dos recém-nascidos de alto risco e promotora de transformações qualitativas para a integralidade do cuidar. **Descritores:** Educação Em Saúde; Enfermagem; Cateter; Neonato.

RESUMEN

Objetivo: realizar grupos de enfoque con las profesionales de enfermería en la unidad neonatal. **Método:** estudio cualitativo, orientado por la referencial teórica de la investigación-acción, llevada a cabo en la Unidad Neonatal de Cuidados Progresivos con los profesionales de enfermería que trabajaron durante al menos tres meses. La información se recolectó mediante la observación participante, con registro en el diario de campo. Posteriormente, se constituyeron los grupos de estudio y discusión. Las informaciones fueron analizados de acuerdo con la técnica de Análisis de Contenido, después de aprobado el proyecto de investigación por el Comité de Ética de la Santa Casa de Belo Horizonte, n. 011/2011. **Resultados:** surgieron las siguientes categorías: << El catéter central de inserción periférica (PICC) >>, << Realidad de PICC en la unidad >> y << Las intervenciones para minimizar los eventos adversos relacionados con PICC >>. **Conclusión:** La educación en servicio es una estrategia efectiva en la promoción de la salud de los recién nacidos de alto riesgo y promueve transformaciones cualitativas para la integralidad de la atención. **Descriptores:** Educación en Salud, Enfermería; Catéter; Neonato.

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INTRODUCTION

With the advent of the Brazilian Unified Health System - *Sistema Único de Saúde* (SUS), in the 1990s, Nursing has experienced important changes in its professional practice. Due to the implementation of the Family Health Program - *Programa Saúde da Família* (PSF), created in 1994, as a strategy in the reorganization of health care model in primary care, and in replacement of the current model (curative care), the nursing professional became the main subject in the leadership of the health care team. There was, also, the need to rethink the professional training of the nursing professional, based on discussions about the curricular guidelines, in 2001.¹

Thus, the attention given to the newborn (NB) in neonatal units began to require from health professionals a better technical, ethical and science qualification, besides the incorporation and dialogue of knowledge. It should be understood as a dialogue of knowledge, the meeting of scientific knowledge, systematized or popular, acquired from the experience of the professional, so there will be no fragmentation of care, due to competition of skills and with different perspectives, and transdisciplinary knowledge among doctors, nurses, physiotherapists and nursing technicians, something that is desired and necessary in the health field.²

On the assumption that education processes in health services are based on “diffusionism” and that have not contributed to the improvement of the quality of care provided to the client, the following question arises: how to conduct negotiations and effective in-service education characterized by collective, participatory and collaborative forms, and with emancipatory perspective, in order to promote the building of new nursing practices for care of newborns, making its protagonists responsible for the changes and the continuity of the formative process?

Thus, this current study aims to conduct focus groups with nursing professionals in a neonatal unit.

METHOD

It is a qualitative study, guided by the theoretical framework of the research-action and performed in the Neonatal Unit of Progressive Care of a philanthropic hospital, equipped with 1.000 beds for patients of the SUS, with a view of generating and producing of knowledge that bring improvements and solutions to above mentioned unit. Among the specialties served, one gets the neonatal unit,

which has 20 beds for Neonatal Intensive Care Unit (NICU), five beds for intermediate care and 10 beds for Kangaroo Unit.

The subjects of this study were professionals of the nursing staff, who work in the unit under study for at least three months and have accepted the invitation to participate as investigators in collaboration with this research and as changing agents of the defined situation-problem.

Data collection was, initially, performed by the technique of participant observation, with registration in a field journal. Later, we constituted the study and discussion groups, under the coordination of the researcher,³⁻⁴ and comprised by nursing technicians and nurses. Due to the duty scale of the nursing staff, they were divided in four groups (GR1, GR2, GR3, and GR4) with 33 participants. Hence, we performed a total of 12 meetings, three for each discussion group.

The data analysis followed the premise of the content investigation proposed by Bardin.⁵ We delivered and explained to all participants on the Free and Informed Consent Form (FICF) and, then, the participants signed it in two copies: one for possession of the researcher and the other for the participant. This research project was approved by the Ethics Research Committee - *Comitê de Ética em Pesquisa* of the Santa Casa de Belo Horizonte, registered under the number 011/2011.

RESULTS

The data analysis, based on the framework of the content analysis,⁵ allowed the building of three categories:

• Peripherally Inserted Central Catheter (PICC)

In this category, the subjects approached about the features of the PICC, its advantages, procedures, indications, contraindications and length of stay:

[...] *It is useful for treatment because the peripheral catheter infiltrates, burning and the central not (GR4).*

[...] *For the NB, the epicutaneous is a more effective method, because it is not necessary to bore the baby, probably will last until the treatment is finished and only (GR4).*

It is a facility by the insertion itself is performed at the bedside, nursing professional itself is doing the insertion, when qualified to do so [...] (GR3).

Some NBs with parenteral nutrition, feed like this is only with parenteral nutrition, he needs the PICC. It is essential in the sector that we work "(GR1).

I find it difficult, for example, the boy has to run blood cells, platelets [...] cannot; the boy is serious, has no other peripheral option [...] (GR4).

[...] It is an access that is available, if there is a medication, it is not necessary to worry if your child has access and durability [...] (GR4).

They have signaled, in addition, to the possible complications arising from PICC, as the following statements:

[...] I think the puncture and the dissected; it gives less complication than the epicutaneous (GR4).

[...] I think the PICC is unfortunately invasive, very invasive, because the risk of infection is very high [...] (GR4).

Reality of the PICC at the unit

Weaving an analysis about the reality experienced in the studied unit, the subjects spoke about the loss of catheter and handling of the PICC, as well as on in-service education:

[...] And our dream was that he would remain until at least the medicinal drugs is over, right [...] but only that, for now, this dream is just a dream (GR1).

[...] I think he is handled too much, at the end of duty, the technician and the nurse have to irrigate [...] then, it is a catheter that is handled too much [...] (GR4).

[...] Today, the Nursing here within the unit is undergoing a transition [...] new people coming [...], then, it is a moment that might be related to the composition itself of the nursing team. [...] (GR3).

• Interventions to minimize the adverse events related to the PICC

In this category, the subjects stated that interventions to minimize the adverse events are associated with qualification, awareness from professionals, leadership, teamwork and systematization of care, which may provide better care regarding the PICC:

I think when these new people come into, there should be a meeting with them [...] and explain [...]. (GR1)

[...] Different ways of each nurse makes dressing and the delay to change this dressing have wasted too much catheters (GR1)

[...] I believe that continuing education is the way; it is really insistence [...] (GR3).

I find it interesting because it talks about the SOPs, but I think it would be good since it has the support group, discussing [...] (GR1).

[...] There is also the lack of knowledge [...] (GR4).

[...] Maybe people are trained, but are not sensitized, not really trained [...] we are not machines, we are people [...] (GR3).

[...] The commitment, I think the charge, which this person will be gaining [...] and also observation, the subject becomes more attentive [...] (GR2).

[...] Then, it is possible to keep a good maintenance, if everyone is in agreement, both the night shift and the daytime, because there is no point I do my part and others do not (GR2). I believe that is the corresponsibility, everyone being involved, committed [...] (GR3).

The management, planning of this care [...] there must be further discussion about it. How it must be done too and it is still too much loose, I think the management of the care is the term, in which we can summarize everything (GR3).

DISCUSSION

• Peripherally Inserted Central Catheter (PICC)

The PICC "is a vascular device with peripherally insertion with central location, which is constituted of polyurethane or silicone.⁶ The advantages of using the device are: the preservation of the peripheral vascular system, cost and time / benefit, minimization of pain, less risk of embolism and confidence in medication administration.⁷

The PICC is inserted by trained nurses and neonatologists qualified to perform the procedure at the bedside, for being considered a method of high complexity and that requires specific technical and scientific knowledge.⁸⁻⁹ Besides being backed by the Resolution nº 258/2001 of the COFEN, the procedure is supported by the Resolution RDC nº 45 of the Brazilian National Health Surveillance Agency - *Agência Nacional de Vigilância Sanitária* (ANVISA), which determines that it is up to the nurse the maintenance of peripheral venous access and the insertion of the PICC.¹⁰

Regarding the main indications of the PICC - to the neonatal population - are the intravenous therapy for more than six days and the prescription of Total Parenteral Nutrition (TPN).¹¹

With regard to the contraindications, it should be listed the impaired venous network, blood collection, infusion of blood products and thrombocytopenia (platelets below 84.000/mm in neonates).¹¹ In clinical practice is detected, too, that the insertion of the PICC in the first 24 hours of life may cause difficulty in advancing the catheter, associated with the changes in blood viscosity.

Statistical studies conducted in Brazil have found that the permanence of the PICC in patients hospitalized in the NICU lasts between eight and 22 days. This is because of

the maintenance of the catheter. For that the stay may be longer, an effective care is needed in handling of the PICC.^{6,12,13} The social actors of this research recognize the that the catheter may have greater durability if "was taken care" by staff.

In relation to the care, two items are indispensable to the maintenance of the catheter: irrigate the PICC with distilled water before and after medication and wash hands before and after handling it, followed by dressing changes every seven days; execution of X-rays after catheter insertion; cleaning of the faucets with 70% alcohol; faucets exchange; catheter washing three times daily, and the use of syringes of 10ml.⁹ Adding to this, the need for continuous infusion and indicate salinization - washing with 0.9% saline and the use of syringe of 10 ml, since it has less pressure, thus minimizing the risk of rupture of the catheter.¹⁴

The complications that required the removal of the PICC before the end of the appointment, within the NICU at the Hospital Santa Catarina of Blumenau, were obstruction (25%) and infiltration (18%); they are possibly related to the traction (13.9%), the rupture (11.2%) and the phlebitis (4.2%).⁶

In the design of groups, the PICC provokes more complications than the central catheters punctured by a surgical procedure. Indeed, it is noticeable that, if there is no effective maintenance with the PICC, the complications start to be recurrent, which causes the sensation of lower efficiency, if compared to other central catheters.

Thus, it is a task of the nursing professionals, maintain attention and specific knowledge about the PICC due to the stressed occurrence of adverse events and complications, to shorten the length of stay, and it is often necessary the puncture a new PICC or request the puncture by physician-surgeon, which can result in increased hospitalization time and, therefore, a greater exposure to pathogens.

• Reality of the PICC at the unit

During the period from January to August 2011, the average of removed catheters due to suspicion of infection or related to themselves was nine days in the unit under study. Note that this average of stay is, at least, matter of concern, questioning and reflection. These losses were caused by obstruction, disruption of catheter, poor positioning, phlebitis and suspicion of infection. It should be highlighted that the data found in the literature are similar to ours.^{6,8}

The subjects argued that the maintenance of the PICC at the unit is ineffective and related to infections stemming from the handling of the device, questioning, in some occasions, the prescription of withdrawal of the PICC. In this sense, two observations are necessary: the critical, as for the withdrawal of the PICC that is cited by the group, which may occur by the fact that nurses and nursing technicians still do not use critical judgment in decision-making and / or do not realize the reality when it comes to the PICC-related infection. Thus, it is necessary to rethink and revisit the care for newborns with PICC.

The care for the PICC is a task of the nursing staff. Therefore, it needs to understand the specificities about events related to the procedures, maintenance and removal of the catheter, in order to have more commitment and understanding of the need for care. It is also up to it being responsible for adverse events that happen and by compliance with the general rules apply to all, which are inherent in the professional performance.

The team also believes in the in-service education as a way to improve the quality of care for newborns, especially in dealing with the PICC. It becomes imperative, therefore, find and create spaces for discussion, analysis and reflection on the work practice so that the construction of knowledge in health services is implemented effectively. So, we are learning and educating ourselves collectively.

• Interventions to minimize the adverse events related to the PICC

Since the nineteenth century, when the Nursing became an independent profession, teaching has become important assignment of the nursing as caregiver. It is up to it preparing the professionals of its team through training and personal development programs, for the acquisition or improvement of clinical skills in the role of the caregiver.¹⁵

From this perspective, it should be realized that the nursing staff idealizes the formal education - the teacher teaches and the student learns - as a solution to the problems experienced in practice. The continuity of traditional education is a challenge; know that teaching is not to transfer knowledge, but actually, an arduous, difficult and even painful task, taken before others, the society even from itself.¹⁶

Another point to be highlighted refers to the terminology used by society to define the processes of teaching: "training". This word is internalized in all participants of the

discussion groups and became a word used in everyday life. The development of "operational trainings" is like a "thing" that the individual does not need to understand, thinks or reflects, but should do well.¹⁷

It should be perceived, through the testimonies, teaching goes beyond the prescriptive discourse. It operates by the joint of knowing, doing, living together, handling, feels the catheter. If the training is processed, it configures itself as a stimulus to the development of commitment, responsibility, creativity, exercise and coexistence of the practice and, ultimately, the assumption of a transformative praxis.

So, even with the training on standard operational procedure, the groups reported problems in practice, indicating that the professional does not "absorb" the content taught and, consequently, does not apply the transmitted care, failing to operate the necessary changes to the professional practice.

Nowadays, it is necessary to reflect that the skills guided only by the unidirectional, vertical, prescriptive and "diffusionist" teaching model no longer meet the panorama of change and reform of health services in force. In this regard, the continuing education should be understood as the follow-up of the "formal" education process, since it will provide the ongoing development of the experienced needs and skills that the health professional need to acquire.¹⁸ In line, it should be presented the social technology, understood as an innovation in the processes of transformation and development of networks, and this is, all and every structure for the execution of activities.

Another point mentioned by participant subjects and related to the loss of the PICC is the lack of knowledge from professionals with regard to the PICC, in caring for newborns. There is an opposition in the relationship between theory and practice, since the practice tends to extricate itself from the theory, which in itself, cannot be considered knowledge, because it does not produce real change in certain situation. For that a theoretical activity is produced and applied, it is essential to practice it. The theory depends on the practice, since the practice is the foundation of the theory, "as it determines the horizon of development and progress of knowledge".¹⁹

However, the participation of everyone in the workplace is necessary, that is to say, educate, intervene, teach, guide and participate in execution of daily activities is an assignment of all subjects involved in the

care process and it is not an exclusive task to a single professional.

The proposal to include individuals in the process of change and improvement in health is something that is already being discussed and pursued by the health humanization program. Nonetheless, in practice, the reality is far from being implemented, since the relations themselves among people are lost, forgotten and emptied of respect.

From the speeches, it appears that some professionals are not involved and engaged in the care provided to the newborn. These uncovered weaknesses configure themselves in ethical questioning, revealing the design and forms of work organization.²⁰

It is necessary that nursing professionals cease to be tied to forms of education conventionally established and begin to think and act critically, by building a space for dialogue and active participation of those involved in the care process. The health education shows positive results when combined with humanization, in a way that will respect values, culture, education and respect to the right of collective participation in care decisions.²¹

In the field of Nursing, the care activities are performed by the nursing staff and the nurse is the responsible for the team. It is assumed, therefore, that the leadership is inherent to this profession, that is to say, to be a nurse you have to be a leader. However, the groups have noted that, sometimes, the nursing professional has difficulty in exercising its leadership with the team and the NB. To be a good leader, the professional must know the right time to act, how to act and become a member of the teamwork, showing its skills and experiences to achieve the expected result.

According to the registration units, the team believes that "charge" is essential to improve the loss indicator of PICC. For it, charge and require from the other on the fulfillment of its duties, the commitment to the "doing" care. From the point of view of the attribute, lead is being picky; whose charging has marked degree of significance in relation to the lead. However, when it comes to charging, reference is made to know to be present in the relationship built with each other, building up the work process based on respect, ethics, responsibility and commitment.

Regarding the teamwork, the group participants believe that it is the key piece in solving the experienced problems. Working together is vital to the success of organizations, which configures itself as a

health challenge, since one realizes that human relationships are "emptied", the focus of the care, rather than being in people, focuses and / or falls in the "objectification" of the human being and personal interests, overlapping the professional responsibilities. Therefore, the teams are formed by skills, but the point in common thread that unites people is a primary goal, which is the same for everyone. Hence, it should be recognized in every individual its skills and motivate them to the team actions.²²

The organization of nursing care is a topic that has been discussed since the 1940s, before the need for nurses to develop their own body of knowledge, in order to establish the profession itself as a science. In this sense, the methodology of the Nursing for the organization of care is called Nursing Care Systematization - *Sistematização da Assistência de Enfermagem* (SAE). Its implementation in clinical practice is supported by the COFEN, according to the Resolution 358/2009, which considers it as the methodological tool of guidance for the patient care, recommending, also, that the Nursing Process (NP) should be supported by a theoretical framework.²³

In this line of thought, the group realizes the need to reorganize the nursing care and emphasizes that, even, the staff not knowing how to perform the care interventions, it can feel the need for the prescription of individualized nursing.

The richness of the content of these statements, made by groups, triggers reflections and leads to rethink the process work of the Nursing. The group finds interesting the disclosure, as well as the discussion of the results, as all members of the care team. The presentation and discussion of the data provide greater concern to achieve the results, suggestions on planning new goals, corresponsibility and consequent behavior change in health care practice.

Thus, it is necessary that the professional work to analyze, judge, plan and evaluate the patient in the nursing actions implemented in a systematic and holistic manner that is focused on scientific principles. The method of the nursing process, guided by a theoretical framework, will contribute to the implementation of the Nursing Care Systematization.²⁴

For this purpose, it is necessary to develop professional skills with the power of perception, be inquisitive, flexible, knowing how to dialogue, being a disseminator of information and be willing to face the current

paradigm changing in the health field, especially, in Nursing.

FINAL CONSIDERATIONS

The process experienced by all subjects in this research and by this researcher / facilitator, concerning to the group discussions, was of such wealth that the product shown here will not able to portray these moments.

The methodology of the research-action allowed for personal, professional and group growth, since the generated knowledge was produced by all stakeholders.

The health education is a subject that needs more attention from professionals, especially from the nursing professional, which is a necessary figure in the transformation of teaching practices in their work space. Work with the collective and the building of teaching archetypes where there is the appreciation of the subjects and their prior and tacit knowledge is a viable and urgent pathway.

The proposal of changes in health field can trigger positive results for society and there will be happier and more fulfilled professionals in being able to contribute to the improvement of the quality of the provided care, because they will be willing to work in a profession, which, in its broadest design, is the act of caring for the human being. The collective building of the subject is the one that most offers subsidies in the care provided to sick newborns, as well as their families.

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