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ORIGINAL ARTICLE

KNOWLEDGE OF THE SURGICAL CENTER TEAM AND INTENSIVE THERAPY UNIT ABOUT THE STERILIZATION CENTER

CONHECIMENTO DA EQUIPE DE CENTRO CIRÚRGICO E UNIDADE DE TERAPIA INTENSIVA SOBRE CENTRO DE ESTERILIZAÇÃO

CONOCIMIENTO DEL EQUIPO DEL CENTRO QUIRÚRGICO Y UNIDAD DE TERAPIA INTENSIVA SOBRE EL CENTRO DE ESTERILIZACIÓN

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ABSTRACT

Objective: to analyze the knowledge of the nursing professionals of the Surgical Center (SC) and the Intensive Care Unit (ICU) about the activities carried out in the Sterilization Center (EC). ***Method***: this is a descriptive study with quantitative-qualitative approach performed with 55 nursing professionals from the CC and ICU. The data collection was done through a semi-structured form and data analysis through the EpiInfo 6.0 program. ***Results***: among the interviewees, 18 (33%) stated that they did not take any interest in training. For 38 (69.10%) professionals, the study time dedicated to EC during the training process was insufficient. ***Conclusion***: it is considered important that educational institutions reflect the approach of EC content in their curricula, noting the importance of the activities developed in this sector and the care to ensure the control of infection related to care. ***Descriptors***: Nursing; Sterilization; Knowledge; Hospital Units.

RESUMO

Objetivo: analisar o conhecimento dos profissionais de enfermagem do Centro Cirúrgico (CC) e da Unidade de Terapia Intensiva (UTI) acerca das atividades desenvolvidas no Centro de Esterilização (CE). ***Método:*** estudo descritivo, com abordagem quanti-qualitativa, realizado com 55 profissionais de enfermagem do CC e UTI. A coleta de dados deu-se por meio de formulário semiestruturado e a análise dos dados por meio do programa EpiInfo 6.0. ***Resultados:*** entre os entrevistados, 18 (33%) afirmaram não se interessar em capacitação. Para 38 (69,10%) profissionais, o tempo de estudo dedicado ao CE durante processo de formação foi insuficiente. ***Conclusão:*** considera-se importante que as instituições de ensino reflitam sobre a abordagem do conteúdo de CE em seus currículos, pontuando a importância das atividades desenvolvidas neste setor e do cuidado para a garantia do controle de infecção relacionada à assistência. ***Descritores:*** Enfermagem; Esterilização; Conhecimento; Unidades Hospitalares.

RESUMEN

Objetivo: analizar el conocimiento de los profesionales de enfermería del centro quirúrgico (QC) y de la unidad de terapia intensiva (UTI) acerca de las actividades desarrolladas en el centro de esterilización (CE). ***Método:*** estudio descriptivo con enfoque cuantitativo-cualitativa realizado con 55 profesionales de enfermería del QC y UTI. La recolección de datos fue por medio de formulario semi-estructurado y el análisis de los datos por medio del programa EpiInfo 6.0. ***Resultados:*** entre los entrevistados, 18 (33%) afirmaron no interesarse en capacitación. Para 38 (69,10%) profesionales, el tiempo de estudio dedicado al CE durante proceso de formación fue insuficiente. ***Conclusión:*** se considera importante que las instituciones de enseñanza reflexionen sobre el enfoque del contenido de CE en sus currículos, puntuando la importancia de las actividades desarrolladas en este sector y del cuidado para la garantía del control de infección relacionada a la asistencia. ***Descriptores***: Enfermería; Esterilización; Conocimiento; Unidades Hospitalarias.

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INTRODUCTION

The Sterilization Center (CE) is considered An extreme important hospital, and it is responsible for the reprocessing of materials used in health institutions.[1,2] The CE is a vital unit since it resembles an industry by its rigor and sequence of activities in the reprocessing and distribution of articles.[3]

Due to the evolution of surgical and diagnostic techniques, the need for materials that allow procedures to be performed safely for professionals and patients has become a reality in health institutions. Therefore, the urgency to expand existing technologies in the CEs and, consequently, to train professionals on their operation has become a challenge for those who work in the area. However, along with occupational risks, there has been a need to control the cost of its implementation, so far barely visible.[4]

The management of material resources in the hospital area has mainly taken on the technological advances of the last decades. The incorporation of sophisticated technology can be perceived by the increase of the complexity of the assistance practices and the challenges that the managers of public and private institutions face the increase of the product offer and, it allows to realize the monitoring of the quality of the products, preserving the security for the patient and health team.[5] The CE is a unit that articulates with practically all the sectors of the hospital, since it supplies medical products to the so-called consumer units, which comprise not only the surgical center but also the hospitalization units, the outpatient clinic, the emergency, the Intensive Care Unit (ICU), among others.[5-6]

The nursing team of the CE has detailed knowledge of the dynamics of care and the unit, being responsible for the management of the materials of the sector and health services. Thus, the relevance of the management of material resources for nursing work becomes clear.[6]

The systematic qualification of the human resources working in the CE is fundamental to the development of quality procedures. In this scenario, it is understandable that only qualified professionals with permanent qualifications can cause significant changes in the organization of health work and the CE, in a particular way, in the control of nosocomial infection and the quality of the assistance to the patient, providing visibility for professionals engaged in indirect care.[7,8]

Thus, this study aimed to analyze the knowledge of nursing professionals working in the Surgical Center (SC) and the Intensive Care Unit (ICU) about the activities developed in the CE.

METHOD

This is a descriptive, exploratory study with a quantitative-qualitative approach with data collection period from October to November 2015. Nursing professionals were interviewed: nurses, technicians, and assistants from the ICU and the SC from a public hospital in Northeast Brazil. These sectors were chosen because they are the largest customers of articles processed in the CE.

For the data collection, a questionnaire was elaborated with 19 (nineteen) questions (18 essays and one objective) that allowed to study the local reality. The steps involved in the execution of the research were: 1) Approach of the researchers to explain the research proposal; 2) Integration of researchers into the SC and ICU routine; 3) Application of the pilot test involving 10 SC professionals; 4) Identification and correction of faults in the instrument; 5) Application of the questionnaire; 6) Analysis of the data.

The interviews were conducted by previously trained researchers. Interviewers approached the participants individually before or after the professional activity.

The quantitative data were organized, tabulated and analyzed in a descriptive way using EPIINFO software (version 6.0). The qualitative data were grouped, categorized and analyzed following the technique of Collective Subject Discourse Analysis.

The study had the research project approved by the Committee on Ethics in Research - CEP/CESMAC, protocol nº 1426/12.

RESULTS

♦ Characterization of the participants

There were 38 (69%) were women, and 17 (31%) were men of the 55 participants, 11 (20%) were nurses, 30 (54.5%) were nursing technicians, and 14 (25.5%) were nursing assistants.

The age ranged from 31 to 52 years old. Most of the interviewees, 36 (65.5%), were in the age group between 31 and 40 years old.

It was observed that 30 (54.5%) professionals completed the undergraduate course, technical or assistant course for more than 10 years; 18 (32.7%) worked for at least 11 years in the sector in which they were interviewed. Regarding the employment relationship, 31 (56%) professionals stated that they work in only one institution.

Table 1. The importance of the Sterilization Center in nursing care in the perception of nursing professionals of a public hospital in northeastern Brazil. Maceió (AL), Brazil, 2015. (n=55).

Importance of the CE in the nursing care	Answers Nº	%
Very important	16	29.1%
Preparation of materials for procedures	12	21.8%
Prevention of the infectious agent and transmission of an infection	07	12.7%
Care of the patient on biosafety	06	10.9%
Keeping materials used in the hospital decontaminated and free of all dirt and micro-organisms	06	10.9%
Fully sterile supplies and instruments, reducing the risk of infections	04	7.3%
Not informed	02	3.6%
Total	**55**	**100%**

- **Professionals' knowledge on CE**

Nursing plays an important role in the CE since it the only professional category that has a legal responsibility for the management and organization of the activities performed in the sector. It was found that 16 (29.1%) participants recognized that this sector is very important; the only one said it was important because many materials are reusable and 12 (21.8%) recognized the importance of CE because it is the sector that prepares the materials to use them in the institution (Table 1). However, a professional who works in the SC said:

> *The CE is the heart of the hospital [...] it is an indispensable sector for the safe progress of the activities carried out in other hospital services [...], since a quality hospital medical service can only be offered if it has a control of infection [...] and this control begins in the CE. (P-1)*

When the participants were questioned about what professionals work in the CE, only four (7.3%) did not know or did not respond, some constituted the team incompletely, the nurse and the nursing technician being the ones with the highest frequency of response (Table 2).

Table 2. The opinion of the nursing professionals of a public hospital in the northeast of Brazil in which professionals work in the CE sector. Maceió (AL), Brazil, 2015.

Professionals who work in the CE	Answers of the professionals	(%)
Nurses	52	94.5%
Nursing technicians	52	94.5%
Nursing assistants	48	87.3%
General services	21	38.2%
Administrator	10	18.2%
Not answered or did not know	04	7.3%

* The number of responses exceeds the number of participants since each could have more than one professional.

Participants were asked what roles are assigned to nurses and other members of the CE nursing team. It was observed that 29 (52.7%) stated that all the staff working in the unit perform the same function (preparation, cleaning, drying, disinfection and sterilization of the instruments used to provide care for the better development of hospital units); 23 (41.8%) stated that the nurse is responsible for the management/supervision/coordination of the area. However, three (5.4%) did not know the functions assigned to the nursing team. One participant said, “The nurse is in charge of supervising the service, guiding the other team members when necessary.”

Concerning the period for content related to the CE, during the professional training (undergraduate, technical or nursing assistant), 38 participants (69.10%) stated that the period was insufficient.

Regarding the possible difficulties faced by the CE, which negatively affect patient care, 23 (41.8%) did not know how to respond or give their opinion on the subject. It was verified that the CE difficulties pointed out by the interviewees are related to the inputs, human resources, and physical structure, 13 (23.6%) pointed out the lack of Personal Protection Equipment (PPE) and 11 (20.0%) pointed out the lack of trained professionals (Table 3).

Table 3. Nurses´ answers about the difficulties found in the CE in a public hospital. Maceió (AL), Brazil, 2015.

Difficulties	n	%
Lack of Personal Protection Equipment (PPE)	13	23.6%
Lack of trained professionals	11	20.0%
Work overload	5	9.1%
Inadequate physical structure	5	9.1%
Occupational diseases	4	7.3%
Lack of materials	3	5.4%
Failures in material control	3	5.4%
Reception of contaminated materials	2	3.6%
Risk of contamination	2	3.6%
Isolation of the CE from other sectors	2	3.6%
Misuse of PPE	1	1.8%
Lack of the CE updates	1	1.8%
Devaluation of work	1	1.8%
Could not answer	23	41.8%

* The number of answers exceeds the number of participants, since each could appoint more than one professional.

Regarding the improvement of the functioning of the CE, 36 (65.4%) did not know or did not want to contribute suggestions and 19 (34.6%) cited: 1) a greater supply of human resources in the service; 2) sufficient distribution of materials to the consumer units; 3) provision of training for CE officials; 4) further clarification of the role of the CE for the patient sectors; 5) sufficient distribution of PPE; 6) work gymnastics; 7) adequate physical structure for the CE communication with other hospital sectors; 8) rotation between the CE professionals in the unit.

Concerning the interest in participating in training and updating courses for further study in the CE and its dynamics with the other sectors of the institution, 34 (62%) mentioned having an interest, 18 (33%) stated that they were not interested in training and 03 (9%) reported that this issue is for professionals who are older and/or ending their career.

Among the interviewees, five (9%) from the ICU presented a more prejudiced stance when questioned about the CE. They have claimed to be an “end-of-career” sector, where the professional does not have their due value. They still report being a very repetitive work, so little interesting. During the interviews, positions such as “the CE is for the old” and “it is a sector that requires less concern” were observed, demonstrating the lack of the CE valorization.

DISCUSSION

Respondents recognize that the CE plays a key role in delivering quality care in their work sectors.

Despite the recognition, some professionals did not value the sector as expected. It is believed that this position is related to 1) the prejudice that still exists with the CE due to its location isolated from other sectors of the institution; 2) the activity of washing, preparing and packing all material that will be used, activities that are seen as irrelevant; 3) the stigma of older professionals working in the CE or the process of retirement. These results demonstrate the lack of awareness and lack of interest of the CE´s client units over the work developed in it.

Regarding the prejudice, the finding converges with the literature pointing to the devaluation of the CE by nursing professionals. These often subjugate the indirect care, seeing it as the performance of merely repetitive activities of little value. Also, it should be noted that the functions developed are not propagated as they should, which contributes to the professionals´ lack of interest about the CE.[9]

In this research, a paradox of opinions was identified: the interviewees affirmed that the SC and the ICU are highly dependent sectors of the CE services, and they also recognize their importance. However, it is verified that there are professionals of the ICU who denote the CE as a secondary sector, destined to the professionals in the process of retirement, who have problems of relationship or behavior. This fact highlights the lack of knowledge and appreciation of the interviewees about the CE. Thus, it was found that many professional did not identify with the CE because they did not relate nursing to a sector that is very similar to an industry and also to a profession that also performs indirect care.[5,9]

However, the interviewees showed that they were aware of the professionals who compose the CE team. This is opposite to another study indicated that nurses of the units consuming sterilized materials showed little knowledge about the sector and the employees of the CE, mentioning devaluation of the work done.8

Participants pointed out the lack of Personal Protective Equipment (PPE), human

resources and adequate physical structure as difficulties found in the CE. Regarding the lack of PPE, the professionals justify not using it because of the shortage in the sector associated with the lack of knowledge about its use.

A study carried out with nursing students on the prevention of accidents with biological material identified that among the most cited environmental factors that favored the occurrence of accidents was the lack of PPE in the places of practical activities. Psychosocial factors included inattention, non-use of PPE, haste, stress, and anxiety. Other factors cited were the lack of knowledge and awareness regarding the use of PPE, inadequate physical structure, excess of people at the place of activity development, lack of training and lack of human resources.[10]

The organizational and managerial structure should collaborate and stimulate the decision making for the use of personal protection equipment to abolish the barriers inherent to its use, raising awareness for the improvement of working conditions as well as the involvement of workers in the decision-making, preparation, and dissemination of infection prevention and control programs.[11]

A study on adherence to personal protective equipment reveals that the accessibility and availability of personal protective equipment are decisive for their adherence. It was evidenced that when protective equipment is not available in several strategic locations of the sector, it is more likely that it will not be used.[12]

On the other hand, the lack of security equipment and inadequate physical structure make improvisation present in the routine of the service. This strategy is due to the risk awareness and the ethical and moral aspects of the subjects. However, improvisation does not ensure security for oneself, it only promotes a sense of duty fulfilled, albeit to the detriment of its protection.[11]

Regarding the lack of trained professionals, the interviewees recognize it as one of the great difficulties found in the service. The same happened with participants of a study carried out in a public hospital in Porto Alegre-RS, who reported the need for permanent health education actions regarding the procedures related to the material sterilization process. These professionals referred to the presence of constant doubts due to lack of training.[8]

The CE is a sector with several peculiarities, being difficult to keep the team in sync, and one way to prevent this situation is the development of continuous programs of training and improvement of workers. Thus, it is evident that the activities involved in the CE work may be simple. However, it is essential for the provision of quality assistance and requires the union of knowledge.[8]

The studied CE is physically within the SC, which increases the inter-professional contact of the two sectors, making the SC professionals know more about the function and importance of the CE. On the other hand, the ICU has a more distant location, hindering the inter-professional relationships between sectors. Also, it is still titled as a sector to packaging materials.

The literature assures that the packaging of articles that disobeys the recommended norms compromises the quality of the sterilization process.[5,8] Therefore, packaging material as mentioned above is an activity relevant to the quality of care provided to the patient.

The SC and the ICU are among the main consumers of the materials coming from the CE, and they are extremely dependent on it for its proper functioning. The interviewees recognized the importance of this sector and its relationship of dependence, but do not see the direct influence of the CE in the quality of their daily activities.

A study aimed at understanding the reason for the invisibility of the CE and the professionals who work in it has demonstrated that such an attitude occurs because nursing has not gained its visibility as a profession. In this way, the study stated that for a profession to be recognized by society, the daily construction of a practice based on scientific and tacit knowledge is necessary. This same study also evidenced that another relevant aspect is the lack of emphasis given to the CE in the technical and higher nursing courses - as reported by the interviewees, since the training to act in this sector occurs in the routine of the service, suggesting that indirect care has a lower dimension in relation to direct care, further enhancing their invisibility.[5,8,9]

Therefore, it is believed that there is a need for more time to study, train and deepen the subject during the professional training process to have recognition of the sector.[13] However, there was a lack of interest by the interviewees to understand the functioning of the CE and to improve the interpersonal relationship between the consumer units and the material supplier.

Thus, the devaluation of the CE of the activities performed in it makes the nurse seen as a mere supervisor. It is believed that

this perception may be a reflection of the idea of how the interviewees see the nurse and/or how some are viewed independently of the work sector.

According to a study on the nurse´s work process in the CE, management is the main job of this professional, because his activities are focused on the organization of materials and human resources. Regarding material processing, it was evidenced that the concentration of administrative activities involving material resources led to the finding that processed or reprocessed medical-hospital articles as the only object of work of the nurse in the CE.[13]

CONCLUSION

This study found that the professionals of the customer units of the CE are unaware of the importance of the work developed by this sector for the quality of care provided. One of the points that may be anchored in this lack of knowledge may be the time devoted to the CE content in the curricula, which the interviewees said it was insufficient during technical and undergraduate nursing courses.

It was verified that the lack of PPEs, human resources, and adequate physical structure are difficulties experienced by the CE pointed out by the interviewees.

It was noticed the existence of prejudice against the activities carried out in the CE and its devaluation and the nursing professionals who work in it. This fact may be related to the lack of knowledge and the lack of interest in the attributions pertinent to this sector.

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