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RESEARCH

A enfermagem e o gerenciamento dos resíduos sólidos de serviços de saúde

Nursing and solid waste management of health services

Enfermería y la gestión de residuos sólidos de los servicios de salud

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ABSTRACT

Objective: to identify the conceptions of nursing professionals about the management of solid waste in health services (SWHS) in a public hospital of city of Santa Cruz/RN. **Method:** this is a qualitative research, developed in 2010, which was used to collect data from semi-structured interviews, conducted with 17 nursing professionals. The data were subjected to thematic analysis of Bardin. **Results:** two categories emerged: inadequate management of SWHS as environmental damage factor; and inadequate management of SWHS perceived as risk to public health. Both demonstrated that nursing professionals seem to partially know the management of SWHS, restricting it to a few steps. **Conclusion:** there is a need of a greater deepening of the theme with the nursing staff, in order to prepare it to deal with the issue of SWHS. **Descriptors:** nursing, solid waste, health services, waste management.

RESUMO

Objetivo: identificar as concepções dos profissionais de enfermagem quanto ao gerenciamento dos resíduos sólidos nos serviços de saúde (RSSS) em um hospital público da cidade de Santa Cruz/RN. **Método:** trata-se de pesquisa qualitativa desenvolvida em 2010, na qual se utilizou para a coleta de dados entrevistas semiestruturadas realizadas com 17 profissionais de enfermagem. Os dados foram submetidos à análise temática de Bardin. **Resultados:** emergiram duas categorias: manejo inadequado dos RSSS como fator de prejuízos ambientais; e gerenciamento inadequado dos RSSS percebido como risco para a saúde pública. Ambas demonstraram que os profissionais de enfermagem parecem conhecer parcialmente o gerenciamento de RSSS, restringindo-o a algumas etapas. **Conclusão:** necessita-se de um maior aprofundamento da temática com a equipe de enfermagem, de forma a prepará-la para lidar com a questão dos RSSS. **Descritores:** enfermagem, resíduos sólidos, serviços de saúde, gerenciamento de resíduos.

RESUMEN

Objetivo: identificar las concepciones de los profesionales de enfermería con respecto a la gestión de los residuos sólidos en los servicios de salud (RSSS) en un hospital público en la ciudad de Santa Cruz de residuos/RN. **Método:** se trata de una investigación cualitativa realizada en 2010, en la cual se utilizó para recoger los datos, entrevistas semi-estructuradas realizadas a 17 profesionales de enfermería. Los datos fueron sometidos a análisis temático de Bardin. **Resultados:** emergieron dos categorías: manejo inadecuado de los RSSS como factor de daños al medio ambiente; y la gestión inadecuada de los RSSS notado como riesgo para la salud pública. Ambas demostraron que los profesionales de enfermería parecen conocer parcialmente la gestión de los RSSS, limitándola a unos pocas etapas. **Conclusión:** existe la necesidad de una mayor profundización de la temática con el equipo de enfermería, con el fin de prepararlos para enfrentar las cuestiones de los RSSS. **Descriptor:** enfermería, residuos sólidos, servicios de salud, gestión de residuos.

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INTRODUCTION

The issues involving the solid waste of health services (SWHS) have occupied an increasing space in the discussions schedule due to the growing concern over the preservation of natural resources and public health associated with these residues.

It is noticeable that during the health care to the patient, various materials are used, contributing to the generation of different wastes. These, when managed improperly, offer to humans and the environment a potential risk.¹

The National Health Surveillance Agency (NHTSA), by the Collegiate Direction Resolution (CDR) No 306/2004, classifies waste from health establishments in five groups, namely: group A (potentially infectious); group B (chemical); group C (radioactive waste), group D (common residues); and group E (sharps).²

The main objective of classification is to better understand the particularities of this type of waste. Thus, they are better conditions to opt for management strategies in order to preserve both the health worker as public and environmental health.³

The proper management of solid waste is characterized as one of the great challenges to be faced within the environmental problem. Regarding to hospital waste, it can be seen that their mismanagement causes environmental impacts that can be defined as contamination, high rates of hospital infection and generation of epidemics or even endemic due to contamination of groundwater by different types of waste health services (SWHS).⁴

These problems could be minimized with proper segregation, which is part of early management process and happens at the moment in which it is generated. The essence of proper segregation, reduces the amount of infectious waste, and also to create an organizational culture of safety, no waste and reduction of occupational accidents.⁵

Thus, nursing is configured as the starting point in the management of SWHS, considering that in most cases the initial segregation of this waste is made by these professionals.⁶

Nevertheless, certain study has shown that the predominant number of nurses who are unaware of the steps of waste management from the health services, which hinders the development of appropriate practices in its management.⁷

In another survey, it was found that most health professionals do not know what is waste and does not value the correct handling of them in hospital practice.⁶

Thus, awareness of nursing professional, regarding to the management of waste generated by their activities in the hospital units, is relevant because it provides a wider view of environmental issues, as well as awakening the interest of the professional to act on environmental quality programs in health units, making the referral to treatment being only the material that really need to be treated.⁸ In addition, the nursing professional to must propose changes by alerting managers about the dangers of a bad management.⁷

Given this context, this study aimed to identify the conceptions of nursing professionals about the management of SWHS in a public hospital in the city of Santa Cruz/RN.

METHOD

This study consists in a qualitative research conducted in a public hospital in the city of Santa Cruz/RN, from March to April 2010. This is a field study, which consists of an investigation of a particular reality that involves specific aspects of the activities of the studied group.⁹

The study population was represented by professional nursing team. This category was chosen because of meeting the objectives of this research, since it is involved with the management of SWHS, as well as a large number of procedures that contribute to an increased production of such waste.

Nursing professionals that met the following criteria were included in the study: being acting in health services during the period of data collection; being involved in direct patient care; accepting to participate voluntarily in the study and signed an Informed Consent Form (ICF).

To define the sample, the saturation criteria was used. The sampling saturation is used to establish the final size of a sample under study, closing the acquisition of new elements. The closure of the sample is operationalized when new information produced by research participants, no longer contribute to the improvement of theoretical reflection based on the data being collected.¹⁰

To collect data, semi-structured interview technique was applied, as it allows flexibility in conversation, in addition to enabling the absorption of new issues and questions brought up by the interlocutor.¹¹

To ensure the secrecy and anonymity of the respondents, their names were replaced by substantive interview followed the interview number, for example: respondent 1.

The interviews were recorded using a tape recorder. The collected data were transcribed and subjected to content analysis of Bardin, following the method of thematic analysis, which identifies sense cores, components of a communication through an analysis of meanings that verifies the significance of the presence or frequency of these cores to the analytical target object.¹²

The research meets the principles and recommendations of Resolution No. 196/96, that determines the guidelines and rules regulatory for research involving human beings, obtaining approval by the opinion embodied No. 059/09, of the University Ethics Committee (UEC) of the the State of Rio Grande do Norte (UERN).

The interview was conducted with 17 nursing professionals, being five (29.4%) nurses, eight (47.1%) nursing technicians and four (23.5%) nursing assistants.

With respect to the time in the profession, three nursing professional (17.6%) are from 01 to 09 years in service; six (35.3%), 10 to 19 years; 35.3%, from 20 to 29 years and two (11.8%) are from 30 to 39 years working in nursing.

Relating to working hours, fourteen professionals (82.4%) have their workweek of 40 hours per week, while three (17.6%) work 48 hours per week.

As for the work sector, 17 of professionals interviewed, four (23.5%) work in the emergency room; two (11.8%), both in the medical clinical and surgical; four (23.5%) have as work sector only the medical clinic; one professional (5.9%) work in the central sterilization equipment and surgical center; one (5.9%) in the ambulatory and five professionals (29.4%) report working in all sectors of the hospital studied.

From the data analysis, two categories emerged, described below.

Category 1: Inadequate management of SWHS as environmental damage factor.

In this category, the nursing professionals pointed out the lack of proper storage of SWHS as one of the elements that contribute to the emergence of environmental impact problems, as seen in the following statements:

I think these residues cause damage to the environment, in order that you do not know keep them, put them in their places, for example, you drop them off there. Must have a warehouse, a little place to put them and not play out in the bush as it everyone does, causing contamination risks. (Interviewee 1)

Used and separated in a closed environment, there it will not hurt anything, but if you leave it in an open place, or drop on the floor, if you do not have careful with them, will seriously hamper [...]. (Interviewee 6)

Several interviewees had doubts or were unable to inform where the SWHS were routed after leaving the hospital.

If we do a healing, we have to get all the material of the dressing and place in a bucket, in the plastic bag and then the cleaning girl comes back, taking everything to the right destination that is out there (referring beside the hospital). I think...I do not know what they do with it. I know it is taken there [referring beside the hospital] and they do not get there because otherwise they had no more place... so much garbage every day did not fit. (Interviewee 11)

The professionals also noted the final disposal of SWHS as a contributing factor to cause damage to the environment, not knowing to respond if prior to disposal waste, passed through some stage of treatment.

These wastes bring risks to the environment and brings especially, because the final destination of the sharps have a company that come to pick them, and the others, the solids go to the dump and the car from the hall come to pick up, but no one knows whether or not incinerate. So I do not know if they put directly into the environment. (Interviewee 7)

I see that causes risks to the environment, especially the way that this waste is discarded in our city. At least to my knowledge, I do not know if the waste is treated before being thrown. So we know that in the future will come the consequences. They will surely have future problems in the environment. (Interviewee 5)

Category 2: Inadequate management of RSSS perceived as risk to public health.

In this context, several reports have pointed to risks that SWHS offer to population health.

We see risk of infection, contamination, a sticked child, contaminated with garbage that gets off. And is almost opposite the entrance door of the lunchroom. (Interviewee 4)

What I think is that this waste bring many losses, through that thing that comes diseases, transmissible diseases, if they get there in the open, where children passes, people... these people looking for things in the trash will taking diseases, bacteria, get out and so they take and harms both the environment and the people directly. (Interviewee 13)

The interviewed nursing professionals also affirm that the SWHS create environments that favor the emergence of various micro-organisms.

Snakes are appearing, sometimes we see snakes here in the hospital, due to what? Due to the garbage that is accumulated in the hospital and they put down here and take a long time to come and pick up the trash. Appears cockroach, mouse, all these things because the garbage stay long without staff picking up. (Interviewee 16)

Fly, mouse are appearing, vectors that we see in the rainy season increase. (Interviewee 2)

The improper management of SWHS has caused serious implications for the environment, making necessary that the subjects in health units have a broader vision for coping this problem. This management involves any action to manage SWHS in their aspects intra and extra unit, from generation to final disposal, and being the responsibility of all professionals who deal with this type of waste.¹³

Waste management is the collection of technical and administrative activities involving internal management steps - generation minimization, segregation, collection, packaging, transportation, storage - and external management steps - treatment and final disposal of waste.³

It is perceived that the respect and proper performance of all steps of the internal management of SWHS represent, beyond the control of the decrease in number of risks and problems related to inadequate management of SWHS, the extent of reduction of the amount of such waste from the point of origin, raising the quality and efficiency of services provided by the health center.¹⁴

For this, one must also take into consideration the external management, because, why to have a proper management within the hospital, if that care not extend outside the hospital?

When is not observed the importance of the final disposal of SWHS, there are several damages arising, as environmental contamination, accidents involving health professionals, of the public cleaning and collectors, as well as the spread of disease to the general population, for direct or indirect contact, via vectors. From an environmental standpoint, the impact of improper disposal causes environmental degradation due to a higher volume of waste that could be reused. From a social standpoint, the impact is in the accelerated use of space reserved for the final disposal of waste, which would exhaust this environment and would require another area to meet this purpose.⁸

The National Policy of Solid Waste obliges municipalities to dispose their waste landfill properly licensed.¹⁵ In order to prevent damage to the environment and public health, these landfills should make use of engineering techniques and security technologies. However, what is observed in Brazil is the prevalence of uncontrolled landfills, known as graveyard, where waste are disposed carelessly on the ground, bringing risk to the population and damaging the environment.¹³

The statements of the interviewees showed that, although nursing professionals have identified the problem of improper disposal of waste (graveyard) resulting from their activities at the hospital, it seems to be a real concern to engage with this problem and seek solutions.

With regard to treatment, some respondents did not know the treatment of waste originating from their activities. It is recognized that most Brazilian municipalities did not treat properly their SWHS. Data from the National Survey of Basic Sanitation show that 63% of Brazilian municipalities have collection of SWHS.

From these cities, only 18% use some type of treatment technology for this waste, while 36% burn these materials in the open, and nearly 35% do not follow any kind of treatment.¹⁶

Given this reality, it is possible to affirm that environmental problems arising from the lack of proper care with SWHS will continue to happen if the government, along with health professionals, including nursing, do not act through mobilization actions that seek alternatives in order to decrease the damages caused by such waste to the environment.

As SWHS are managed by different entities (inside and outside the unit), there is a tendency to compartmentalize the problem according to the managerial level. This segmentation provides frustrations by the sectors involved in the SWHS issues, and hinders their actions to improve the management of these wastes. Thus, it is necessary to understand that the management of SWHS requires a joint effort - involving both the government as health units - and that needs to be improved and monitored, taking into consideration the quality of the environment.

Although to relation the environmental problems to the lack of proper management of SWHS, nursing professionals seem to partially meet this process, being restricted to steps such as packaging or storage, showing doubts about how these wastes are treated, making it difficult to conduct effective and inter-sectoral actions aimed at improving the quality of management of such waste.

It is clear that the step of packaging is an essential element in the management of SWHS, as it is directly linked to segregation, providing the prevention of contact with humans and the environment, thus contributing to a correct destination.⁷

On the other hand, we need to identify all steps in the management of SWHS, from its generation to its final disposal. Thus, nursing professionals will have to participate in finding solutions that are consistent with the need for environmental preservation, as a thought based on whole promotes to the construction of conscious actions, and facilitate the dialogue of ideas with reality, reducing the problems that are reductionist views in our lives.

Another point that needs to be discussed, is the environmental interference in health conditions of the people. There is a close relationship between these elements. As some authors affirm¹⁷, the process of diseases production is determined and conditioned by several environmental factors, which act in time and space, about the conditions and risk populations. The spatial organization that society assumes throughout history, enables the circulation of pathogens agents to establish a link that ties on the one hand, population groups with social features that can magnify adverse effects, and on the other, sources of contamination and local proliferation of vectors.

Thus, the SWHS under epidemiological aspect, play a role in public health, since, besides the macro-vectors, also develop amid the waste the micro-vectors such as worms, fungus and viruses.¹⁸

It was evident in this study, that are not intended locations for the storage of waste resulting from the activities of health, causing waste is exposed and accessible to people, helping to contaminate them.

It is noticed that the apparent lack of appropriate care with the researched rejects of the health establishment, besides to contribute to environmental degradation, causes damage to the health of the population, since it favors the proliferation of various animals, that even invade the hospital area.

Therefore, it is understood that is part of the nurse's action, to promote the health of the environment in order to avoid injuries inherent to the human being.⁷ It is needed, therefore, to discuss this theme during education, providing spaces for critical reflection and dialogue, in an attempt to mold the future professional practice.⁶

CONCLUSION

The research has shown that nursing professionals identify the inadequate management of SWHS as a causer element of harm to both the environment and for public health, presenting notions of some of the steps in the management, of their relevance and implications, but these are notions that still show as fragmented and isolated.

This framework makes it difficult to conduct effective actions aimed at quality management of SWHS, contributing to generate more of such waste, increasing the negative environmental and health impacts of the population.

Knowing all stages of management that involve the waste of health services, from its generation to its final disposal, nursing professionals will act in the search for improvements in the management of SWHS process.

Thus, environmental education at all levels of education and the discussion of this theme in academic and professional education in the health field is essential, highlighting the environmental damage caused by waste when handled incorrectly, which creates a cultural change for health professionals, especially nursing, to deal with the issue of SWHS. Moreover, it is necessary a structural preparation of the locals for disposal and treatment of such waste, remembering to encompass the several dimensions of the problem.



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