

**PERCEPTION OF NURSING AND MEDICINE STUDENTS ON WEAKNESSES IN  
CARE TO THE POTENTIAL ORGAN DONOR****PERCEPÇÃO DE ACADÊMICOS DE ENFERMAGEM E MEDICINA SOBRE  
FRAGILIDADES NA ATENÇÃO AO POTENCIAL DOADOR DE ÓRGÃOS****LA PERCEPCIÓN DE LOS ACADÉMICOS DE ENFERMERÍA Y MEDICINA  
SOBRE LAS DEFICIENCIAS EN LA ATENCIÓN AL DONANTE POTENCIAL DE  
ÓRGANOS**

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**ABSTRACT**

**Objective:** To know the difficulties in maintaining the potential donor organs and tissues, from the speeches of the students. **Methods:** Qualitative research, exploratory-descriptive, held with eight students of nursing and medicine, members of the Organ Procurement Organization of a Reference Hospital in the state of Ceará. Data collections were through semi-structured interviews, and the results were analyzed according to categorization technique. **Results:** three categories emerged: Work developed by the Organ Search Organization, the opinion of scholars on the work carried out and barriers in the potential donor maintenance process. **Conclusion:** it was observed that the main obstacles in maintaining the potential donor are the physical and human resources of the hospital.

**Keywords:** Tissue and organ procurement; Brain Death; Organs Transplantation.

**RESUMO**

**Objetivo:** conhecer as dificuldades na manutenção do potencial doador de órgãos e tecidos, a partir dos discursos dos acadêmicos envolvidos. **Métodos:** pesquisa qualitativa, do tipo exploratório-descritiva, realizada com estudantes de enfermagem e medicina membros de uma comissão de Organização de Procura de Órgãos de um Hospital de Referência no Estado do Ceará. A Coleta de informações ocorreu por entrevista semiestruturada. Os resultados foram analisados conforme a técnica de categorização. **Resultados:** Emergiram três categorias: Trabalho desenvolvido pela Organização de Procura de Órgãos, opinião dos bolsistas quanto

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ao trabalho exercido e entraves no processo de manutenção do potencial doador. Conclusão: Observou-se que os principais entraves na manutenção do potencial doador são os recursos físicos e humanos do hospital.

**Palavras-Chave:** Obtenção de tecidos e órgãos; Morte encefálica; Transplante de órgãos.

## RESUMEN

Objetivo: conocer las dificultades en el mantenimiento de los potenciales donantes de órganos y tejidos, a partir de los discursos de los académicos involucrados. Métodos: Fue una investigación cualitativa, exploratoria y descriptiva, realizada con estudiantes de enfermería y medicina de una comisión de Organización de Búsqueda de Órganos de un hospital de referencia en el Estado de Ceará. La recolección de datos fue a través de una entrevista semi-estructurada. Los resultados se analizaron según la técnica de categorización. Conclusión: Se observó que los principales obstáculos para el mantenimiento del donante potencial son los recursos físicos y humanos del hospital.

**Palavras clave:** Obtención de tejidos y órganos; Muerte encefálica; Transplante de órganos.

## INTRODUCTION

The brain death (BD) is defined as a complete and irreversible failure of brain functions, not keeping life without the aid of artificial means.<sup>1</sup> It is indispensable to carry out two neurological exams to confirm the diagnosis of BD, made by two different doctors, one of them must be a neurologist or neurosurgeon. It also is required to carry out the further examination, to show the absence of electrical activity and metabolic brain or a brain blood perfusion.<sup>2</sup>

Brazil began performing organ transplantations at the beginning in the 60s. However, at that time, this treatment was little spread due to the low survival rate of transplant patients. On the other hand, after 15 years, this activity has gained importance with the development and creation of surgical techniques,

support equipment, methods for determining histocompatibility between donor and recipient, and finally, with the advent of immunosuppressive drugs. Finally, such procedures had spread among hospitals, increasing the need for regulation for donation and transplantation.<sup>3</sup>

During 2013 in Brazil, there were 8.871 cases of PD, so that only 2.526 became effective, with a total of 6.345 non-donors. Among the main causes of non-realization of the donation, there is the family refusal (2.622), cardiac arrest (1.292) and medical contraindication (1.150).<sup>4</sup>

After identifying a potential donor, the family should be informed about the suspected BD and the evidentiary examinations should be performed. Then, the potential donor is notified to the Notification Center, the Procurement and

Distribution of Organs (CNCDO). This Center will forward the notification to the Organ Procurement Organization (OPO), evaluating the clinical conditions of the potential donor, and if possible, it will perform the family interview about the donation. When the family allows the transplantation, an internal protocol starts including several technical and administrative procedures necessary for the viability of the organs.

However, in the hospitals every day, it is observed the difficulty of an adequate and effective maintenance of a patient in BD, and consequently, this influences the conclusion of the diagnostic time and interferes with the family decision regarding the donation. Other factors can also influence the process, such as weakness in the knowledge of professionals about BD.

The attention to an organ and tissue potential donor also has been a fertile area for medical and nursing students learning, which is shown relevant, since although many curriculum revisions in higher education institutions, particularly the area health, the issue is not addressed in order to ensure their integration in a consistent manner.<sup>5</sup>

From this context, this study aimed to identify the difficulties in maintaining the potential donor organs and tissues, from the speeches of the students/scholars

of OPO of a Hospital of the North of Ceará.

## METHODS

Exploratory and descriptive research with a qualitative approach to a field type study held in a North Reference Hospital of Ceará, Brazil, which provides the maintenance, collection, and transplantation of organs and tissues. The Hospital is located in the city of Sobral, 238 km from the capital, Fortaleza. Currently, it is one of the referral hospitals for a population of about 1.6 million people, including more than 55 municipalities in the region and it has contributed significantly to the advancement of transplantation indicators, ranking as third in the number of notifications in the state.<sup>6</sup>

The development period of the study was between July 2014 and May 2015. The beginning of the data collection was after the approval by the Commission of Ethics in Research of the Hospital and the Research Ethics Committee of the State University of Vale do Acaraú (UVA), with opinion N° 1,058,814, on April 3, 2015, as part of a larger research entitled: Barriers in the maintenance process of organs and tissues: What do students and professionals involved say?

Study participants were scholars of the OPO team, with nursing and medicine

students, totaling 13 students. As inclusion criteria, they should be on the team for more than one year. Thus, eight of them were included in the final group of respondents.

A script for a semi-structured interview was used, with answers recorded by the electronic device. The interviews were transcribed in full and examined as the samples were collected. After the conclusion, the data were categorized, corresponding to the cognitive process of dividing the world's experiences into groups of entities, or categories, building a physical and social order of the world.<sup>7</sup> The speeches of the nursing and medicine students are marked respectively by NS and MS followed by a number.

## RESULTS AND DISCUSSION

After analyzing the interviews, two categories emerged: Perception on the activities of the OPO and barriers in the potential donor (PD) maintenance process.

### Perception of the activities in the OPO

In the first category, it was sought to understand the perception of students on the activities of the OPO. In their testimonies, they emphasized a proper maintenance as a key factor for the success of the whole process, especially at the time

of procurement of organs because their quality depends on how the maintenance was performed. *Our work is focused on organ's maintenance; among others this is the most important, keeping the patient's vital functions, keeping the organs so that they can be viable for a possible donation (NS3). (...) The fellows' team starts monitoring until the opening of the protocol to take care of giving the quality of organs (NS4).*

The focus of the scholars when dealing with a PD is the hemodynamic maintenance, depending on the needs by the BD, which causes some changes in the functioning of organs.

Students highlighted the importance to the donor because he will give organs and tissues that are viable to use them in others. Although the donor is considered clinically dead, they do not refer to it as a body, corpse or "thing", but as a person who though dead, still needs care, calling him then, as a "patient", although it is understood that the body does not properly care, but its organs that will benefit others.<sup>8</sup>

They also reported how much relevant to them is the opportunity to be members of the OPO, with a significant learning as future professionals. Thus, from their reports, the theme of the processes involved in organ donation seems to be weakly covered by pedagogical projects of health courses. *OPO is the service that helps students both medicine and nursing to integrate with the learning*

*process in organ donation, putting into practice many activities that no one sees during graduation. It is a service that requires a lot of student performance, because, in addition to fulfilling their curriculum, they have to participate in these schemes duty. However, it is a service that can greatly increase the knowledge (MS3).*

Although many curricular reviews in higher education institutions, especially in the health area, the theme is still approached in a fragile and superficial way, being a weakness in care<sup>5</sup>, so that students can be affected, needing opportunities to remedy a lack of training.

The education process is fundamental in this area, especially since the participation of society and especially health professionals, is one of the decisive factors in the success of transplantation programs. A group that deserves mention is the students, especially in the health area.<sup>9</sup>

The better staff training even in the school could contribute to improving the maintenance process and organ donation, since the training of professionals on the diagnosis of BD and maintenance of PD may increase the number of donors, with the need to demystify prejudices, addressing more deeply ethical issues, suppressing the lack of scientific information and increasing the number of interested individuals, because these students, as well as being potential donors of organs, also will be responsible for the

same role towards their clients/patients.<sup>10-11</sup>

It was also sought to understand how the students feel about this job. The reports showed the understanding of responsibility and social dimension, highlighting even the contribution of scholars to improve indicators of the OPO. *I see this job of great importance because we are not only taking care of life (...) we are taking care of several lives (...) and we may benefit 3, 4 or even more lives and also improve the quality of life (...) (NS3). (...) But always remember the improvement we had in the maintenance of these people, who brought along with more donors also improved the quality of organs that were raised (NS2).*

It is positive that the student involves the problems of the area. These opportunities will meet the teaching service integration, which supports the development of skills in the labor field, especially while still students.

### **Barriers in the potential donor maintenance process**

Most students said there are barriers in the potential donor maintenance process. Among them, it is worth mentioning problems regarding the quantity and quality of the professionals who are part of the OPO and others from the service, which often have to participate in the process due to a shortage of professionals, both doctors and nurses, despite weaknesses in skill and knowledge

in the subject. *The number of doctors and availability should be higher, the opening and closing protocol become very time-consuming because of the shortage of professionals, and the medical and nursing staff should also be more (...)* (MS1). (...) *There are professionals who are not part of the OPO, who does not have the proper knowledge and also end up messing up the process (...). The OPO has few professionals who are dedicated exclusively to the service, they are on duty in the sectors, and have other tasks, disrupts the whole process* (MS2). (...) *We realize the need for the exams by the clinician and neurologist or neurosurgeon and often they are professionals who are scarce in the health service and end up delaying the opening and closing of the Protocol* (MS3).

A donor can benefit more than ten people. However, in Brazil, the waiting lists have been increasing every day due to the shortage of organs. Weaknesses in PD care of organs and tissues have been described in the literature as possibly responsible for the non-execution of an important portion of donations, whether structural, financial or human resources level.<sup>12</sup>

Even though the brain death criteria are well defined, there are still doctors who consider this situation different from death.<sup>13</sup> Concerning nursing, there was also weaknesses perceived in the knowledge of the staff on aspects of the diagnosis of BD, main general and specific care provided and the steps in the process of organ and tissue donation.<sup>14</sup>

Thus, it is understood that the team's lack of preparation generates professional stress, family suffering, and compromises the effectiveness of the process, being essential to education and improvement, seeking to avoid such factors, and enabling the expansion of supply of organs and tissues for transplantation, resulting in benefits to the society.<sup>15</sup>

The insufficient number of professionals and limited financial resources (represented by the deficiency in the structure and professionals, such as neurologists) have emerged as the main obstacles in this process. Structural, funding, and personnel problems have marked many donation programs of organs so that weaknesses of these components interfere in the care process and generates frustration among professionals involved in assisting the PD.<sup>12</sup>

Another difficulty that scholars have described was the ineffective family approach, attributing the lack of family knowledge on the subject, professionals are not trained enough to deal with the situation and the weaknesses in the hospital's physical structure, influencing the decision about donation the organs. (...) *We end up losing many cases due to family anxiety. The local approach is not appropriate* (NS2). (...) *In the family interview, what makes it more difficult is the availability of doctors and a person who*

*knows how to approach families. (...) When family members are more enlightened, the donation is easier (NS3). In relation to the family approach, I see that the completion of the whole process is not informed, it gets worst and creates negative things (worse) because the service already has a poor service, the family ends up stressing and gets anger not with the protocol, but because of the service that is poor (MS2).*

The family refusal was shown as another barrier to the professionals interviewed, similar to other studies that show the refusal as the main factor for not effecting the donation<sup>5</sup>, associated in most cases, not understanding the diagnosis of brain death.<sup>16</sup>

It should be offered special care to the family of the PD, either because such care can positively influence acceptance for donation or the need for their suffering by the loss of a loved one, which in many cases of BD may be related to tragic accidents, usually involving adolescents and youth people.

It is also observed the dissatisfaction of the scholars to hospital infrastructure, highlighting the lack of beds, especially for clients/patients in BD investigation, lack of medicines and supplies. Sometimes, basic equipment for the ICU is not working or is not available in sufficient quantities. *There are many difficulties, but I believe that the main one is the structure we have in the hospital (...), some medicines and some equipment are missing and, if there were any of them, it would greatly improve*

*our work so that we could achieve the goal of maintaining the potentially viable donor (NS3). (...) Lack of qualified professionals (...). (...) Most of the clients/patients who we monitor do not enter even in ICU, they stay in the (room) high complexity, where there is a lack of medicine, infusion pump (...) lack of everything (MS2). (...) There is no ventilator for all potential donor, there is no ICU bed available (...) so we, as fellows and members of the OPO, do what we can (...). We cannot make a gasometry in the patient at the time you want because the ICU gasometer is calibrating or the gasometer of the pediatric ICU is not working; then the blood goes to another hospital (...) (MS4).*

Also adding to this problems, there is the precarious structure of the Brazilian health system, characterized by overcrowding in emergency units, with people placed in hallways, long waiting time for care, high care tension, great pressure for new calls, in addition the lack of ICU beds, equipment, materials and trained professionals, which is committed not only to assist the client/patient who is with the possibility of improvement, but also all the actions necessary for the development of the organ donation process.<sup>17</sup>

Even with all these situations, Brazil has the largest public transplantation program of the world, with advances such as significant increases in the number of transplants, although still insufficient.<sup>18</sup>

## CONCLUSION

OPO are configured as a privileged space for the placement of new knowledge and practices for students by the subject of care of BD person and PD be treated as incipient in his health graduation.

The thematic of care to the potential organ donor should be better addressed in health education, with a focus on physiological, ethical and ethics involved in the death/dying process.

Although the OPO being scenario of the study with advances in the number of notifications, procurement and organ transplants, it is necessary to pay attention to the weaknesses evident in the structural, human, logistics and financial resources since probably they interfere negatively on the number of notifications, maintenance of the PD, the capture or the organ transplantation occurring in the hospital.

The study limitations are its regional aspect, limiting the possibility of generalizations.

Given the above, this research raises for future studies that quantify the impacts of subjecting the process to those identified barriers.

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