

# Recommendations for patients undergoing bariatric surgery regarding immunization against COVID-19

## Recomendações aos pacientes submetidos a cirurgia bariátrica em relação à imunização contra o COVID-19

## Recomendaciones para pacientes sometidos a cirugía bariátrica con respecto a la inmunización frente a COVID-19

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Obesity (CID 10: E-66) is a chronic disease resulting from the accumulation of adipose tissue, related to body mass index (BMI) equal to or greater than 30, multifactorial, and also, with interaction with behavioral, cultural, genetic, metabolic, social, economic and political factors.<sup>1,2</sup> According to data provided by the World Health Organization (WHO) since 1975, the problem of obesity and morbid obesity has almost tripled worldwide, and in 2016, about 1.9 billion adults, who were already aged 18 years or older, would be more likely to be diagnosed with this disease.<sup>2-3</sup>

For several researchers interested in this important theme, the prevalence of obesity has grown very strongly in recent decades, according to some studies, especially in countries that are in the process of development, industrialization or post-industrialization.<sup>3-4</sup>

Numerous comorbidities are associated with this public health issue, such as hypertension (AH), diabetes mellitus (DM), obstructive sleep apnea syndrome (OSAS), metabolic syndrome (MS), various types of cancers (AC), among others, with bariatric surgery (CB) being one of the main ways to combat and control obesity.<sup>1-5,16</sup> On the other hand, in December 2019, in Hubei Province, China, an outbreak of pneumonia that is believed to have been triggered by a new coronavirus strain was identified by testing and medical diagnosis, which was detected by testing and medical diagnosis, which allowed its spread in an accelerated manner to at least twenty-four (24) other nations..<sup>6-7,12</sup>

On December 29 of the same year, a hospital institution located in Wuhan admitted for health treatment, the number of four (04) people who were diagnosed with pneumonia, being recognized that they had developed work activities in the Huanan Wholesale Seafood Market.<sup>7-9,12</sup> This phenomenon was effectively reported by the hospital to the Center for Disease Control (CDC-China), and the field epidemiologists of China (FETP-China), managed through their efforts to identify additional patients, who were linked to the incident that occurred in the seafood market and, already on December 30, the competent authorities in health, reported this cluster to the Chinese CDC.<sup>8,12</sup>

In a recent publication, developed by the Latin American Federation of Obesity Societies, the pandemics of obesity and COVID-19 were analyzed, in addition to their direct and indirect developments in several nations.<sup>5,12</sup> Today, February 28, 2021, they are registered with the Coronavirus Resource Center of Johns Hopkins University, the universe of "113,894,300" global cases recorded, and the ten (10) nations currently with the highest case records were the United States with 25.1% (n=28,558,289), India with 9.7% (n=11,096,731), Brazil with 9.2% (n=10,517,232), Russia with 3.7% (n=41,984,400), England with 3.7% (n=4,182,788), France with 3.3% (n=3,747,263), Spain with 2.8% (n=3,188,553), Italy with 2.6% (n=2,907,825), Turkey with 2.4% (n=2,693,164) and Germany with 2.1% (n=2,448,135).<sup>10</sup>

When analyzing the number of deaths due to COVID-19 by the same global case registration portal, it was possible to identify that the United States recorded the highest preponderance with 20.3% (n=512,181), followed by Brazil 10.1% (n=254,221), Mexico with 7.3% (n=1,734,051), India with 6.2% (n=157,051), England with 4.9% (n=122,939), Italy with 3.9% (n=97,507), France with 3.4% (n=85,741), Russia with 3.4% (n=84,700), Germany with 2.8% (n=70,106) and Spain with 2.7% (n=69,142), respectively.<sup>11</sup> Thus, one of the main mechanisms for combating and controlling COVID-19 is through the immunization process, and this important strategy is approved in Brazil by the National Health Surveillance Agency (ANVISA), through a decision on the emergency use, on an experimental basis of vaccines.<sup>12-13</sup>

This important national body, related to the National Health Surveillance System (SNVS), was created by Law number 9,782 of January 26, 1999, and that, according to its third article (3rd), it is constituted as an autarchy under special regime, linked to the Ministry of Health (MS), with its office and foreign in the Federal District (DF), of indeterminate duration and acting throughout the national territory.<sup>14</sup> In this sense, another important document to be cited in this analytical context is ministerial decree number 188 of February 3, 2020, which declares an emergency in public health of national importance (ESPIN), due to human infection by the new coronavirus (2019-nCoV).<sup>15</sup>

Thus, the scientific literature points out that morbid obesity is a disease that increases the risk of developing the severe forms of COVID-19, and vaccination is indicated for patients undergoing bariatric surgery (CB) by the Brazilian Society of Bariatric and Metabolic Surgery (SBCBM).<sup>16</sup> Thus, the SBCBM made available some recommendations for patients undergoing this surgical procedure, aiming to contribute to the containment of the impacts of this disease, being suggested immunization against COVID-19, characterized as an individual and shared decision with the surgeon, besides emphasizing the use of masks and personal protective equipment (PPE), also providing nutritional recommendations and dietary supplementation indicated by the multidisciplinary team.<sup>16</sup>

Also according to the SBCBM, obesity and associated diseases are usually powerful risk indicators for the expansion of Severe Acute Respiratory Syndrome (SRS), and people should prioritize vaccination, maintain care and develop actions to control these diseases.<sup>16</sup> It is also recommended, the rigorous medical follow-up of these patients, even after vaccination, in addition to the control of nutritional status, evaluation by a professional periodically, the implementation of physical activity, emotional and psychological follow-up, hand hygiene carefully and the use of alcohol gel.<sup>16</sup>

In this sense, the importance and need for vaccination of people submitted to CB is reiterated, according to the schedules and schedules stipulated for its realization, respecting the criteria established by the competent agencies, responsible for the organization and management of all processes related to this important health activity. The fight and control of both obesity and COVID-19 are the responsibility of the whole society, aiming to reduce the impacts of these "pandemics", their comorbidities and these important public health issues, strongly identified in contemporary times.

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# Nursing Care of an Adolescent with Toxic Epidermal Necrolysis: A Case Report

## Cuidados de Enfermagem a um Adolescente com Negrólise Epidérmica Tóxica: Relato de Caso

### Cuidados de enfermería prestados a un adolescente con negrólisis epidérmica tóxica: reporte de caso

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#### RESUMO

**Objetivo:** Relatar a assistência de enfermagem diante do caso de um adolescente com diagnóstico de Negrólise Epidérmica Tóxica (NET) internado em uma Unidade de Terapia Intensiva de Queimados. **Método:** Trata-se de um relato de caso sobre as intervenções de enfermagem realizadas em um adolescente com diagnóstico de NET, internado por um mês em 2020 na Unidade de Terapia Intensiva de Queimados de Goiás. As informações foram coletadas do prontuário do paciente. **Resultados:** Apresentamos práticas clínicas para auxiliar no manejo de pacientes com NET. O caso apresentado teve um desfecho positivo. **Conclusão:** Os cuidados de enfermagem são essenciais para o prognóstico positivo do paciente. Nesse caso, a enfermagem atuava principalmente no cuidado de feridas, administração de medicamentos, laserterapia e vigilância para prevenção de infecções.

**Descritores:** Negrólise Epidérmica Tóxica; NET; Cuidados de enfermagem; Queimadura.

#### ABSTRACT

**Objective:** To report nursing care facing a case of an adolescent diagnosed with Toxic Epidermal Necrolysis (TEN) hospitalized in a Burns Intensive Care Unit. **Method:** This is a case report on the nursing interventions performed on a teenager diagnosed with TEN, who was hospitalized for a month in 2020 at the Burn Intensive Care Unit in the state of Goiás. The information was collected from the patient's medical record. **Results:** We present clinical practices to assist the management of patients with TEN. The case presented had a positive outcome. **Conclusion:** Nursing care is essential for the positive prognosis of the patient. In this case, nursing acted mainly in wound care, medication administration, laser therapy and surveillance to prevent infections.

**Descriptors:** Toxic Epidermal Necrolysis; TEN; Nurse Care; Burns.

#### RESUMEN

**Objetivo:** Informar los cuidados de enfermería en el caso de un adolescente diagnosticado de Negrólisis Epidérmica Tóxica (TNE) ingresado en una Unidad de Cuidados Intensivos por Quemados. **Método:** Se trata de un relato de caso sobre las intervenciones de enfermería prestadas a un adolescente diagnosticado de TNE, hospitalizado durante un mes en 2020 en la Unidad de Cuidados Intensivos Quemados de Goiás, información obtenida de la historia clínica del paciente. **Resultados:** Presentamos prácticas clínicas para ayudar en el manejo de pacientes con TNE. El caso presentado tuvo un resultado positivo. **Conclusión:** El cuidado de enfermería es fundamental para el pronóstico positivo del paciente. En este caso, la enfermería trabajó principalmente en el cuidado de heridas, administración de medicamentos, terapia con láser y vigilancia para prevenir infecciones.

**Descritores:** Negrólisis epidérmica tóxica; NET; Atención de enfermería; Quemaduras.

## Introduction

Toxic Epidermal Necrolysis (TEN) is a rare and serious disorder, which leads to an acute mucocutaneous lesion, usually triggered by drugs, being associated to a high rate of morbidity and mortality. The disorder has multisystemic repercussions and a clinical picture based on changes in the skin and mucous membranes, which affects more than 30% of the total body surface. If the percentage is lower than 30%, the patient is diagnosed with Stevens-Johnson Syndrome (SJS).<sup>1-3</sup>

As for the etiology of this condition, it can be due to infections, but it is believed that most cases - almost 80% - are induced by drugs. It can develop in one or two weeks, but it can also be quickly, within 48 hours. The pathogenesis is still not well understood, but research says it is a delayed hypersensitivity reaction to drugs in people with greater genetic predisposition.<sup>2,3</sup>

Nurses should seek, in their professional practice, excellence in care and quality in their assistance<sup>4</sup>. Because it is disease with low-incidence, and because there are few studies in the field of nursing addressing this topic, the report of this case is relevant. The study aims to report the main nursing care facing a case of an adolescent diagnosed with TEN hospitalized in a Burns Intensive Care Unit.

## Method

This is a case report about the nursing care provided to a teenager diagnosed with toxic epidermal necrolysis, who was hospitalized in a Burns Intensive Care Unit in a public hospital in the state of Goiânia - Brazil, currently a reference in treatment of burned patient.

The patient was admitted to the institution from February to March 2020. Data were collected in the month of June from the patient's medical record, present in the hospital's electronic medical record system.

The project was approved by the institution's ethics committee, for publication of the case, the exemption from the free and informed consent term was authorized, as secondary data was used and when entering the institution's service, the responsible for the patient authorized the use of images and history for research purposes.

Ethical precepts were respected, according to the recommendations of Resolution 466/12. This study brings minimal risks to the patient, as it guarantees the confidentiality of the data and since it is a case report, interventions will not occur, which reduces the possibility of causing physical and psychological damage to the patient.

## Results

A fourteen years old male patient accompanied by his parents, from the city of Jataí (State of Goiás, Brazil), admitted to the Burns Intensive Care Unit on 02/15/2020 in a serious general condition. On admission, he was hemodynamically stable without use of vasoactive drugs, dehydrated, feverish, with normal color, acyanotic, anicteric. Neurological state: confused, agitated; with isochoric and photoreactive pupils. With uveitis and keratitis in both eyes

and bilateral eyelid swelling. He had a large amount of blood in the oral cavity, significant lip swelling, friable and bleeding mucosa. Regular heart rate, tachycardia, normotensive and prolonged capillary refill time. On lungs auscultation: presence of vesicular murmurs, diffused rhonchi, tachydyspneic using accessory muscles; Oxygen supplementation in a mask device without reservoir, with a flow rate of 15L/min, saturating 85%. Flat and flaccid abdomen, painless on palpation, with positive Nikolsky's sign and absence of swelling in the lower limbs. After the evaluation, it was instituted immediate interventions for hemodynamic control. TEN was the diagnosis, having as its etiological agent: silver sulfadiazine cream and metamizole used by the patient a few days ago. The sparse lesions (scaling lesions) affected anterior and posterior trunk, head, neck, oral and genital mucosa, upper and lower limbs, reaching about 67% of the burned body surface.



**Figure 1:** Lesions due to toxic epidermal necrosis, 2020.



**Figure 2:** Healed toxic epidermal necrosis lesions, 2020.

The total hospitalization period was 21 days, in this period the Singular Therapeutic Project (STP) was instituted, focusing on real or possible problems that the patient could present, with the objective of discussing interventions that would guarantee conditions for his clinical improvement and hospital discharge.

Thus, the main nursing diagnosis that directly impacted the possibility of hospital discharge was the *Impaired Skin Integrity* related to harmful chemical

factors; evidenced by changes in skin integrity. Thereby, nursing care for injuries consisted of mechanical debridement at the bedside, laser therapy, daily dressings on the lesions with Essential Fatty Acids (EFA), covering it with rayon gauze lubricated in petroleum jelly, sterile compress and bandages to occlude.

*Risk of infection* related to changes in skin integrity. In view of this diagnosis, the main precautions were: Strictly monitoring vital signs; monitoring local and systemic infection signs and symptoms; manipulation of invasive devices using aseptic technique; daily evaluation of the lesions watching manifestation of any phlogistic signs.

After 21 days of hospitalization, the patient was discharged from the hospital with an outpatient return visit to continue treatment and assess the lesions. After the first return visit, we could observe the epithelialization of the wounds, thus concluding the clinical treatment.

## **Discussion**

TEN is a rare and serious disorder that leads to an acute mucocutaneous eruption, usually drug induced. Medications can trigger an immune response by binding directly to the Major Histocompatibility Complex (MHC) and T-cell receptors, stimulating a specific population of cytotoxic T-cells that have the function of destroying keratinocytes directly and indirectly. Keratinocytes are the major cell type of the skin and their main characteristic is the protein constitution based mainly on the synthesis of keratin. <sup>2, 3,5</sup>

The destruction of this group of cells triggers the healing process that affects the entire body, which is like the clinical picture of a major burn, being this the main clinical finding of this pathology. <sup>2,3,5, 6</sup>

Nurses' knowledge about physiology and anatomy, the healing process and the available and indicated coverings, taking into consideration its cost-benefit is essential to prescribe the most appropriated technology for the treatment<sup>7,8</sup>. Thus, Essential Fatty Acid (EFA) was the main product used during treatment because it keeps the injury hydrated, stimulates angiogenesis and epithelialization, since other products could trigger a new toxic reaction on the patient's skin.<sup>9,10</sup>

Laser therapy was another approach aiming the treatment of wounds. In skin lesions, low-power laser irradiation is the first choice. It acts through biomodulation of cells and tissues, which helps the healing process by stimulating epithelialization and angiogenesis, it also has analgesic action and reduces edema. <sup>10</sup>

Due to skin's waterproofing barrier loss, TEN carriers have an important risk of infection. Secondary infections are the most found complications, which, together with sepsis, are the main causes of mortality in patients with TEN. <sup>5, 6, 10</sup>

Nurses must offer individualized care for these patients based on the identification of their affected needs, on the elaboration of the diagnosis, on the planning of interventions and their implementation and evaluation. For nursing to advance as a science as well as the advance of the provided care quality, it is necessary to produce knowledge that underlies nursing interventions into care process.<sup>5,10</sup>

## Conclusion

Nursing care for the adolescent in this case study aimed, above all, promoting and maintaining skin integrity, preventing the worsening of dermal changes already in place and preventing infectious foci. Therefore, nurses play a fundamental role in the process of wound healing and infection prevention. It is important to highlight the scarcity of publications in the nursing field about the best management of the patients with TEN. From that, we need more clinical studies and the development of protocols to improve and guarantee that the care provided is based on scientific evidence, ensuring safe and quality care.

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# Nursing before abortion: an integrative review

## A enfermagem perante o aborto: uma revisão integrativa

### Enfermería frente el aborto: una revisión integradora

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#### RESUMO

**Objetivo:** Diante da necessidade de assegurar uma prática assistencial embasada em evidências científicas, tem-se como objetivo identificar como é prestada a assistência de enfermagem à mulher em situação de abortamento. **Método:** Trata-se de uma revisão integrativa realizada através do levantamento bibliográfico de artigos sobre a atuação da enfermagem perante o abortamento. A coleta de dados foi realizada através da Biblioteca Virtual da Saúde nas bases de dados da Medical Literature Analysis and Retrieval System Online, Literatura Latino-Americana e do Caribe em Ciências da Saúde e Base de Dados Nacionais da Enfermagem. **Resultados:** Foram obtidas para a análise 5 produções bibliográficas entre revisões integrativas, relato de experiência e outros. **Conclusão:** Conclui-se que embora o Código de Ética de Enfermagem seja um documento de acesso livre e fácil, muitos enfermeiros pecam em seu cumprimento quando colocam suas opiniões pessoais a frente da qualidade assistencial. Foi um limitante para a pesquisa a escassa quantidade de produções recentes sobre a temática. Espera-se com este artigo trazer contribuição acerca das condições de abortamento.

**Descritores:** Aborto; Enfermagem; Assistência; Saúde da mulher; Revisão; Brasil.

#### ABSTRACT

**Objective:** In view of the need to ensure a care practice based on scientific evidence, the objective is to identify how nursing care is provided to the woman in situation of abortion. **Method:** This is an integrative review performed through a bibliographic survey of articles on nursing performance before abortion. The data collection was performed through the Virtual Health Library in the databases of Medical Literature Analysis and Retrieval System Online, Latin American and Caribbean Literature in Health Sciences and National Nursing Database. **Results:** 5 bibliographic productions were obtained for the analysis among integrative reviews, experience reporting and others. **Conclusion:** It is concluded that although the Code of Ethics of Nursing is a document of free and easy access, many nurses sin in its fulfillment when they put their personal opinions before the quality of care. A limited number of recent productions on the subject were researched. This article is expected to bring a contribution about the welfare conditions in the abortion.

**Descriptors:** Abortion; Nursing; Assistance; Woman health; Review; Brazil.

#### RESUMEN

**Objetivo:** Adelante de la necesidad de garantizar una práctica de salud basada en evidencia científica, el objetivo es identificar cómo es prestada la atención de enfermería a las mujeres en situaciones de aborto. **Método:** Esta es una revisión integradora realizada a través de una encuesta bibliográfica de artículos sobre el papel de la enfermería frente al aborto. La recolección de datos se realizó a través de la Biblioteca Virtual de Salud en las bases de datos del Medical Literature Analysis and Retrieval System Online, Literatura Latinoamericana e do Caribe em Ciências da Saúde y la Base de Datos Nacional de Enfermagem. **Resultados:** Se obtuvieron cinco producciones bibliográficas para el análisis, incluidas revisiones integrales, informes de experiencias y otros. **Conclusión:** se concluye que aunque el Código de Ética de Enfermería es un documento con acceso libre y fácil, muchos enfermeros pecan en su cumplimiento cuando antepone sus opiniones personales a la calidad de la atención. La escasa cantidad de producciones recientes sobre el tema fue un factor limitante para la investigación. Se espera que este artículo haga una contribución sobre las condiciones del aborto.

**Descritores:** Aborto; Enfermería; Asistencia; Salud de la mujer; Revisión; Brasil.



## Introduction

Abortion, the subject of much discussion in the current scenario, is defined as termination of pregnancy in a period equal to or less than 20 to 22 weeks with the product of conception weighing up to 500 grams. It is configured as a public health problem, practiced illegally by mostly black women, with low education, poor, motivated mainly by financial difficulties and other distinct motivations, among them: not being married, having an income below half a minimum wage or having more children than they consider ideal.<sup>1-2</sup>

Regarding the perception of women who had abortions about the autonomy of the body, many of the women in this context are religious, believe in the need to reach the social expectation of being good wives and mothers, and indicate the lack of family support as an important contributor to the decision abortion.<sup>3-4</sup> Decree Law No. 2,848 of December 7, 1940 of the Brazilian Penal Code, articles 124 to 128 criminalize abortion that is not included in the following situations: risk of maternal life, pregnancy resulting from rape and fetal anencephaly (according to a decision of the Supreme Court In 2012). For this reason, research on the subject does not present the real magnitude of abortion in Brazil as it is underreported.<sup>5-8</sup>

The search for women for rights mainly through feminist groups continues for decades in the search for autonomy over their own bodies. There were changes in this period in public policies for women's health, but they are not enough and what already exists is applied with disabilities. Criminalization does not decrease the number of abortions and still contributes to the increase in maternal deaths, this can be considered a violation of human rights.<sup>9</sup>

There were 770 maternal deaths as a result of abortion between 2006 and 2015 in the Mortality Information System (SIM), a decrease from 5.7% to 4.1% during the period, with these deaths being more frequent in the 20 to 29 age group. 29 years, however, it is not possible to differentiate.<sup>8</sup> According to the 2010 National Abortion Survey (PNA), 1 in 4 women between 18 and 39 years old had had an abortion and in the next PNA, in 2016, there was no major change in this statistic. Despite criminalization, abortion in Brazil is still common, practiced by ordinary women.<sup>10</sup>

The Nursing Code of Ethics provides in article 41 that it is the duty of nursing to provide assistance without any discrimination, prohibits in article 73 the participation in abortion practice - except in cases permitted by law - and exempts the professional from the obligation in situations provided for by law by conscientious objection. One must welcome, guide, maintain secrecy and not judge the woman who will or has already gone through this situation and is fragile.<sup>8,11</sup>

This article is justified by the need to discuss aspects of the nursing professionals' conduct taking into account the factors associated with the issues in which the professionals are involved and can prevent humanized attention such as morality, religiosity and culture.

In view of the need to ensure a care practice based on scientific evidence, the objective is to identify how nursing care is provided in situations of abortion.

## **Method**

### **Type of study**

It is an integrative review<sup>12-13</sup> carried out through a bibliographic survey of articles on the role of nursing in the face of abortion.

### **Methodological procedures**

Based on the guiding questionnaire - how is nursing care provided to women in an abortion situation? - Review objectives were established; inclusion and exclusion criteria for articles; definition of the relevant theme and which will be extracted from the research; selection of articles in the literature.

### **Data collection and organization**

Data collection was performed through the Virtual Health Library (VHL) in the databases of the Medical Literature Analysis and Retrieval System Online (MEDLINE), Latin American and Caribbean Literature in Health Sciences (LILACS) and the National Database of Nursing (BDENF) where the health descriptors were used: "Abortion", "Nursing" and "Assistance", respectively applied simultaneously with the use of the Boolean operator "AND".

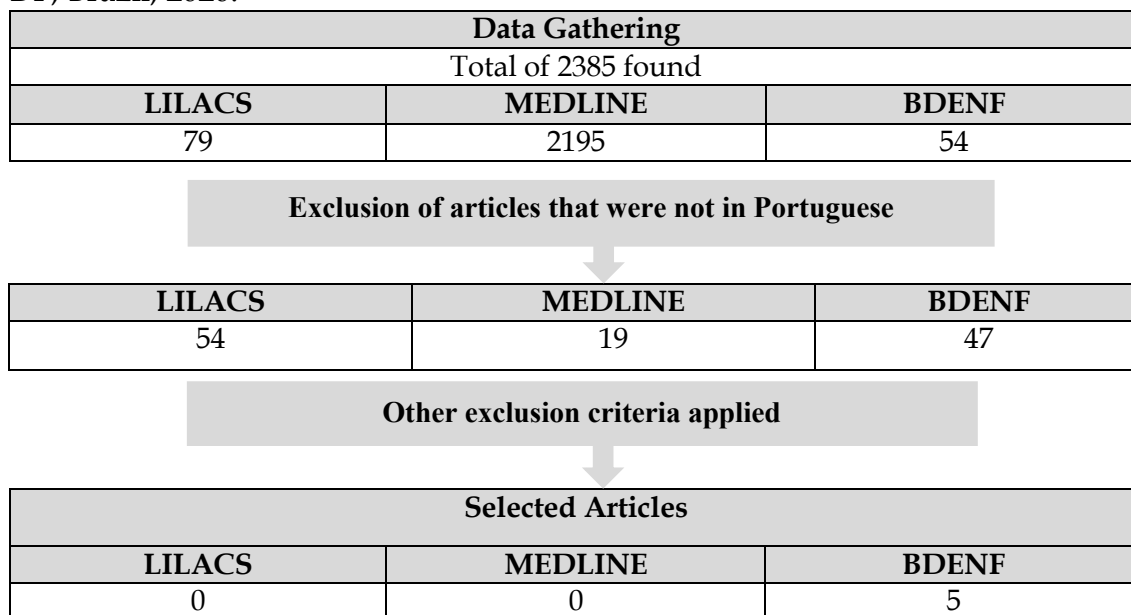
The following inclusion criteria were used: thematic regarding nursing care provided to women in an abortion situation; bibliographic productions between the years 2015 to 2020; full texts available online in Portuguese. Exclusion criteria were used: articles with different themes from the proposal. As an additional criterion for characterizing the studies, the classification of the level of evidence<sup>35</sup> was used to demonstrate the quality of studies related to nursing and abortion.

### **Data Analysis**

According to the article selection process (Table 1), 5 bibliographic productions were obtained for analysis, including integrative reviews, experience reports and others, in the MEDLINE, LILACS and BDENF databases from February to March 2020.

2,385 articles were initially identified, 2,328 of them in the MEDLINE, LILACS and BDENF databases, of which 2,213 were excluded because they were not available in Portuguese, resulting in 115 potentially relevant productions. Of this total, 91 more articles were excluded because they did not meet the exclusion criterion - scientific productions between the years 2015 and 2020 - resulting in 24, 1 for not providing full text and, afterwards, another 18 articles were excluded because they understand a different theme study. At the end, a total of 5 articles were obtained for integrative review.

**Table 1-** Flowchart of the selection process for scientific productions Brasília-DF, Brazil, 2020.



## Results

**Table 2-** Characteristics of the selected studies.

Title	Year/Journal	Source	Type of Study	Level of Evidence	Context
Nursing care for women in situations of abortion: an integrative review	2015 / Revista de Enfermagem da UFSM	Brazil	Integrative Review	VI	Healthcare
Attention to women undergoing induced abortion: the perception of nursing professionals	2015 / Revista de Enfermagem da UFSM	Brazil	Descriptive/Qualitative	VI	Healthcare
Humanized care for women in abortion situations: a reflective analysis	2017 / Revista de Enfermagem UFPE <i>On line</i>	Brazil	Qualitative/Reflexive Analysis	VI	Healthcare
Abortion: nursing care protocol: experience report	2017 / Revista de Enfermagem UFPE <i>On line</i>	Brazil	Descriptive/Experience Report	VII	Healthcare
The contextualization of abortion from the perspective of the nurse	2018 / Revista <i>Nursing</i>	Brazil	Exploratory/Descriptive	VI	Healthcare

### Description of the 5 studies resulting from the research:

Studies published in the years 2015 (40%), 2017 (40%) and 2018 (20%) were collected, published in 3 different journals with the concentration of 2 (40%) in the UFSM Nursing Journal, 2 (40%) in Revista de Enfermagem UFPE *On line* and 1 (20%) in Revista *Nursing*.

About the methodology, 1 (20%) integrative review, 2 (40%) qualitative studies, 1 (20%) experience report and 1 (20%) reflective analysis. 5 (100%) articles were carried out in Brazil and have the context of care.

## Discussion

### Nursing assistance offered to women in abortion situations

Attention to women's health has been worked on public policies in Brazil since 1983 with the creation of the Comprehensive Assistance Program for Women's Health (PAISM) with an emphasis on reproductive health and intensified in 2004 with the creation of the National Comprehensive Care Policy to Women's Health (PNAISM) which is broader, covering several aspects involving women's health, including care for safe abortion.<sup>14</sup>

In the context of sexual violence, which can result in contamination by sexually transmitted infections and pregnancy, living with the aggressor means that victims are unable to seek health care in time to avoid conception. Emergency contraception, in order to be effective, must be used within 72 hours of the event and prevents about 3 out of 4 pregnancies. It becomes one of the most important interventions in view that if there is a conception, the abortion procedure is not always accessible.<sup>15</sup> Although the legislation protects women who are victims of violence or at risk of life in the situation of abortion and this generates better assistance through other cases, some professionals still interfere in this difficult process. The personal values of the nursing staff should not be placed at the forefront of the profession, but it is seen that the woman who illegally aborts is considered by the professionals as irresponsible while the one who suffers spontaneous abortion or is at risk is a victim who needs to be comforted.<sup>16</sup>

A study carried out in the form of an experience report shows the importance of using the Nursing Care Systematization (SAE) and the use of protocols as great allies in providing qualified care.<sup>17</sup> Assistance must be free of any prejudice, respecting the woman's privacy, maintaining professional secrecy in cases of illegal abortion - as the fact should not be communicated to the authority without consent - and respecting the principles of bioethics which are: beneficence, non-maleficence, autonomy and justice.<sup>18-21</sup> Confidentiality should only be broken in cases of sexual violence as it is the responsibility of all health professionals to make compulsory notification, although this obligation is not explicit in the codes of ethics.<sup>22-23</sup>

A study on teenage abortion reveals that 17% of illegal abortions in Brazil are performed by girls aged 12 to 18 years old. Scarce research on the subject leaves doubts about the characteristics and impact of abortions performed by this public. Half of the adolescents surveyed had partners of a much older age and underwent abortion under pressure from them, this may be associated with vulnerability due to male domination and does not mean that they had an abortion just because they did not want motherhood. They also did not share with the family when they confirmed the pregnancy, which shows the lack of support.<sup>24</sup> The relationship of dominance of men by condition of power is a characteristic that has always been present in society, but has been deconstructed over the years.<sup>14</sup>

Women who have had unsafe abortions are more likely to experience physical complications, and despite being a restricted medication, access to misoprostol is easy. However, it is still difficult to understand the magnitude of the consequences for mental health.<sup>25</sup> Many women have a feeling of regret and

guilt and that is why it is extremely important that the nursing team practices empathy and qualified listening for comprehensive care, respecting the individuality of the woman because they are present in the entire process.<sup>21,26</sup>

One of the factors that affects the quality of nursing care is the irregular distribution of attributes that are not within its competence.<sup>27</sup> The professional may refuse to assist a patient if it is not within their technical, scientific competence or there is no security for both.<sup>28</sup> Another fact that also contributes to this is the prioritization of women in other periods of reproduction to the detriment of those who are undergoing an abortion process, which causes embarrassment.<sup>20</sup>

Although the service is not considered bad, professionals still lack the sensitivity that the situation requires. The woman's freedom to expose her feelings to the team is necessary so that there are no barriers in communication between professional and patient, as this discussion can avoid new attempts at abortion that cause consequences not only for the woman, but also possible fetal malformations.<sup>29</sup> During assistance, the individual as a whole should be valued, paying attention not only to verbal communication, but also to body posture, gestures and facial expression. Receptiveness and reception generate physical and emotional well-being.<sup>20-21</sup>

### **Nursing perception about care performance**

The first International Nursing Code of Ethics was developed in the 1940s and approved only in 1953. It was created considering the different social and legal characteristics of the countries in which it would be applied, as well as respecting human rights. This served as a basis for each country to create its own document and was also the first attempt to untie nursing with religiosity.<sup>30</sup> Knowledge of the current code of ethics, training of professionals and the use of protocols optimizes care and gives dignity to women.<sup>17</sup> A study on the deontological experience of nursing shows that professionals have little knowledge about the Nursing Code of Ethics and see it as an obligation despite understanding its importance for maintaining order, indicating having security and support. They show interest in covering their knowledge, with the possibility of training and updating on their particularities, exceptionally on nursing autonomy. It is common to have an infraction due to lack of knowledge.<sup>31</sup>

It is perceived by the nurses themselves the mechanized way in which they treat women in this process, focused on physical needs, being seen as an obligation, care is not done under a holistic view respecting all aspects of the patient. They also assume to understand that it should be different, remembering their role in reception and education.<sup>19-20,26,29,32</sup>

Such professionals prefer not to participate in the care in general of women undergoing induced abortion, since they consider it easier to deal with spontaneous abortion.<sup>26</sup> Many of the professionals who work in this area do not have the training to do so, although some have a long period of experience.<sup>16-18,26</sup> Some professionals assume that there is discrimination in this context, but still allow themselves to be influenced in terms of neutrality. Neglect is also noticed when health professionals make it difficult to access contraceptive methods. Their lack of knowledge interferes with the quality of care as much as their

personal opinions since 97.5% of nursing professionals do not have ethical and legal science about abortion.<sup>33</sup>

In addition to humanized care in its entirety by nursing, women must receive multiprofessional care because in addition to clinical changes, there is emotional distress that is characterized by feelings of guilt, regret, social stigma and, in most cases, the absence of a partner. . Humanized reception helps to reduce the negative effects that will always happen in this situation, regardless of how the act occurred.<sup>18-19,21</sup>

Conducting debates and dynamics on the subject is the most effective form of training as it proves that it is possible to review your own practices in relation to assistance. It is understood that professionals who have experienced abortion either personally, professionally or within the family are more open to discussing abortion as public health.<sup>28,32</sup>

### **Sex education and reproductive health**

To discuss sex education, one must first understand its historical context in Brazil. Since colonial times in Brazil, religiosity has permeated discussions on the subject. At that time sex was seen only for procreation and women should have as many children as they could and only in the 19th century did it become related to health and rules were still imposed based on chastity, with a gender differentiation when men had greater sexual freedom and women were repressed. At the beginning of the 20th century, attempts were made to include sex education in schools in order to control sexually transmitted infections, but the idea was prevented by conservatism. During the dictatorial period, in the 60s, sex education once again lost ground in schools, however, in 1978 it started to be implemented in elementary and high school. Sex education in schools by health professionals becomes more accessible in a reality where young people and adolescents do not usually seek health care.<sup>34</sup>

Reproductive planning - also called family planning - is the right of every citizen, regardless of sexual orientation or gender identity, has great importance for the strengthening of sexual and reproductive rights. It is carried out by a multidisciplinary team, and includes control measures or preparation for fertility.<sup>23</sup>

Due to the high rates of abortion - 4,007,327 hospitalizations between 1996 and 2012 in the Unified Health System and about 16,905,911 unsafe abortions in Brazil - it is necessary to expand reproductive and family planning.<sup>18</sup> Abortion is one of the biggest causes of maternal mortality in Brazil, since 1 in 10 women with unwanted pregnancies resort to this in an unsafe manner and do not receive quality care in the health service when they come to look for it.<sup>17</sup>

The moment of hospitalization is the ideal time to understand the reason for the abortion, guide and advise on health education and prevention of new abortion practices and even talk about family planning, understanding that in the future this woman may or may not want children.<sup>19,29</sup> It is important that women leave care with knowledge about contraception methods and how to use them, health care goes beyond hospital care.<sup>20-21</sup>

It becomes an obstacle to education, sexual rights and reproductive health when it is common for men, especially nurses, to attribute only responsibility to



their children or to avoid pregnancies, and therefore the importance of this debate with the male sex, as presented in a study conducted with this audience.<sup>16</sup>

Failure in education about sexual and reproductive rights is a contributor to the practice of abortion.<sup>19</sup> This conduct is considered a violation of reproductive rights.<sup>32</sup>

## Conclusion

We concluded that although the Nursing Code of Ethics is a document with free and easy access, many nurses sin in its compliance when they put their personal opinions ahead of the quality of care and this can already be seen in the undergraduate student, which it was even an incentive for writing this study. Nursing is the predominant category in care and largely responsible for the implementation of humanized care and health education, as it is present at all levels of the process. Their practice must always be based on evidence and this also implies continuing education and, in this specific case, training on women's health.

It is evident that it is necessary to reorganize care and the teaching model in universities with a focus on learning ethics in all its applications, as it is understood that there is limited knowledge on the part of professionals, however, they must also have an interest to expand their knowledge.

This article is relevant to the study on the subject due to the lack of recent scientific collection on the subject, which was a limitation for the research. It is expected to bring a contribution about the assistance conditions in abortion, seeking to raise awareness about the treatment given to patients in this circumstance so that nursing is not or does not become inert as to the sensitivity that characterizes and differentiates the profession. The relevance of conducting new specific research on the theme was identified.

We have the understanding that this research will bring valuable contributions enabling developments that are based both on the current health policy that includes the quality of assistance to the user of the Unified Health System (SUS) and on the valorization of nursing research.

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# The difficulties of nursing care for elderly patients in palliative care - an Integrative review

## As dificuldades da assistência de enfermagem com o paciente idoso em cuidados paliativos- Revisão integrativa

## Las dificultades de la atención de enfermería al anciano en cuidados paliativos - Revisión integradora

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### RESUMO

**Objetivo:** Descrever as dificuldades da assistência de enfermagem paliativa ao paciente idoso segundo a literatura científica. **Método:** Trata-se de uma revisão integrativa da literatura cuja busca ocorreu nas seguintes bases de dados online: Literatura Latino-Americana e do Caribe em Ciências da Saúde (Lilacs), Scientific Electronic Library Online (SciELO) e National Library of Medicine National Institutes of Health (Medline/ Pubmed) no período de 2015 a 2020. Para a busca, foram utilizados os seguintes descritores: envelhecimento, cuidados paliativos e morte. Incluíram-se artigos científicos que abordassem a temática na língua portuguesa, publicados entre 2015 a 2020 e disponíveis na íntegra nos bancos de dados selecionados. Excluíram-se artigos que não se enquadraram diretamente nos objetivos deste estudo. **Resultados:** Foram encontrados 95 artigos, sendo 14 da base Lilacs, 35 da base SciELO e 46 da base Medline/ Pubmed. No entanto, 8 artigos atenderam os critérios de elegibilidade. Essa falta de conhecimento, muitas vezes é justificada pela falta de processos informativos, não somente no ambiente de trabalho, como também nas instituições de ensino de enfermagem. **Conclusão:** A equipe tem conhecimento sobre cuidados paliativos e reconhece a família como elo entre profissional e idoso. Entretanto, ficou evidente que é indispensável a educação continuada e suporte emocional voltado à enfermagem.

**Descritores:** Envelhecimento; Cuidados Paliativos; Morte.

### ABSTRACT

**Objective:** To describe the difficulties of palliative nursing care for elderly patients according to scientific literature. **Method:** This is an integrative review of the literature that was searched in the following online databases: Latin American and Caribbean Literature in Health Sciences (Lilacs), Scientific Electronic Library Online (SciELO) and National Library of Medicine National Institutes of Health (Medline / Pubmed) from 2015 to 2020. For the search, the following descriptors were used: aging, palliative care and death. Scientific articles that addressed the topic in Portuguese were included, published between 2015 and 2020 and available in full in the selected databases. Articles that did not directly fit the objectives of this study were excluded. **Results:** 95 articles were found, 14 from Lilacs, 35 from SciELO and 46 from Medline / Pubmed. However, 8 articles met the eligibility criteria. This lack of knowledge is often justified by the lack of informational processes, not only in the workplace, but also in nursing teaching institutions. **Conclusion:** The team has knowledge about palliative care and recognizes the family as a link between professional and elderly. However, it was evident that continuing education and emotional support focused on nursing is essential.

**Descriptors:** Aging; Palliative care; Death.

### RESUMEN

**Objetivo:** Describir las dificultades de los cuidados paliativos de enfermería al anciano según la literatura científica. **Método:** Se trata de una revisión integradora de la literatura, que se buscó en las siguientes bases de datos en línea: Literatura Latinoamericana y del Caribe en Ciencias de la Salud (Lilacs), Scientific Electronic Library Online (SciELO) y National Library of Medicine National Institutes of Health (Medline / Pubmed) de 2015 a 2020. Para la búsqueda se utilizaron los siguientes descriptores: envejecimiento, cuidados paliativos y muerte. Se incluyeron artículos científicos que abordaron el tema en portugués, publicados entre 2015 y 2020 y disponibles íntegramente en las bases de datos seleccionadas. Se excluyeron los artículos que no se ajustaban directamente a los objetivos de este estudio. **Resultados:** se encontraron 95 artículos, 14 de Lilacs, 35 de SciELO y 46 de Medline / Pubmed. Sin embargo, ocho artículos cumplieron los criterios de elegibilidad. Esta falta de conocimiento a menudo se justifica por la falta de procesos informativos, no solo en el lugar de trabajo, sino también en las instituciones de enseñanza de enfermería. **Conclusión:** El equipo tiene conocimientos sobre cuidados paliativos y reconoce a la familia como vínculo entre el profesional y el anciano. Sin embargo, fue evidente que la educación continua y el apoyo emocional enfocado en enfermería es fundamental.

**Descritores:** Envejecimiento; Cuidados paliativos; Muerte.

## Introduction

Aging occurs from the birth of the individual, in a natural and irreversible way. Over the years, people may feel incapable and unprepared with the approach of death, being subjected to unhappiness and silence. The growth in the number of elderly people and life expectancy has been a determining factor for the growth in the number of people with neurodegenerative diseases, and with functional disabilities, chronic diseases and cancer.<sup>1</sup>

Geriatrics, a specific medical specialty for the elderly, has the mission of making decisions that require extensive knowledge of the pathologies present in the elderly. As a result, the presence of terminally ill elderly patients may become increasingly frequent due to the increase in chronic diseases in this population.<sup>6</sup>

With the limitation of activities of daily living for the elderly, the nursing team of the Family Health Strategy (FHS); it can be reorganized and provide, through a humanized work of the professionals, the relief of the suffering of this patient, through pain control, the choice of the best conducts to be applied according to their need so that these and others do not stimulate greater agony.<sup>1,7-9</sup>

The WHO World Health Organization defines that palliative care for human beings consists of offering quality of life in the face of a terminal illness through the prevention and relief of suffering, recognizing, determining and treating pain and other physical and psychosocial problems.<sup>10</sup> Thus, palliative care is that provided to patients with no estimate of cure, whose disease has little chance of a positive response to curative therapy, being essential, in this phase, pain management and relief of suffering in all patient extensions, whether physical, psychic, social and spiritual. However, care must be distinct and individualized, considering the analysis of the needs of each patient who is in a condition of dependence.<sup>11</sup>

In this sense, the objective of this research is to describe the difficulties of palliative nursing care for elderly patients according to the scientific literature.

## Method

This is an integrative literature review study. This is defined as a method that provides the synthesis of knowledge and the incorporation of research results in healthcare practice based on scientific evidence that is synthesized and generates conclusions on a given topic under study. The steps taken were: Identification of the study question; Literature search; Data evaluation; Analysis of presentation of relevant results; and Discussion of the literature.

The inclusion criteria were scientific articles that addressed the topic in Portuguese, published between 2015 and 2020 and available in full in the selected databases. Articles that did not directly fit the objectives of this study were excluded. The purpose of selecting these criteria was to obtain data that answered the following guiding question for this research: What are the difficulties of palliative nursing care for elderly patients?

For data collection, searches were carried out from 2015 to 2020 in the following databases: Latin American and Caribbean Literature in Health Sciences



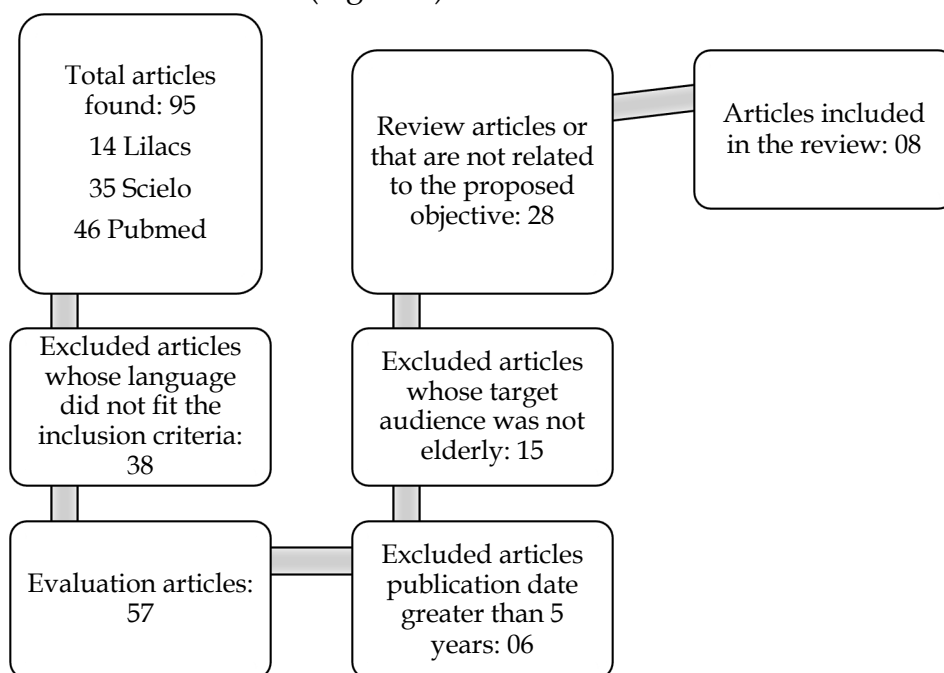
(Lilacs), Scientific Electronic Library Online (SciELO) and National Library of Medicine National Institutes of Health (Medline / Pubmed). For the search, the following structure composed of Health Science Descriptors was used: aging AND palliative care AND death.

Initially, the titles and abstracts of the studies were read according to the eligibility criteria. After the initial reading, the studies were read in full by two different evaluators, and research was maintained with at least two positive claims from the reviewers. In case of disagreement in the exclusion of articles, a third evaluator was called to the study.

For the analysis, the quantitative data were summarized in absolute (n) and relative (%) frequency and the qualitative data were treated with thematic content analysis.

## Results e Discussion

35 articles were found in the SciELO database, 14 articles in the Lilacs database and 46 in Pubmed, totaling 95 articles. After careful reading, only 08 articles met the inclusion criteria (Figure 1).



**Figure 1- Flowchart of exclusion of articles according to the eligibility criteria. 2020.**

Chart 1 shows the studies selected according to the year of publication, the author (s), objective (s) and results found.

**Chart 1-** Summary table of the review sample according to year, author, objectives and results. 2020.

Year	Author	Objectives	Results
2018	Santos, Faria e Patino <sup>12</sup>	It seeks to situate the environment based on analyzes and interpretations of the social psychology of aging and death.	It is concluded that aging and death are processes that involve dimensions of feelings, psychology clarifies the narratives about life, about aging, they are not restricted to a biological dimension, but the loneliness of finitude and the repression of death, that guide our social practices.
2016	Costa, Santos, Yarid, Sena e Boery <sup>13</sup>	Propose a reflection on palliative care, seeking to value practical experiences for the elderly in the light of bioethics.	Understand palliative care in relation to the principles of bioethics in the demands of elderly patients, in order to improve living conditions and establish a dignified survival.
2018	Andrade <sup>14</sup>	Identify factors responsible for the insufficient insertion of nurses in palliative care for elderly people at home.	It concludes the great need to prepare health professionals since graduation, to better deal with death.
2018	Ribeiro e Borges <sup>15</sup>	Analyze palliative care, about coping with aging.	The aging process and development and strategies for coping with aging and falling ill; mentions the participants' life trajectories.
2019	Gutierrez, Ting e Hoffmann. <sup>16</sup>	Investigate how the elderly deal with difficult life events and the process of dying itself.	It is concluded that the majority of the elderly have difficulties to face their dying process, even after having experienced complex situations throughout their lives and feel alone.
2016	Poletto, Bettinelli e Santin <sup>17</sup>	To know the medical practices and human dignity of the experiences of the death of elderly patients in a hospital environment.	Study addresses the divergence in the face of death, experienced by professionals in order to minimize ethical dilemmas in their daily practice.

2015	Souza, Zoboli, Paz, Schweitzer, Hohl, Pessalacia <sup>18</sup>	Identify cases of patients in palliative care attended at PHC.	The curative treatment for palliative patients are factors conducive to comprehensiveness and to obtaining answers to the search for better living conditions more adequate to the ethical challenges that the teams experience.
2015	Crippa, Lufiego, Feijó, Carli, Gomes <sup>19</sup>	Identify existing publications on bioethics and palliative care in the elderly between 2002 and 2013, describing the cases found.	Palliative care deserves to be discussed in more depth in limiting supportive treatments for patients with incurable and terminal diseases.

It was found that of the 08 articles were published in 03 in 2018, 02 in 2016, 01 in 2019 and 2015 were 02. There was an increase in the number of articles published on the topic in recent years.

Death is a process that is linked to the daily lives of nurses, who, during their work routine, can deal with this situation, but it is also an issue that is often not debated in society.<sup>20</sup>

In the elderly, the feeling of incapacity in the face of death can occur according to the unpreparedness to age well and healthy. With this, many prefer to live with silence, unhappiness, rejection and guilt. It is in these moments that the assistance provided to the elderly under palliative care aims to ensure that the patients have conditions that favor living the rest of their lives in a dignified manner until the moment of death. <sup>21</sup> It does not intend to cure, it is a therapeutic measure that aims to reduce the negative repercussions of the disease on the patient's well-being.<sup>22</sup>

Palliative care can be performed at home by the multiprofessional team, which implies a multidisciplinary approach to provide harmonic assistance aimed at the elderly, an interpersonal relationship between those who care and those who are cared for.<sup>23</sup> In elderly people with more debilitated diseases, who face physical or psychological suffering, emphasizes the importance of well-being and preservation of dignity, acting in the state of pain resulting from their illness.<sup>24</sup>

It must be an integral part of professional health practice, regardless of the stage of the disease's evolution. It is necessary to develop comprehensive care that impacts on people's health and autonomy and on the determinants and health conditions of communities, both in irreversible cases and in the case of progressive chronic disease.<sup>25</sup>

Every loss has a feeling of loneliness and discouragement, generating a reaction called mourning, associated with social isolation that can be experienced differently by each elderly person. Each elderly person understands in a way that this type of care is for their own good, the lifestyle, the history of losses and the

internal and external resources used to deal with them depends on the previous personality characteristics.<sup>26</sup>

The time that is left for the elderly, health professionals need to respect the quality of life with dignity, until the last moment, because the time that is left must be enjoyed with dignity. The health professional must develop skills and knowledge of physical symptoms and signs, and have the ability to respond to needs, which may be appropriate in this situation.<sup>27</sup>

The elderly patient needs basic care like any other, such as: hygienic care, food, pain relief, pharmacological treatment to relieve symptoms (nausea, vomiting, diarrhea) and emotional support, both for patients and the family, who accompanies this whole process.<sup>28</sup> It is also essential to assess the painful experience in terms of the magnitude of pain, in order to understand the implementation of analgesic measures and the effectiveness of instituted therapies.<sup>29-30</sup>

The nursing team needs to have a good level of knowledge in view of the terminality of the patient's life, to guarantee humanized and safe care, both for the family and for the patient.<sup>31-32</sup> The professional's relationship with death, especially in relation to the feelings experienced by the team, another contributing factor is the lack of experience and knowledge in the area, which makes palliative care difficult.<sup>32</sup>

Specific knowledge in the practice of palliative care, can generate more security when working with patients and family members, allowing the conception of values and beliefs, in addition to influencing the quality of care provided, and the use of scientific precepts. This lack of knowledge is often justified by the lack of informational processes, not only in the workplace, but also in nursing teaching institutions.<sup>32-33,34</sup>

Other difficulties reported in some studies<sup>8,11/12,19</sup> is the lack of a support network, including unpreparedness to deal with the patient's death, lack of resources, materials, financial and social isolation. Active participation in the suffering of the patient and family, lack of collaboration on the part of the team and the lack of involvement of nurses when making decisions at the end of life, and moral suffering. In addition to the exhausting emotional and physical workloads, as different approaches are needed to comfort, interact and welcome patients and their families.<sup>35-37</sup>

It would be impossible for nursing professionals not to get involved with patients and family members over the years dedicated to the profession, feelings such as insecurity, anguish, frustration are rewarded when they feel comfort and satisfaction when performing their activities successfully.<sup>38</sup> What can positively influencing these feelings is the relationship of the professional with the team, the company that works and the period of activity.<sup>33</sup>

If health institutions offered nursing professionals who work with palliative care support groups to share their experiences and feelings, perhaps this could contribute to reducing emotional suffering. In addition to opportunities for technological updates, specialization and improvement of professionals.<sup>39-41</sup>

Residential caregivers, whether family or contracted, generally do not have adequate support and emotional balance, this can result in psychological illnesses such as depression.<sup>35</sup>

The study<sup>42</sup> carried out with 1,271 caregivers of cancer patients in Italy showed that, although families are responsible for a small portion of all costs

arising from home care, the impact of the disease on the family's daily activities and savings can be main.

These caregivers over time need physical, practical and psychosocial support to support the demands that home care requires.<sup>18</sup> Because providing this intensified care can be aggravated, when it involves financial difficulty, a reality lacking technical, managerial, psychosocial support and increases worker overload.<sup>20</sup>

## Conclusion

The study showed that one of the best forms of care for the elderly patient together with the nursing team, when dealing, for example, with finitude, guided by palliative care, in the work environment is strengthened by actions of possibility of survival, although deaths occur. It also demonstrates the lack of experience, the feelings experienced throughout the process and the lack of emotional support from the health institution that works.

The communication and interaction of the nursing team with the family must always remain open, as there is a need to inform, guide and understand the entire process experienced by the family, since there is a need to prepare them for the discharge of the patient and their care at home.

In this sense, it is important to reflect on the planning of actions that favor the understanding and preparation of the nursing team on palliative care for elderly patients, revealing its importance as a health care profession.

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# Depression and suicide risk in nursing

## A depressão e o risco de suicídio na enfermagem

### Depresión y riesgo de suicidio en enfermería

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#### RESUMO

**Objetivo:** analisar a depressão e o risco de suicídio entre os profissionais da Enfermagem segundo a literatura científica. **Método:** Trata-se de uma revisão integrativa da literatura realizada nas bases de dados eletrônicas: Literatura Latino Americana e do Caribe em Ciências da Saúde, Scientific Electronic Library Online e National Library of Medicine, via Pubmed, buscando artigos publicados entre 2010 a 2020. **Resultados:** Dentre os fatores desencadeantes para a depressão nos profissionais da enfermagem estão: conflitos no trabalho, de interesse e familiar, plantões noturnos, estresse, sobrecarga, relação interpessoal, baixa perspectiva profissional. Já os fatores desencadeantes para o suicídio estão: depressão, Burnout, baixa relação pessoa, uso de medicamentos e ansiedade. **Conclusão:** É um problema de saúde pública, em que afeta um grande número de profissionais da enfermagem, sendo mais comum nos técnicos de enfermagem. É preciso que haja criação de políticas públicas para que esse profissional seja atendido semanalmente por psicólogos e rodas de conversas. Desse modo, é de suma importância a detecção precoce de sintomas depressivos e ideação suicida.

**Descritores:** Depressão; Suicídio; Enfermagem; Depressão entre enfermeiros; Suicídio entre enfermeiros.

#### ABSTRACT

**Objective:** to analyze depression and the risk of suicide among nursing professionals according to scientific literature. **Method:** This is an integrative literature review carried out in the electronic databases: Latin American and Caribbean Literature in Health Sciences, Scientific Electronic Library Online and National Library of Medicine, via Pubmed, looking for articles published between 2010 to 2020. **Results:** Among the triggering factors for depression in nursing professionals are: conflicts at work, of interest and family, night shifts, stress, overload, interpersonal relationship, low professional perspective. The triggering factors for suicide, on the other hand, are: depression, Burnout, low person-to-person ratio, medication use and anxiety. **Conclusion:** It is a public health problem, in which it affects a large number of nursing professionals, being more common among nursing technicians. It is necessary to create public policies so that this professional is assisted weekly by psychologists and conversations. Thus, it is extremely important for the early detection of depressive symptoms and suicidal ideation.

**Descriptors:** Depression; Suicide; Nursing; Depression among nurses; Suicide among nurses

#### RESUMEN

**Objetivo:** analizar la depresión y el riesgo de suicidio entre los profesionales de enfermería según la literatura científica. **Método:** Se trata de una revisión bibliográfica integradora realizada en las bases de datos electrónicas: Literatura Latinoamericana y del Caribe en Ciencias de la Salud, Biblioteca Electrónica Científica en Línea y Biblioteca Nacional de Medicina, vía Pubmed, buscando artículos publicados entre 2010 a 2020. **Resultados:** Entre los factores desencadenantes de la depresión en los profesionales de enfermería se encuentran: conflictos laborales, de interés y familiares, turnos de noche, estrés, sobrecarga, relación interpersonal, baja perspectiva profesional. Los factores desencadenantes del suicidio, por otro lado, son: depresión, Burnout, baja relación persona a persona, uso de medicamentos y ansiedad. **Conclusión:** Es un problema de salud pública, en el que afecta a un gran número de profesionales de enfermería, siendo más común entre los técnicos de enfermería. Es necesario crear políticas públicas para que este profesional sea asistido semanalmente por psicólogos y conversaciones. Por tanto, es extremadamente importante para la detección precoz de síntomas depresivos e ideación suicida.

**Descritores:** Depresión; Suicidio; Enfermería; Depresión entre enfermeras; Suicidio entre enfermeras

## Introduction

The word depression is used to describe a set of negative and somber feelings, long lasting in time and space, usually related to anguish. In some cases, depression can be considered a natural reaction of the human person in periods of transition, especially in times of change and growth.<sup>1</sup>

Depression can cause abnormal changes in the individual's mental function, which can be understood as a prolongation of negative feelings.<sup>2</sup>

According to the World Health Organization (WHO), depression is considered the 5th biggest public health problem in the world. Leads workers' mental illnesses, and can affect individuals at any stage of life, however, its greatest incidence is in the average age between 40 and 49 years, being more common among women.<sup>3</sup>

The association between mental disorders and suicide is over 90%, among these disorders, we can mention mainly depression, bipolar mood disorder, alcohol abuse, schizophrenia and personality disorders.<sup>4</sup>

Among workers, nurses are among the professionals most likely to develop mental health problems. The health worker is directly affected, due to his involvement with the suffering process of patients and family members, where they end up being involved in the whole exhausting and tiring process.<sup>5</sup>

In addition to being a profession with various risks in its execution, including physical, chemical and ergonomic, it also has shift work, job insecurity, professional restriction, decreased autonomy, extensive bureaucratic tasks, which can cause a feeling of dissatisfaction and insufficiency the quality of the service provided.<sup>6</sup> Along with depressive symptoms, the incidence of suicide is also high among health professionals. This is all influenced by the stress of the environment and work process, directly interfering with the quality of life of these professionals and their working life.<sup>7</sup>

Nursing is one of the fastest growing professions in the world and, with it, mental health problems among these professionals have stood out. Among health workers, nursing professionals are part of the group that, due to their high rate of mental disorders, anxiety depression, stress, in addition to the state of exhaustion, physical and mental exhaustion due to conditions that can evolve, and lead to the limit, increased the risk of suicide. The exhaustion stage represents the most serious stage of physical and mental exhaustion, with chronic symptoms of permanent sadness, discouragement, pessimism, isolation, feelings of guilt, sleep disturbance and suicidal or death thinking.<sup>7</sup>

Among the factors that contribute to the development of depression in nursing are working conditions, excessive workload, non-professional recognition, night shift, conflicts at work, stress and family conflicts. Depression and suicide are public health problems, with a high rate of professionals with these disorders and who have been suffering and losing their lives. Such data demonstrate the importance of understanding this phenomenon, prevention strategies and suicide risks.<sup>7</sup>

In this sense, the objective of this study was to analyze depression and the risk of suicide among nursing professionals according to the scientific literature.

## Method

It is an integrative literature review, for the elaboration of the integrative review, the reviewer determines the specific objective, formulates the questions and the hypotheses to be tested. Based on this, it carries out the search to identify and collect the maximum of relevant primary researches within the established inclusion and exclusion criteria.<sup>8</sup>

For this research, the following steps were followed: establishment of the hypothesis and objectives of the review through the establishment of a guiding question, definition of the descriptors and keyword to guide the searches; definition of the information to be extracted from the selected articles; presentation of results and discussion. The research question that guided this review was: What is the knowledge produced about depression and the risk of suicide among nursing professionals?

The data collection took place in August 2020, the search places used for the elaboration of this research were the electronic databases: American and Caribbean Literature in Health Science (Lilacs), Scientific Electronic Library Online (SciELO) and National Library of Medicine (Medline / via Pub Med), and official documents from the Ministry of Health (MH). For the search, the following descriptors registered in the Health Sciences Descriptors (DESC) were used: Depression AND Suicide AND Nursing AND Depression among nurses AND Suicide among nurses.

The inclusion criteria were: scientific articles in English and Portuguese, published between 2003 and 2020, with full and free text available, referring to depression and suicide related to nursing. Articles that were not recognized academically and that were published more than 17 years ago were excluded.

Initially, an exploratory reading of the titles and abstracts was performed to recognize the articles that met the eligibility criteria. Then, the previously selected articles were read in full, and they were again submitted to the inclusion and exclusion criteria.

After the selection of the final sample, the following variables were extracted from the publications and made up the summary table of this review: year of publication, magazine webqualis, publication periodical, objective, method, result and conclusions. To carry out the research, elaboration and formatting of the project, the Google platform and the Microsoft Office Word text editing tool were used.

## Results and Discussion

Initially, 70 articles were found, after applying the inclusion and exclusion criteria, 29 articles were selected to serve as a basis for the elaboration of the project.

## Characterization of Depression and Suicide in Brazilian Nursing

In Brazil, the largest number of health professionals are nurses. They exercise great care in the health of the Brazilian population; so there is a great emotional and physical demand. When depression and suicide appear, there are several signs and symptoms, which are shown in Chart 1.

**Chart 1-** Signs and Symptoms of Depression and Suicide. 2020.

Depression	Suicide
Absence of understanding of performing tasks	Depression
Low professional expectation	Burnout
Interest conflicts	Low personal achievement
Family conflicts	Anxiety
Stress	Use of medication
Overload	
Night shifts	
Interpersonal relationships	
Not knowing how to deal with grief	
Job insecurity	
Professional inexperience	
Conflicts at work	

Furthermore, according to a survey conducted by de Souza (2020), the female sex (62%) is the most affected because the demand for women is much greater in their daily lives and for having more professionals of this gender working in nursing. In a study by Oliveira et al (2020), it revealed the percentage of nursing professionals with symptoms of depression. The nursing technician is the most affected (59%), followed by the nurse (25%) and finally the nursing assistant (16%).<sup>9-10</sup>

Based on the above, it is necessary to consider that the health and quality of life of nursing professionals, considering that their professional practice takes place in complex realities, the most diverse human relationships, having to deal with different demands on a daily basis, facing them if with factors that can produce risk for depression and suicide, and that contribute to illness and compromise the full provision of care. Thus, nursing professionals with more depressive symptoms are nursing technicians, perhaps because they are more in number than other workers in the field. In addition, the female gender is the most prevalent, and this gender is the most prevalent in nursing, in addition to its high daily demands, such as the third shift (at home) and work overload, favor the development of depression and suicidal ideation.<sup>9-10</sup>

Thus, it is necessary to pay attention to the seriousness of the risks that these professionals run, both in their work and in their personal lives, in developing mental disorders and which is often neglected, even by the professionals themselves. Measures to improve interpersonal relationships in the work environment of nursing professionals must be adapted as dialogue, listening, bonding and welcoming, as they favor the understanding of suffering, appreciation of experiences and attention to the needs of the different people involved in the work process. For example, you can create a circle of weekly conversations and psychologists available free of charge for each professional.

Therefore, psychological problems should be identified among these professionals, in order to formulate educational programs and clinical strategies for early guidance and diagnosis, with the aim of preventing the chronicity of depressive disorder, reducing the risk of suicide and reducing the risk of suicide. increase in other psychiatric disorders.

## Depression

The term depression is relatively new, being used for the first time in 1960, to indicate a state of discouragement or loss of interest in life. The development of the concept of depression emerged with the decline of magical beliefs that underlie the understanding of mental disorders until then. Depression has a series of implications for humans, caused by, among other diseases, some symptoms such as insomnia, sleep and eating disorders<sup>11</sup>

People with depression describe the loss of the ability to take pleasure in activities in general, show less interest in the surrounding environment, neglecting their professional and social activities. Complaints of fatigue and lack of energy even in activities that do not require physical efforts are some of the symptoms involved.<sup>12</sup>

Depending on the number and severity of symptoms, a depressive episode can be classified as mild, moderate or severe. Mild depression can be a normal adaptive response to loss and brief separation, whereas severe depression is the consequence of repeated separations, losses and immense traumas, causing a lot of suffering and dysfunction.<sup>13</sup>

When the severe depressive episode occurs, the individual is troubled or shaken. You have a loss of self-esteem, feelings of worthlessness or guilt. The severe depressive is unable to develop his daily social and domestic activities, and may present psychotic symptoms such as psychomotor retardation, hallucinations and delusions, and suicide is a marked risk.<sup>14</sup>

According to the Brazilian Health Technology Assessment Bulletin (2012), for the diagnosis of depression, an interview must be conducted to identify the symptoms, taking into account the tendency of the patient to deny himself, or even to minimize and justify. To establish the differential diagnosis, additional information is important to identify the factor that causes depression. Therefore, the diagnosis of depression depends on the patient's assessment, general condition and personal and family history. Based on the correct diagnosis, the most appropriate treatment must be implemented in order to reduce symptoms and improve the patient's quality of life.<sup>15</sup>

Psychosocial treatments are effective for mild depression. Antidepressants may be an effective form of treatment for moderate to severe depression, but they are not the first line of treatment for mild depression.<sup>16</sup>

The necessary medical assistance, together with the patient's collaboration and the correct use of medication, is very important. Therefore, it is a partnership work in search of improving the individual affected by the pathology. Still for the author, antidepressant drugs have the function of regulating the substantial components of the brain, thus bringing temporary relief to the patient, who is encouraged by the partial result and works hard to solve the problem.<sup>17</sup>

Drug treatment is essential to obtain clinical benefits, but the patient should not abandon it when he perceives improvement of symptoms. It is very common for patients to abandon treatment early, believing that they no longer need it, but this should only be done with medical guidance.<sup>18</sup>

### **Nursing depression**

Studies show that psychic illness is increasingly common among professions, with the health area and among them the most affected, especially nursing, which is exposed to various stressful situations. The health professional must be able to deal with all types of pathologies, including those of a terminal character, which lead the patient to an aggravated depressive condition, and for that he has to be well psychologically, but this is not always what happens, because the professional gets involved and absorbs this depressive situation.<sup>6,19</sup>

The health area, mainly nursing, is considered one of the most stressful professions, and this is due to the unsatisfactory conditions of the workplace, the direct contact with suffering, death, insufficient number of professionals, large number of tasks and low salary support from the manager overloads the employee making him unmotivated and stressed. The most striking consequence of professional stress is the reduction of work, which interferes in relationships and events are no longer important, and all personal effort seems useless to the affected professional.<sup>20-21</sup>

Occupational stress is that arising from work, that is, it is a set of phenomena that present themselves in the worker's body, unable to face the demands required by their occupation, which may affect their health and well-being. When this stress becomes continuous, it can favor the onset of some diseases, including depressive disorders and burnout syndrome.<sup>22</sup>

Burnout is a response to chronic stress that affects the worker's performance, interpersonal relationships, productivity, as well as the individual's quality of life. It is worth mentioning that not every depressive professional develops burnout syndrome, because sometimes the agent that causes depression can be other reasons, besides work.<sup>23</sup>

In addition to the factors mentioned, other factors that trigger psychic disorders in nursing are the occurrence of rotating shifts, which can cause sleep disorders, gastrointestinal and cardiovascular disorders, psychic disorders, especially depression.<sup>24</sup>

Likewise, night work, in addition to causing difficulty sleeping and waking up, can lead professionals to the abusive use of alcohol or other substances, including dependence on some types of medication, causing irritation and aggression and, thus, causing damage to their work, family and social life. The pathogenic suffering experienced at work starts to function as an agent of health fragility.<sup>25-26</sup>

When someone from the nursing team goes into depression, there are several setbacks to the institution, to which he provides services, mainly a probable breakdown of the work team. Which in a way ends up causing several situations related to work organization and customer service.<sup>27</sup>

The work overload and the duration of the work, the lack of autonomy and control in the work processes, the presence of physical, chemical and biological risks, dealing with suffering, insufficient resources, responsibility for



people, remuneration, family situation, the home-work conflict, are considered stress factors in health professionals.<sup>28</sup>

### **The crisis of suicide in nursing**

Nurses are at higher risk of suicide than the general population and are four times more likely to commit suicide than people who work in any other profession. In addition, nurses are more likely to commit suicide than men.<sup>29</sup>

Gomes and Oliveira add that the external factors that are pushing some nurses to the limit are largely related to the nature of the health sector and the work environment. Many of today's healthcare professionals are working in environments that are a breeding ground for stress and trauma in the workplace. For nurses, they are also faced with dangerous working conditions, inconsistent working hours and long shifts, often on double working hours.<sup>16</sup>

There are some occupational factors related to nurses' suicide, such as self-sacrifice, as they are regularly caught between the demands of the system and those of their patients.<sup>30</sup>

A culture of self-sacrifice is prevalent in the health field, which means that nurses often do not develop the self-care and self-compassion strategies needed to thrive in demanding conditions - they are more concerned with the well-being of patients than with their own.<sup>31</sup>

Other factors that are related to suicide are bullying, emotional pressure, long hours due to lack of staff, which contribute to mental health problems and violence and abuse in the workplace.<sup>30</sup>

We cite the example of visitors and family members who end up physically and verbally assaulting the health team, also taking their anger out on nurses during what can be an emotionally difficult time for them.<sup>16</sup>

Nurses who work in the emergency room or on night shifts are more likely to be exposed to violence because these are the times when they are most often in contact with patients under the influence of drugs or alcohol. Many cases of abuse are not reported and are seen as part of the job. All this burden is imposed on these professionals, without having a backup for their emotional physical health, leaving them to resolve on their own what is a major generator of depression.<sup>16,32</sup>

Warning signs are not always present or are reliable. When present, they can be difficult to detect. A heavy workload and a fast pace of work often mean that colleagues are too busy or worried to notice the first warning signs. Care should be taken, as signs such as sadness, demotivation and behavior change may simply indicate deterioration in mental health, and attention is needed to avoid aggravation, such as suicide.<sup>30</sup>

Some preventive measures for depression and suicide among health professionals include reducing working hours, attractive and rewarding working conditions, recognizing the need for ongoing training and investing in professional development, social support for teams and encouraging their participation in decisions. Thus, there must be an approach that sees this as a collective and organizational problem and not an individual one.<sup>23</sup>

It is essential that there are preventive and therapeutic strategies to deal with conflict situations of the nursing professional, especially for those who work

in critical units. Multidisciplinary strategies for the emotional preparation of these professionals should be included, aiming to minimize the states of anxiety, reducing depression, and thus avoiding the risk of suicide.<sup>24</sup>

## Conclusion

Depression is a set of negative and somber feelings, long lasting in time and space, which can be associated with anguish, being considered the 5th biggest public health problem in the world, with its peak between 40 and 49 years, prevailing in women.

Professionals in the field are the most affected, as they must deal with all kinds of human diseases, including terminal ones, which lead the patient to an aggravated psychological condition. In this group, nurses are the ones who suffer the most, as they go through more stressful situations. Women are the most affected by this situation and among the nursing professions, it is more prevalent in nursing technicians.

Among the triggering factors for depression in nursing professionals are: conflicts at work, of interest and family, night shifts, stress, overload, interpersonal relationship, low professional perspective. The triggering factors for suicide are: depression, Burnout, low person-to-person ratio, medication use and anxiety.

Finally, the psychological problems among these professionals must be identified, in order to formulate educational programs and clinical strategies for early guidance and diagnosis, with the objective of preventing the chronicity of depressive disorder, reducing the risk of suicide and the risk of suicide. increase in other psychiatric disorders.

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# Technical training and practical performance of the teacher in the face of realistic simulation: scope study

## Capacitação técnica e atuação prática do docente frente à simulação realística: estudo de escopo

### Formación técnica y desempeño práctico del docente ante la simulación realista: estudio de alcance

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#### RESUMO

**Objetivo:** avaliar a capacitação técnica e atuação prática, bem como as dificuldades e desafios dos docentes frente à metodologia da simulação realística. **Método:** Esta revisão foi elaborada de acordo com metodologia de um scoping review (análise de escopo). A pergunta principal a ser respondida foi: "Tem sido estudada e mensurada a capacitação dos docentes do curso de graduação em Enfermagem, diante da aplicação de práticas na metodologia de Simulação Realística?". **Resultados:** Dentre os artigos avaliados, seis foram escolhidos, e as principais barreiras percebidas, nos estudos, foram as organizacionais, como falta de recursos financeiros e de infraestrutura tecnológica para o aprimoramento dos docentes, além de outros aspectos, como falta de informações sobre a importância da prática baseada em evidências, educação continuada para os professores e falta de tempo no cotidiano do trabalho para treinamentos institucionais. **Conclusão:** Há poucas evidências científicas nacionais que determinem necessidade da capacitação técnica e atuação prática, bem como as que evidenciam as dificuldades e desafios dos docentes frente à prática da simulação realística.

**Descritores:** Ensino; Enfermagem; Simulação de Paciente; Treinamento com Simulação de Alta Fidelidade; Treinamento por Simulação..

#### ABSTRACT

**Objective:** to evaluate the technical training and practical practice, as well as the difficulties and challenges of teachers in the face of the methodology of realistic simulation. **Method:** This review was prepared according to the scope analysis methodology (scope analysis). The main question to be answered was: "Has the training of professors of the undergraduate nursing course been studied and measured, given the application of practice in the Realistic Simulation methodology?". **Results:** Among the articles adopted, six were chosen, and the main barriers perceived in the studies were organizational ones, such as lack of financial resources and technological infrastructure for the improvement of teachers, in addition to other aspects, such as lack of information about the importance of evidence practice, continuing education for teachers and lack of time in daily work for institutional training. **Conclusion:** There is national scientific scientific evidence that determines the need for technical training and practical practice, as well as the difficulties and challenges of teachers in the face of the practice of realistic simulation.

**Descriptors:** Teaching; Nursing; Patient Simulation; High Fidelity Simulation Training; Simulation Training.

#### RESUMEN

**Objetivo:** evaluar la formación técnica y práctica práctica, así como las dificultades y desafíos de los docentes ante la metodología de simulación realista. **Método:** Esta revisión se elaboró de acuerdo con la metodología de análisis de alcance (análisis de alcance). La pregunta principal a responder fue: "¿Se ha estudiado y medido la formación de los profesores de la carrera de enfermería, dada la aplicación de la práctica en la metodología de Simulación Realista?". **Resultados:** Entre los artículos adoptados se eligieron seis, y las principales barreras percibidas en los estudios fueron organizativas, como la falta de recursos económicos e infraestructura tecnológica para el mejoramiento de los docentes, además de otros aspectos, como la falta de información sobre la importancia de la práctica de la evidencia, la formación continua de los docentes y la falta de tiempo en el trabajo diario para la formación institucional. **Conclusión:** Existe evidencia científica científica nacional que determina la necesidad de formación técnica y práctica práctica, así como las dificultades y desafíos de los docentes ante la práctica de la simulación realista.

**Descritores:** Docencia; Enfermería; Simulación de pacientes; Entrenamiento de simulación de alta fidelidad; Entrenamiento de simulación.

## Introduction

The concern with the development of skills and continuing education has led to semiology and other health disciplines to promote a less directive and more stimulating teaching of the active participation of students.<sup>1</sup>

In this new context, the use of simulation has become an important part of the courses, representing an innovative, practical and ethical way of acquiring skills by students.<sup>2</sup> According to the Harvard Simulation Center's definition, "simulation is a situation designed to allow people to experience the representation of a real event for the purpose of practicing, learning, evaluating, testing, or understanding human systems or actions".<sup>3</sup>

Since simulation is a practice with good results for learning clinical contents, there are experiences that guide the constructivist conception and start from the premise that learning is not to reproduce reality, but to be able to elaborate a personal representation about the situation presented.<sup>4</sup> Thus, the experience of simulated situations allows greater development of knowledge, skills and attitudes of students.<sup>5</sup>

The use of simulation, in undergraduate studies for the various courses in the health area, promotes benefits in the teaching-learning process, since it offers conditions for the training of numerous skills essential for the various professional practices.<sup>6</sup> Among them, we can include not only the training of procedural skills, but also the communication skills with patients, family members and multidisciplinary team, in which the development of teamwork relationships, including the ethical and humanistic approach of patients<sup>7</sup>, better standards of care and training, management of errors and patient safety, patient autonomy, social justice and distribution of resources.<sup>5</sup>

Among the advantages of simulation-based teaching is the possibility of repetition of skills, seeking a progressive acquisition of skills and competences, in addition to allowing experiences of situations close to the real before direct contact with the patient, which promotes a collaborative, motivational and significant learning.<sup>8-11</sup> Examples of this are urgent and emergency situations, in which previous observation and action provide greater security in care, requiring knowledge, efficiency and ability in decision making.<sup>1</sup>

The technology has been used as an ally of new teaching methodologies, with scientific proof that this educational strategy should integrate part of the training.<sup>2</sup> The mannequins and simulators available today, with advanced digital features and anatomical details of great fidelity to the human body, allow the simulation of simple to complex situations of a given occurrence or clinical picture. However, despite all existing technological resources, the preparation of teachers to facilitate this process is mandatory for the success of the activity, that is, very high investment in technology does not guarantee effectiveness in training; a well-designed contextualization will have real meaning to students, leading them to reflection and retention of their knowledge.<sup>7</sup>

Teachers should work together in deciding which topics may or may not benefit from the simulation, since it can be inserted at all times of the course in which it is necessary to work on the clinical reasoning of the students, and this should not necessarily be linked to procedures or therapeutic conducts, but to transfer theoretical content so that it is practical.<sup>7</sup>

Finally, simulation is not a substitute for clinical practice, but a complement to training, enabling the student's contact with situations that would not always be possible in the clinic, making teaching more uniform for this and more ethical for patients. Its curricular insertion should be carried out in an integrated way with the practices already existing in the curriculum of each university and can be inserted from the beginning of the course in association with other activities. The teacher's training in the methodology is essential for this activity to be motivating, in a controlled and significant environment.<sup>7</sup>

Based on the fact that the Clinical Simulation, or Realistic Simulation, has gained ample space in the training, training and/or updating of students and professionals from various areas of health, knowing that the teacher has a fundamental role in this teaching methodology, the objective of the work will be to evaluate the technical training and practical performance, as well as the difficulties and challenges of teachers in the face of realistic education.

## Method

This review was prepared according to the methodology of a scoping review, recommended by the Joanna Briggs Institute.<sup>12</sup> The scoping review technique is being widely used in the area of health sciences, with the purpose of synthesizing and disseminating the results of studies on a subject.<sup>13-16</sup> The objective of a scope analysis is to map, through a rigorous and transparent method, the state of the art in a thematic area, intending to provide a descriptive view of the reviewed studies, without critically evaluating them or summarizing evidence from different investigations, as occurs in a systematic review.<sup>17</sup>

Scope reviews differ from systematic ones because they do not aim to evaluate the quality of available evidence, but aim to quickly map the main concepts that support a research area.<sup>17</sup> However, they differ from a traditional literature review in that they involve a more systematic procedure.

In this perspective, this scope review used the methodological framework proposed by Arksey and O'Malley<sup>17</sup>, with the amendments made by Levac, Colquhoun and O'Brien<sup>13</sup>, Peters and collaborators<sup>18-19</sup>, scholars of the Joanna Briggs Institute. Adapting to our purposes, the structure of this review consists of six main consecutive steps: identification of the question and research objective; identification of relevant studies that would enable the breadth and scope of the purposes of the review; study selection, according to the predefined criteria; data mapping; summarization of the results, through a qualitative thematic analysis in relation to the objective and question; presentation of the results, identifying the implications for politics, practice or research.

Initially, the following research question was defined: "Has the training of nursing undergraduate professors been studied and measured in the application of practices in the Realistic Simulation methodology?".

Next, the keywords (descriptors) that could capture the articles related to the theme of this research were identified, including: "teaching", "nursing" and "simulation".

For the identification of the relevant studies, we consulted the databases of journals of the VHL (Virtual Health Library). This database was selected because it is comprehensive, with wide coverage of publications in the health area. The following search strategy was used: "in Teaching OR Nursing OR



Simulation", which was developed by the third author (principal researcher) in collaboration with the first author and a librarian from Anhembi Morumbi University.

The capture of the documents was restricted to the following inclusion criteria: articles published in journals indexed in the health area, full text, Portuguese language. The initial year for the beginning of the search was 2015, and the collection (and updating) of the studies occurred in September 2020.

## Results

All 1,401 studies found were incorporated into a spreadsheet in the Excel®. Next, the 891 articles not related to the search were identified and excluded, leaving 510 studies. Of these, after reading the titles and abstracts, 96 were excluded because they did not present elements that met the objective of this review, and 170 were repeated. It is notable here that, when the relevance of a study was not clear from the abstract, the complete article was retrieved for its full reading by the third author, in order to verify whether it adequately addressed the research issue. The 244 who remained in the selection were read; of these, 235 were excluded. The most common reasons for excluding studies were because they did not substantially address the challenges of teaching in the practice of Realistic Simulation in the undergraduate nursing course.

The nine studies selected to be part of this review were mapped through a spreadsheet in the Excel® program, with the following information: search date, descriptor, title, author(s), year of publication and objectives.

**Table 1** - Articles selected after application of the methodological steps, regarding the author's name, title, year of publication and objectives of the study. São Paulo, 2020.

<b>Professors working in the simulation for undergraduate courses in medicine and nursing: challenges, gains, improvements</b>				
<b>Date</b>	<b>Descriptor</b>	<b>N°</b>	<b>Final Articles</b>	<b>Objectives</b>
17/set	Teaching	1	Eficácia da simulação no ensino de imunização em enfermagem: ensaio clínico randomizado	Evaluate the efficacy of clinical simulation in the cognitive performance of nursing students in adult immunization scenarios in the context of Primary Health Care.
20/set	Nursing	2	Types and purposes of the simulation in undergraduate nursing education: integrative literature review	Identify the types and purposes of simulation in undergraduate nursing education.
20/set	Nursing	3	Development of an instructor guide tool: 'Three Stages of Holistic Debriefing'.	Describe the development of a Holistic Debriefing Tool in English Portuguese Brazil aimed at nursing educators to promote reflective learning.
20/set	Nursing	4	Elements of the teacher's face in the tutorial setting: implications in nurses' training.	To know the elements present in the teacher's face that determine the teaching-learning process in the tutorial scenario and analyze its implications in the formation of nurses.



20/set	Nursing	5	The use of simulation in the context of health and nursing education: an academic reflection	Reflect on the current perspectives of teaching and learning in the context of health and nursing education from the use of simulation as an active methodology.
17/set	Simulation	6	Use of the Student Satisfaction and Self-Confidence in Learning (SSSCL) and the Simulation Design Scale (SDS) in nursing teaching: experience report	To report the experience with the use of the Student Satisfaction and Self-Confidence with Learning Scale (ESEAA) and the Simulation Design Scale (EDS), obtained from the cross-cultural adaptation of Student Satisfaction and Self-Confidence in Learning (SSSCL) and simulation design scale (SDS) in the Undergraduate Nursing course.
17/set	Simulation	7	Implementation and development of the Simulation Laboratory (LabSim) of the Ribeirão Preto School of Medicine, University of São Paulo (FMRP-USP)	Objectives- 1) Centralize, facilitate, train and coordinate didactic activities involving Simulation for the courses offered by FMRP-USP; 2) Promote self-learning among undergraduate students for consolidation and complementation of the content provided in regular courses; 3) Develop innovative initiatives of training and research in Health Simulation.
17/set	Simulation	8	Learning through clinical experience simulation: perceptions in nursing students	To analyze the perception of nursing students regarding the experience of Clinical Simulation with the participation of actors.
17/set	Nursing and Simulation	9	From theory to practice, operating the clinical simulation in Nursing teaching.	Report the experience of operationalization of clinical simulation as a pedagogical strategy in a discipline of a nursing undergraduate course.

## Discussion

The importance of simulation is given by providing experiences during the educational process, to students, with opportunities for repetition, recognition of standards and decision-making, through the fidelity provided by the teacher by creating a scenario with the greatest possible approximation to reality, favoring the practical learning of the student through the content provided previously, so that he can feel able to solve them.<sup>20-21</sup>

From the simulation, the experience of an event such as the real one is guaranteed, in a safe environment, allowing to simulate ideal conditions for the application of previous classroom knowledge, with the possibility of the student reflecting on their own mistakes, in addition to the development of skills and abilities, in the student, for his direct action with the patient, ensuring a permissive practice of errors that do not cause them.<sup>22-23</sup>

The simulation ensures a safe and controlled environment, with the possibility of variations in content and levels of difficulties, preventing potential risks, aligned with national curriculum guidelines.<sup>23</sup>

Research portrays benefits and acquisition of skills and abilities such as empathy, articulation between theory and practice, reduction of errors, decision-making, leadership development and also increased levels of satisfaction, autonomy and self-confidence for trained professionals.<sup>24-27</sup> But the question that stands out is: "Who trains these professionals should also be trained on the methodology?".

The study also highlights the importance that the mobilization around this methodology is not only directed to technology and infrastructure related to them, but also to the training and understanding of the conceptual basis of its use by professionals involved in health education, so that there is a better use of its potential for promotion, in this new time in excellence of health education, that clinical simulation may favor.<sup>3</sup>

The literature review, conducted in 2020, by Goes et al, showed gaps in the research found in the searches, due to the lack of studies aimed at the development of the nurse educator to promote the best pedagogical practices, in addition to verifying the lack of tools available to assist nursing educators in conducting abriefing focused on athetiudinal, technical and cognitive learning at the same time.

The authors Silva et al (2016), Costa et al (2015), Bergamasco et al (2018), Pazin-Filho et al (2016) and Oliveira et al (2018) highlight the importance of the practice to be performed in the precepts of the methodology, without exceptions, to achieve the learning objectives, thus making it the focal point in the process, however, without main emphasis of the same.

When the simulation is used in the health area, the teacher begins to have a role as a guide of the activities, being a motivating and encouraging element of the students' development, attentive to show their progress and encourage them to understand what they should change or correct, leaving the traditional methodology focused on the "master" that teaches the "spectator student", who, in turn, receives the knowledge passively.<sup>3</sup>

Being, therefore, a fundamental part of the methodology that the student perceives the relevance and application of what is being taught, so that it awakens his interest in knowing something that is relevant to real and significant situations for life<sup>3</sup>, evidences the importance of this protagonism of the teacher, first believing and valuing the methodology, for awakening and interest in deepening their knowledge about Realistic Simulation, and then achieve an effective application in the laboratory, with the expected results for this methodology.

In the studies found, gaps were found in the evaluation of the educational intervention, in the relationship with the description of the trained population, in the monitoring and traceability of the students' development and the actual learning data. The main barriers perceived in the studies were organizational, such as lack of financial resources and technological infrastructure for the improvement of teachers, in addition to other aspects, such as lack of information on the importance of evidence-based practice, continuing education for teachers and lack of time in daily work for institutional training.

This technological universe is often frightening and uncomfortable for this generation of masters. Therefore, the incorporation of these new technologies, at first, can be frightening for the faculty less familiar with them, however, it is important to emphasize that the focus of the construction of the scenarios is not in the field of technology, which should be in charge of trained technicians for this.<sup>3</sup>

In the Clinical Simulation methodology, the teacher promotes patient-centered learning in controlled and safe environments, which allow the standardization of clinical problems, positive feedback, increasing students' self-knowledge and confidence, providing the development of interpersonal relationships and critical thinking, as well as increased skill for clinical evaluation and decision, required in care practice.<sup>3</sup>

## **Final Consideration**

There is little national scientific evidence that determines the need for technical training and practical action, as well as those that evidence the difficulties and challenges of teachers in the face of the practice of realistic simulation.

It is worth a critical look and the questioning, both for the educational institutions, as for the teachers, protagonists in the application of the methodology, which will define the effectiveness of the practice, whether this role is being well executed and causing all the investment to revert in the expected final result, which is to lead the student, protagonist in the scenario and in the discussion, to leave a realistic simulation scenario with critical ability to identify opportunities for improvement in their performance, in an instigating and motivating way, giving it an expanded projection of its future practice and professional performance.

The intention is not, under any circumstances, to evidence a "professional disability" on the part of teachers. On the contrary, there is clearly the need to bring up this discussion, highlighting the importance and protagonism of teachers in this process, making it clear that it is not enough to invest in technology and structure. It is essential that the teacher is qualified for this practice.

It is proposed, for the consolidation of this discussion, a check list to be applied later, bringing, in the form of a questionnaire, the results of these questions and the proposal of improvements in the conditions of the teacher's performance in the face of the Realistic Simulation.

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# Anxiety in nursing academics and their future complications

## Ansiedade em acadêmicos de enfermagem e suas complicações futuras

### Ansiedad en enfermería académica y sus futuras complicaciones

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#### RESUMO

**Objetivo:** Conhecer quais elementos favorecem a ocorrência de ansiedade em acadêmicos de enfermagem e suas possíveis complicações. **Método:** Revisão integrativa da literatura nacional e internacional. A coleta foi realizada nas bases de dados indexáveis na Biblioteca Virtual em Saúde, Base de dados da literatura Latino-Americana em Ciência da Saúde, Biblioteca de Enfermagem; Index de Psicologia, Medical Literature Analysis and Retrieval System Online e Scientific Eletronic Library Online. Com descritores: Ansiedade, Acadêmicos, Complicações e Enfermagem. **Resultados:** Após a análise dos artigos selecionados, 11 artigos compuseram a amostra. **Conclusão:** A compreensão acerca da ansiedade em acadêmicos de enfermagem é imprescindível para que se torne possível a prevenção de futuras complicações.

**Descritores:** Enfermagem; Ansiedade; Acadêmicos; Complicações.

#### ABSTRACT

**Objective:** To know which elements favor the occurrence of anxiety in nursing students and its possible complications. **Method:** Integrative review of national and international literature. The collection was carried out in the indexable databases in the Virtual Health Library, Database of the Latin American literature in Health Science, Nursing Library; Psychology Index, Medical Literature Analysis and Retrieval System Online and Scientific Eletronic Library Online. With descriptors: Anxiety, Academics, Complications and Nursing. **Results:** After analyzing the selected articles, 11 articles made up the sample. **Conclusion:** Understanding anxiety in nursing students is essential for preventing future complications.

**Descriptors:** Nursing; Anxiety; Academics; Complications.

#### RESUMEN

**Objetivo:** Conocer qué elementos favorecen la ocurrencia de ansiedad en estudiantes de enfermería y sus posibles complicaciones. **Método:** Revisión integradora de literatura nacional e internacional. La recolección se realizó en las bases de datos indexables de la Biblioteca Virtual en Salud, Base de datos de la literatura latinoamericana en Ciencias de la Salud, Biblioteca de Enfermería; Índice de psicología, Sistema de análisis y recuperación de literatura médica en línea y Biblioteca electrónica científica en línea. Con descriptores: Ansiedad, Acadêmicos, Complicaciones y Enfermería. **Resultados:** Tras analizar los artículos seleccionados, 11 artículos conformaron la muestra. **Conclusión:** Comprender la ansiedad en los estudiantes de enfermería es fundamental para prevenir futuras complicaciones.

**Descritores:** Enfermería; Ansiedad; Académica; Complicaciones.

## Introduction

Anxiety is considered as a natural defense mechanism that human beings have to respond to the unknown in the best possible way. When it reaches disproportionate degrees, it becomes something harmful to health, causing psychological and somatic impairment to the individual.<sup>1</sup>

The experience in the academic environment becomes challenging for any student and the search for adaptation, knowledge and social relationship becomes constant. New habits and routines are being shaped over time and the exposure to stress due to change is clear, which ends up generating doubts about the academic capacity and preparation in this new phase. It is worth mentioning that each subject reacts to new discoveries in a different and singular way, in the same way that each emotion and feeling is experienced in different intensities.<sup>2-3</sup>

The stressors generated within the college are related to aspects such as assessments, classes, seminars which leads to the evolution of major problems if they are not controlled. Stress begins to accumulate, compromising quality of life and health, leaving students more exposed to anxiety and more vulnerable to psychiatric disorders.<sup>4</sup>

Epidemiological data highlight how anxiety is present in the university environment. A study conducted at a university in Bahia showed that of the 110 academics interviewed, 62.7% had a level considered to be minimal anxiety, 27.3% had mild anxiety, 6.4% moderate anxiety and 3.6% severe anxiety. A recent study carried out in a public education institution found a prevalence of 30.2% among nursing students, a percentage close to that of the university population, which is 30.6%. Cross-sectional study carried out in the forest area of Minas Gerais points out a prevalence of 37.5% among nursing students.<sup>5-7</sup>

The importance of studying anxiety in nursing students is justified by its high prevalence. The more approached the subject, the first signs of anxiety can be identified by the subject himself and as access to information grows, knowledge proportionally increases, making the problem less complicated to be solved if identified at the beginning.

It is clear that most students have experienced situations that generate anxiety. In view of this, we raise the following problem: what are the elements that favor the occurrence of anxiety in nursing students and its possible complications? The present study had as general objective to know which elements favor the occurrence of anxiety in nursing students and its possible complications.

## Method

This study was based on an integrative review of national and international literature, of a qualitative nature, seeking to understand the subject in question. According to Prodanov and Freitas<sup>9</sup>, the methodological step has the purpose of gathering, understanding and evaluating methods available in scientific studies with extensive information about the research, formulating a knowledge network, allowing the synthesis of results obtained through relevant research.



For instrumentalizing the review, it used the following organization: 1- development of the theme; 2- justification of the research question; 3- choice of descriptors and database; 4- evaluation of selected studies with inclusion and exclusion criteria; 5- analysis of the data found. The theme chosen for this research was: Anxiety in nursing students and their future complications.

For the construction of the research question, the PCC strategy was used, which represents a mnemonic for population, concept and context (Chart 1). Thus, following this structure, the following research question was formulated: what are the elements that favor the occurrence of anxiety in nursing students and its possible complications?

**Chart 1-** Application of PCC strategy.2020.

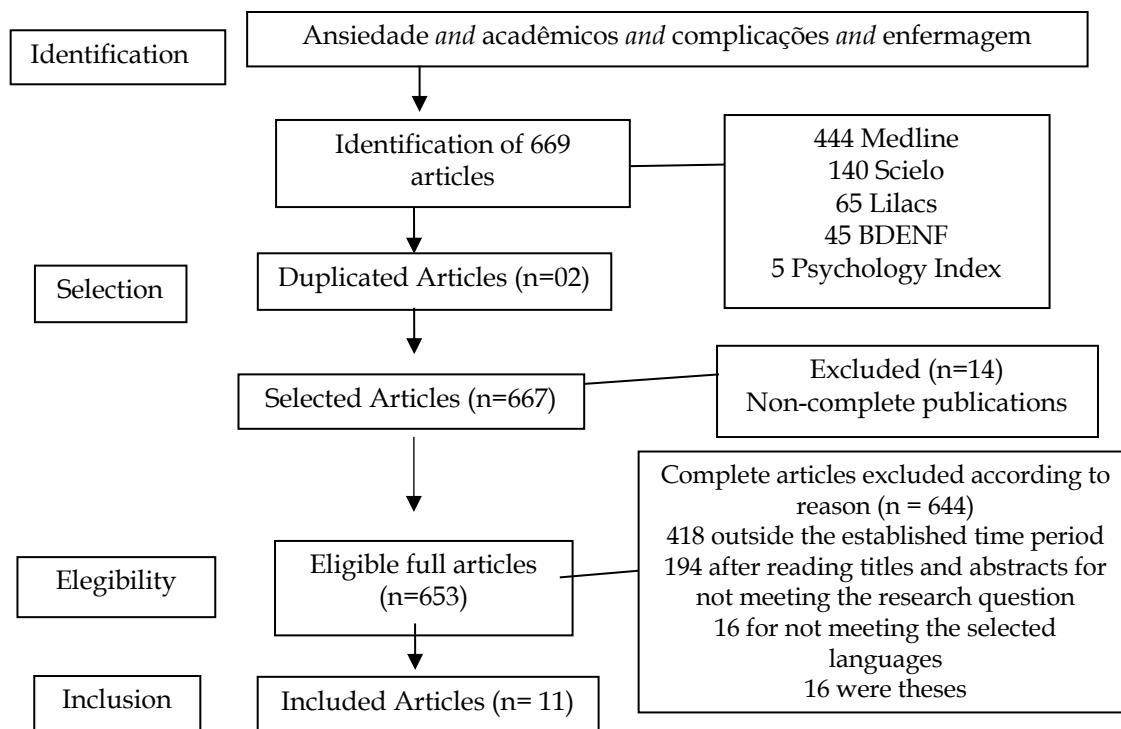
Strategy	Definition	Application
P	Population	Nursing students
C	Concept	Anxiety
C	Context	University Environment

The publication period for this study was established between the years 2013 to 2019. The Health Sciences Descriptors (DECS) used were: “Ansiedade”, “Acadêmicos”, “Complicações” e “Enfermagem”, being combined by the operator boolean “and” between the expressions, in order to locate and systematize the interest records. To search and select articles, the following databases were consulted: VHL (Virtual Health Library); LILACS (Latin American Health Science Literature Database); BDENF (Nursing Library); Psychology Index (Periodicals indexed in Psychology databases); MEDLINE (Medical Literature Analysis and Retrieval System Online) and SCIELO (Scientific Eletronic Libary Online). The collection took place from August 2020 to September 2020. As it is an article based on studies already carried out, it was not submitted to the Research Ethics Committee (CEP).

The inclusion criteria adopted were: original articles, in Portuguese and English, free of charge, published in the period from 2013 to 2019 and those that understood the proposed theme. The exclusion criteria were: articles written in Spanish, not free of charge, theses, monographs, dissertations, duplicate articles, outside the established years, in addition to studies that did not correspond to the theme.

According to the methodology used, 669 scientific articles were found, 444 in MEDLINE, 140 in SciELO, 65 in the LILACS database, 45 in BDENF, 5 in the Psychology Index. After the inclusion and exclusion criteria, 658 scientific studies were discarded, 418 were excluded because they were not available between the years 2013 to 2019, 194 discarded after reading the title and summary for not meeting the research question, 16 for not being in the languages selected, 14 were unavailable in their entirety, 16 were theses, two were duplicates and the sample of the present review consisted of 11 articles (Figure 1).

**Figure 1** - Flowchart of the article selection process adapted from Prisma. 2020.



Data analysis started with a fluctuating reading of titles and abstracts for systematization and identification of topics of interest, followed by an exhaustive reading of scientific articles to enable the search for the answer to the research question.

## Results

To analyze the article described here about anxiety in nursing students and its future complications, 11 scientific publications were selected, the results were described through the journal, year of publication, authorship and title observed in Chart 2.

**Chart 2-** List of articles used. 2020.

Journal	Authorship and publication year	Title	Results	Problems / Complications
Revista Eletrônica de Enfermagem	MARCHI, Kátia Colombo et al.,2013	Anxiety and anxiolytic consumption among nursing students at a public university <sup>9</sup>	Of the 308 students, 16% were using anxiolytics at the time the research was carried out or have used it at some point in their lives; of these, 35% had severe anxiety, according to the application of the Beck Anxiety Inventory.	Of the 308 students evaluated, 34% have mild anxiety, 24% moderate and 12% severe, Inappropriate use of anxiolytics. Mainly reported social phobia and panic syndrome. Relates anxiety to cognitive problems including selective attention, which interferes with the brain to select relevant information through learning situations

Revista Psicopedagogia	DIAS, Emerson Piantino et al., 2014	Expectations of nursing students regarding the first internship in health institutions <sup>10</sup>	They demonstrate that the beginning of the internship is permeated by feelings of fear, insecurity and anxiety of the students.	Students' feelings of fear and anxiety
Revista de Enfermagem	JESUS, Isabel Silva de et al., 2015	Nursing students' experiences with anxiety <sup>11</sup>	The analysis of the information gave rise to three categories: context of identification with the course; insecurity about the job market; and context of academic relations and demands.	Feelings such as fear, anguish, impotence, stress and anxiety
Revista Brasileira de Enfermagem	GOYATÁ, Sueli Leiko Takamatsu et al., 2015	Effects of acupuncture in the treatment of anxiety: an integrative review <sup>12</sup>	The results show positive and statistically significant effects of using acupuncture to treat individuals with anxiety	Anxiety
Revista de Enfermagem	LIMA, Brigitt Vasconcelos de Brito Gomes et al., 2017	Assessment of anxiety and self-esteem in graduates of the undergraduate nursing course <sup>13</sup>	When assessing the anxiety levels of graduating students, the occurrence of High Anxiety and Low Self-Esteem prevailed.	High levels of anxiety and low levels of self-esteem demonstrate that graduating students require attention, in the sense that such changes influence their learning and cognition
Revista de Enfermagem	FREITAS, Ana Carolina Macedo et al., 2018	Intervening factors in the nursing student's quality of life <sup>14</sup>	The results presented allow us to question how much an unsatisfactory quality of life and well-being interfere with the student's academic results and performance	Sleep deficit and, as a consequence, had difficulty maintaining attention during classes, directly affecting QoL and learning
Revista Brasileira de Enfermagem	FERNANDES, Márcia Astrês et al., 2018	Prevalence of anxious and depressive symptoms in university students from a public institution <sup>15</sup>	Most participants were female, single, born in the state capital and lived with their parents. The prevalence of depression was 30.2% and anxiety, 62.9%. An association was identified between the level of depressive symptoms, work, sex and leisure.	Burnout Syndrome, sleep deficit, difficulty in maintaining attention and maintains that high levels of anxiety negatively influence the learning process, memory, reasoning, concentration and prevents the academic performance required before graduation
Revista Brasileira de Educação Médica	LEÃO, Andrea Mendes et al., 2018	Prevalence and factors associated with depression and anxiety	476 students answered the questionnaires. There was a predominance of females (71.6%), students under 20 years of age (69.3%) and singles	Dissatisfaction with the amount of sleep, insomnia and physical inactivity were aspects strongly associated with the prevalence of depression among students. It highlights generalized anxiety

		among university students in the health field of a large urban center in northeastern Brazil <sup>7</sup>	(92.0%). The prevalence of depression and anxiety were 28.6% and 36.1%, respectively.	disorder (GAD) and social anxiety disorder (SAD). It will reflect on bigger problems in the future, progress to other types of mental illness and even suicide if there is no necessary interventions.
Revista Online de Pesquisa o cuidado e fundamental	PEREIRA, Fernanda Lourdes Ribeiro et al.,2019	Anxiety manifestations experienced by nursing students <sup>16</sup>	After the transcription and analysis of the conversations, four categories emerged that were discussed separately. Conclusion: It is proposed that the teacher has a motivating posture	Low self-esteem and inferiority, which can trigger various mental disorders, including depressive disorder, whose most drastic and serious consequence is suicide. Implications that interfere with reasoning, attention, understanding and prevent the necessary action for the performance of mental activities, implying their academic performance. Appearing feelings of failure, favoring the appearance of other types of mental disorders, including social anxiety disorder
Revista Brasileira de Saúde Ocupacional	RIBEIRO, Hellany Karolliny Pinho et al.,2019	Anxiety disorder as a cause of leave from work <sup>17</sup>	The final selection consisted of 13 articles, the oldest of which was published in 2006 and the most recent in 2016. The main risk factors for sick leave were conditions and work environment, with a negative impact, both for the health of the patient. worker as for the employer.	High prevalence of anxiety disorders as a cause of absence from work and high demand for sickness benefit costs. Generating a negative impact on your life that imposes limitations on your daily activities, reduces your potential at work and interferes with family and social life.
International Journal of environmental and Public Health	SON, HaeKyoung, SO, Wi-Young, KIN, Myoungsu k, 2019	Effects of aromatherapy combined with music therapy on anxiety, stress and basic nursing skills in nursing students: a randomized clinical trial <sup>18</sup>	Aromatherapy combined with music therapy had a significant effect on test anxiety ( $F = 4.29, p = 0.016$ ), state of anxiety ( $F = 4.77, p = 0.011$ ), stress ( $F = 4.62, p = 0.012$ ) and performance of fundamental nursing skills ( $F = 8.04, p = 0.001$ ) compared with aromatherapy and music therapy separately	It is observed that anxiety, during psychiatric hospitalization, is expressed through psychological and physical components, such as apprehension, fear, anguish, changes in vital signs and psychomotor agitation.

## Discussion

### Factors that trigger anxiety in nursing students

Pereira and collaborators<sup>16</sup> attributed the period of adaptation or adjustment to the university as the triggering element of anxiety, especially in the first three semesters of the course. With this process, the student deals with family distance, distance from friends, begins to accommodate himself with a physical structure totally different from his school reality, as well as absorbing the new teaching / learning method offered. This adjustment can contribute to high levels of anxiety and opposes the idea that the academic is prepared for these situations.

Satisfaction and the search for identification with the course is another aspect that produces anxiety, so the student begins to develop feelings of frustration, helplessness, unhappiness with his choice and concern about not getting the expected financial return in the face of anxiety. In addition to the devaluation of this profession imposed by society, family, friends and the comparison between the medical course and nursing. These aspects negatively influence the future expectations of your professional development.<sup>11</sup>

Academic requirements are another motivating element of stress, the overload in the activities developed makes students find it difficult to meet the demands of the course and collaborates as a triggering factor of anxiety to varying degrees. These academic demands are linked to the way he responds to assessments, presentation of works and curricular internships, for example. In view of this, Marchi and collaborators<sup>9</sup> state that undergraduate nursing students manifest high levels of anxiety due to problems in the quality of teaching and the environment, work, practical field and personal situations.

Still in order to corroborate the evidence cited, Pereira et al.<sup>16</sup> show that theoretical and practical evaluations become a problematic element for the student, the pressure exerted in relation to the grade, content to be charged, approval, ends up generating high levels of anxiety, compromising their student performance and reflecting in the future on the failure of the discipline. Regarding evaluations, Jesus et al.<sup>11</sup> mention that this evaluation method is still linked to measure, classify knowledge and student performance. The intense expectation of reaching the goal and demonstrating a good performance cause episode of anxiety.

According to Dias et al.,<sup>10</sup> before the first curricular internship, the academic touches on many feelings and expectations. In the provision of care, the student will incorporate a pre-professional attitude to care for the other, this first contact with reality outside the university constitutes an anxiogenic element. The situations that generate anxiety are related to unpreparedness in face of real situations, not fulfilling what was taught, human suffering and death.

Other expectations regarding the first curricular internship are in the teacher / student, student / patient and student / team relationship. When there is no interpersonal relationship between these points in the practical field, the student ends up developing numerous emotional reactions, which are the anxiety that makes it even more difficult to create bonds. So, this practical process can become difficult affecting your learning process.<sup>10</sup>

Interpersonal relationships, especially between teacher / student, are

fundamental during academic activities, as communication becomes important so that the student feels more comfortable in performing the imposed tasks. When teachers' attitudes come to be seen as threatening, students begin to feel neglected and intimidated, thus teaching / learning becomes something negative and difficult. The breaking of this communication link ends up becoming a propitious factor for a lot of anxiety, surrounded by the feeling of contempt on the part of the teachers.<sup>16</sup>

An outstanding factor is the Course Conclusion Work (CBT), seen as a great enemy and also pointed out as an agent capable of triggering anxiety in the final stretch of graduation. According to Lima et al.,<sup>13</sup> these consequences are already expected, considering that the course completion work requires maximum performance from the student, taking him to a level of extreme pressure. Freitas et al.,<sup>14</sup> collaborates that this phase becomes delicate where the academic, in addition to facing the CBT, is also concerned with his professional life.

Lima et al.<sup>13</sup> also points out that a final stage of graduation, some challenges and expectations about the future end up intensifying and taking on a large proportion in the life of the university student. This is due to the fact that, with the emotional stress experienced during the graduation period, there is an increase in concern about the insertion of the same job market and the constant fear of failure in their future job. Freitas et al.<sup>14</sup> contribute that, at the end of the course, the student becomes even more anxious due to the concern with his exit to work life, so the anxiety begins to arouse fear and insecurity in the face of professional responsibilities.

Insecurity related to the job market stems from expectations that are related to the student's professional future. Aware of what the job market requires, the student begins to charge himself at the university, as a way to be effective in his professional performance. Jesus et al.<sup>11</sup> affirm that such charges generate discomfort and anxiety, especially in situations that are still unknown, such as the performance of a new procedure, the probable professional frustration is a factor that generates personal conflicts in the academic life and as a consequence of this element, the emergence of anxiety.

### **Problems and / or complications resulting from anxiety in the nursing student**

It is known that academic development at undergraduate level is necessary for students to improve their knowledge and put it into practice. When anxiety begins to compromise your intellectual abilities, it begins to present problems in face of the activities imposed in its formation. Based on this evidence, Lima et al.,<sup>13</sup> add that cognitive functions can be impaired by situations that cause anxiety and these influences reach key points in academic resourcefulness, thus the learning, attention and concentration process are reduced. According to Freitas et al.<sup>14</sup>, sleep deficit occurs frequently and, as a consequence, the students evaluated in the research also had difficulty maintaining attention during classes, directly affecting learning.

For Fernandes et al.<sup>15</sup> it can cause the Bornout Syndrome, sleep deficit, difficulty in maintaining attention and also maintains that the high levels of anxiety negatively influence the learning process, memory, reasoning,

concentration and prevents the necessary academic performance before the graduation.

Marchi et al.<sup>9</sup> relates anxiety to cognitive problems, among which, selective attention, which interferes with the brain to select relevant information through learning situations. If this function is compromised, the student decreases his logical reasoning and consequently his individual performance. In conclusion, Fernandes et al.<sup>15</sup> argue that high levels of anxiety negatively influence the process of learning, memory, reasoning, concentration and prevents the academic performance required in the graduation.

When the academic fails to excel due to high anxiety and begins to be dominated by that feeling, cognitive functions are. Thus, Pereira et al.<sup>16</sup> indicate that these implications interfere with reasoning, attention, understanding and prevent the necessary action for the performance of mental activities, implying their academic performance. With this, there are continuous feelings of failure, favoring the appearance of other types of mental disorders, including social anxiety disorder (SAD) and depression.

Mental disorders are common in the university environment, affected by this disorder, the academic begins to present personal and professional problems during the provision of care to the patient. Among the types of anxiety disorder in academia, Leão et al.<sup>7</sup> highlights generalized anxiety disorder (GAD) and SAD. This psychic illness will reflect in future problems, progress to other types of mental illness and even suicide if there are no necessary interventions.

Ribeiro et al.<sup>16</sup> point out that there is a high prevalence of anxiety disorders as a cause of absence from work and the high demand for sickness benefit costs. Generating a negative impact on the life of the person who has anxiety disorder, which imposes limitations on their daily activities, reduces their potential at work and also interferes in family and social life.

Some students do not seek psychological support and consequently self-medicate at home, following guidelines, generally, from someone they know who faced a similar situation and recommended the use of the medication or seeking information on the internet, without medical advice. Marchi et al.<sup>9</sup> affirm that the same way that the academic starts his treatment on his own, he also interrupts it without consulting a specialist doctor, it is worth mentioning that this interruption must be done gradually to avoid withdrawal symptoms. The use of benzodiazepines without a specialist's evaluation and guidance may generate pharmacological dependence or enhance the effect if there is interaction with other drugs such as alcohol, for example, and especially tolerance to the drug.

## **Conclusion**

The results analyzed point out that adaptation, satisfaction with the course, assessments, job presentation, CBT, curricular internships, insomnia, practical classes, lack of leisure, teacher / student relationship and job market insecurity are the main triggers for development of anxiety. As a result, several complications can arise and harm the student in his academic activities, such as: Decreased cognitive functions, poor performance of activities, appearances of anxiety disorders, depression, risk of suicide, self-medication, Burnout Syndrome, sleep deficit, low self-esteem, feeling of inferiority and failure and being away from work.



In this context, this study adds to the knowledge about anxiety, serving as material for information directed to academics, helping in the recognition of symptoms, triggering factors and their complications, opening the eyes also to the promotion of mental health within university experiences, facilitating prevention, as well as the search for ways to face it in order to reduce the consequences caused by anxiety and other signs and symptoms, especially among nursing students.

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# Human resources costs in hemodialysis: analysis of the warning and overtime regimen

## Custos com recursos humanos em hemodiálise: análise do regime de sobre aviso e horas extras

### Costos de recursos humanos en hemodiálisis: análisis del régimen de advertencia y horas extras

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# REVISA

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#### RESUMO

**Objetivo:** avaliar o custo e a viabilidade financeira do regime de sobreaviso e horas extras dos profissionais de enfermagem do setor de Hemodiálise e propor intervenções que favoreçam a racionalização dos recursos financeiros nesta unidade. **Método:** levantamento da literatura pertinente em bases de dados acadêmicas; identificação da realidade através de análise de documentos como folha de ponto, escala de sobre aviso, descrição de horas extras, comprovantes de pagamento de táxi e reembolso quilometragem; e construção do Diagrama de Ishikawa para evidenciar o problema e suas causas. **Resultados:** o custo com o regime de sobre aviso e horas extras no setor de hemodiálise em um período de 18 meses foi de R\$ 198.996,59 (média mensal R\$ 11.005,39), verificou-se que 70% deste valor deve-se ao pagamento de sobre aviso. Foi proposto duas intervenções distintas, as quais economizaram em 18 meses aproximadamente R\$ 73.730,99 (média mensal R\$ 4.096,16) e 82.814,40 (média mensal R\$ 4.600,80), tais propostas aguardam avaliação dos gestores responsáveis para possível implantação. **Conclusão:** a construção deste estudo contribuiu de maneira a aprimorar e desenvolver o conhecimento teórico-prático sobre a gestão financeira e otimização de recursos, podendo servir também como incentivo/modelo para outras unidades iniciarem ações visando a racionalização de recursos financeiros.

**Descritores:** Custos; Recursos Humanos; Hemodiálise; Horas Extras; Sobreaviso.

#### ABSTRACT

**Objective:** to evaluate the cost and financial viability of the overwarning and overtime regime of nursing professionals in the Hemodialysis sector and to propose interventions that favor the rationalization of financial resources in this unit. **Method:** survey of the pertinent literature in academic databases; identification of reality through analysis of documents such as timesheet, scale over notice, description of overtime, vouchers of payment of taxi and mileage refund; and construction of the Ishikawa Diagram to highlight the problem and its causes. **Results:** the cost with the warning and overtime regime in the hemodialysis sector in an 18-month period was R\$ 198,996.59 (monthly average R\$ 11,005.39), it was found that 70% of this amount is due to the payment of on notice. Two distinct interventions were proposed, which saved approximately R\$ 73,730.99 (monthly average R\$ 4,096.16) and 82,814.40 (monthly average R\$ 4,600.80) in 18 months, such proposals await evaluation from managers responsible for possible implementation. **Conclusion:** the construction of this study contributed in order to improve and develop theoretical and practical knowledge about financial management and resource optimization, and may also serve as an incentive/model for other units to initiate actions aimed at rationalizing financial resources.

**Descriptors:** Costs; Human Resources; Hemodialysis; Overtime; On notice.

#### RESUMEN

**Objetivo:** evaluar el coste y la viabilidad financiera del régimen de sobreaviso y horas extras de los profesionales de enfermería del sector de la Hemodiálisis y proponer intervenciones que favorezcan la racionalización de los recursos financieros en esta unidad. **Método:** encuesta de la literatura pertinente en bases de datos académicas; identificación de la realidad a través del análisis de documentos tales como hoja de horas, escala sobre aviso, descripción de horas extras, vales de pago de taxi y reembolso de kilometraje; y la construcción del Diagrama de Ishikawa para resaltar el problema y sus causas. **Resultados:** el costo con el régimen de advertencia y horas extras en el sector de la hemodiálisis en un período de 18 meses fue de R\$ 198,996.59 (promedio mensual R\$ 11,005.39), se encontró que el 70% de esta cantidad se debe al pago de previo aviso. Se propusieron dos intervenciones distintas, que ahorraron aproximadamente R\$ 73,730.99 (promedio mensual R\$ 4,096.16) y 82,814.40 (promedio mensual R\$ 4,600.80) en 18 meses, tales propuestas esperan la evaluación de los gerentes responsables de una posible implementación. **Conclusión:** la construcción de este estudio contribuyó con el fin de mejorar y desarrollar conocimientos teóricos y prácticos sobre gestión financiera y optimización de recursos, y también puede servir como incentivo/modelo para que otras unidades inicien acciones destinadas a racionalizar los recursos financieros.

**Descritores:** Costos; Recursos Humanos; Hemodiálisis; Horas extras; De aviso..

## Introduction

In the last century, much of the world has experienced an intense epidemiological transition in the field of health, a fact that can be seen from the constant changes in the patterns of mortality, morbidity and disability of the population. In this context, Chronic Kidney Disease (CKD) is inserted, considered a worldwide public health problem.<sup>1</sup> Such condition consists of kidney damage, with progressive and irreversible loss of kidney function (glomerular, tubular and endocrine).<sup>2</sup>

It is estimated that the worldwide prevalence of CKD is 8 to 16%.<sup>3</sup> Brazilian data do not allow the assessment of the prevalence of CKD as a whole, however a study points out that in 1994 there were about 24 thousand individuals undergoing some type of treatment for CKD, in 2004 this number increased to 60 thousand individuals, an increase of 150% in a decade; revealing the severity and scale of the problem.<sup>4</sup>

DRC is a silent condition, a fact that contributes to a late diagnosis. In the more advanced stages to ensure the individual's survival, it may be necessary to use the Renal Replacement Therapy (RRT) modality; hemodialysis being the main dialysis modality currently used.<sup>5</sup>

The current legislation in Brazil requires that the members of the health team remain in the dialysis environment throughout the hemodialysis session; being included in this aspect the nursing professionals.<sup>6-7</sup>

During the hemodialysis process, it is the role of the nurse and nursing technician to identify possible complications, assess the proper functioning of the dialyzer, provide a peaceful and comfortable environment, offer emotional support and enable / encourage the exposure of feelings. The monitoring of the hemodialysis session can be analyzed as a care intervention, aimed not only at patient safety, but also at the quality of care provided.<sup>8</sup>

The need for constant monitoring of this patient may require management measures from the health institution regarding the working hours of the nursing team, such as variable working periods, flexible schedules, implementation of the over warning regime and overtime, these measures will vary according to the demand of the hemodialysis service. With regard to overtime, for example, the cost x benefit of this practice must be evaluated, the literature points out the harm of overtime for the nursing team, with repercussions such as stress, decreased quality of care, increased absenteeism, decreased quality of life, among others.<sup>9</sup> It is also necessary to assess the costs of such measures and their feasibility, still talking about overtime, a study conducted at a Public Hospital in Coacal (RO) evaluated absenteeism in the nursing team, composed of 352 employees, it was found that the institution's spending on overtime for this category in 2013 reached R\$ 438,315.52.<sup>10</sup>

In the mid-1980, Strategic Management in Human Resources started to be placed on the agenda in large organizations, since it enables the maximization of profits, customer satisfaction and an increase in the quality of the services provided. The current characteristics of Strategic Management in Human Resources include: concentration on the core business of the area, process management, downsizing and downsizing, benchmarking and extraversion, consultancy and strategic vision, innovation and cultural change, emphasis on

objectives and results, effectiveness organizational and forward-looking vision.<sup>11-12</sup>

The intense competition in the organizational world, makes human resources cost management one of the topics widely discussed today. Issues related to the cost of human resources must be evaluated frequently, and it is necessary to consider the country's political and economic situation, market analysis, financial viability of the current human resources framework, etc.<sup>13</sup>

In the context of hospital care, the cost of human resources in nursing is responsible for the largest share of the total expenditure of health institutions.<sup>14</sup> The costs spent with human resources in the hemodialysis sector are specifically little known. However, it is known that the increasing expenditures in the hospital area and the scarcity of financial resources, requires managers to take systematic actions that favor cost control and maintenance of the quality of services. Health institutions are increasingly under pressure to carry out management restructurings, with the objective of ensuring the organization's survival, for this, cost control is indispensable.<sup>8,15-16</sup>

Understanding that the evaluation of the costs of health services is a managerial strategy capable of subsidizing the allocation of financial resources, the guiding question of this research is: the regime of alertness and overtime of nursing professionals working in hemodialysis is financially viable?

In this sense, the objectives of the study were: to assess the cost and financial viability of the health care and overtime regime of nursing professionals in the Hemodialysis sector; and to propose interventions to rationalize financial resources in the Hemodialysis sector.

## Method

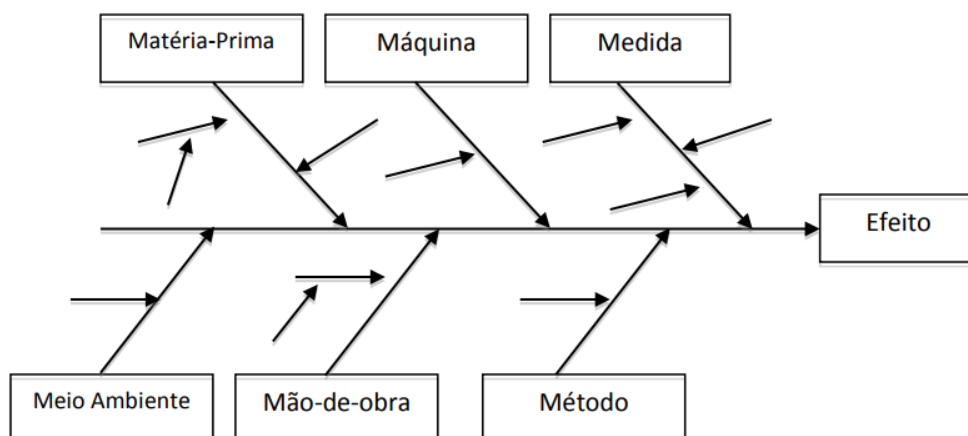
In view of the problems that require changes, it is necessary to recognize the issues involved. The relevant academic literature was surveyed; and data collection, based on the cost of this regime, such information was obtained through some documents of the institution, these being the time sheet, scale of warning, overtime description, proof of taxi payment and mileage reimbursement, in the period from 16/11/2015 to 15/05/2017.

Subsequently, in order to systematically assess the causes of the high cost of this regime, the Ishikawa Diagram was used, searching from there for possible points for intervention.

The Ishikawa Diagram is also known as the Cause-Effect Diagram or Fishbone Diagram, created by Karou Ishikawa in 1953, used in principle to assess the dispersion in the quality of products and processes in the industrial environment. This tool favors the identification and analysis of the possible causes of variation of a given process and the way the causes interact with each other.<sup>17-18</sup>

The construction of the diagram starts considering the effect, the words that appear at the ends of the diagram's branches are families of causes, which can be classified as raw materials, machines, measures, environment, labor and method (6Ms). Other families of causes can also be used at the ends of the branches, depending on the problem to be investigated.<sup>19-20</sup>

**Figure 1 - Ishikawa Diagram**



**Source:** Ishikawa K. Total quality control: in the Japanese way. Rio de Janeiro: Campus. 1993.

After the definition and implementation of the intervention, the team's forecast, forms of monitoring, evaluation and budget involved will be carried out. Regardless of the intervention to be put into practice, the monitoring will be carried out based on the monitoring of the number of attendances in the hemodialysis sector, number of activations via BIP, total expenses with the over-warning and overtime regime and verification of possible changes in quality assistance provided. The minimum monitoring to evaluate the effectiveness of the performed intervention should be three months.

## Results

In order to better understand the issue of costs with the over-warning and overtime regime in the Hemodialysis sector, a brief search was made in the relevant literature.

Currently, the Hemodialysis sector of the Hospital Beneficente de Senhoras Sírío Libanês (HSL) works with internal and external services, working 24 hours a day, in the following shifts: 7:00 am to 12:00 pm, 1:00 pm to 4:00 pm and 17:00 to 21:00 hours; Mondays, Wednesdays and Fridays there is a shift from 22:00 to 06:00. Regarding the number of nursing professionals, there are 5 nurses and 20 nursing technicians.

Considering the great demand for this service, there was a need to implement a differentiated work regime, so that all hemodialysis services in critical areas could be performed at different times (in addition to business hours). Then the regime of alert and overtime came into effect for the nursing technicians of hemodialysis (these are the professionals responsible for the procedures during this process), the other professionals involved in the process remained with their respective working hours.

Putting this regime into practice has great repercussions for both assistance and management. Thinking from the point of view of health service management, extending the workday directly implies an increase in costs. The professionals involved in this regimen (not all in the unit) remain with a BIP for a specified period, if there is activation during this period, the professional must



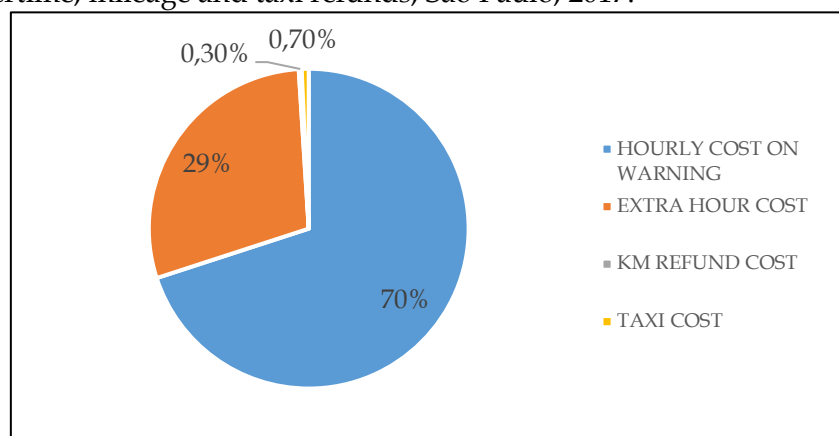
go to the institution to perform hemodialysis on a given patient. In addition to the usual salary of professionals, there is an additional cost with the BIP Hour, Extra Hour, KM Reimbursement and Taxi.

For a better understanding of this reality and subsequent survey of actions, a cost survey was carried out with a regime of alert and overtime in the hemodialysis sector of HSL from 11/16/2015 to 05/15/2017, totaling the analysis of 18 months. Such data were obtained through time sheets, over-warning scale, description of overtime, taxi payment vouchers and proof of payment of mileage reimbursement. During this period, the cost of the warning and overtime regime was found to be R \$ 198,996.59, an amount composed of the amount paid for hours on notice, overtime reimbursement of mileage and taxi (Table 1).

**Table 1** – Cost distribution with over-warning and overtime regime in the Hemodialysis sector of the Hospital Beneficente de Senhoras Sírio Libanês, São Paulo, 2017.

	Average cost/month in \$	Cost in 18 months on \$
Time on warning	7.695,81	138.524,55
Extra Hour	3.230,86	58.155,40
Mileage reimbursement	43,68	785,84
Taxi	85,04	1.530,80
<b>Total</b>	<b>11.005,39</b>	<b>198.996,59</b>

**Figure 2** - Percentage of overtime and overtime costs in the Hemodialysis sector of Hospital Beneficente de Senhoras Sírio Libanês according to the variables overtime on notice, overtime, mileage and taxi refunds, São Paulo, 2017.



Considering that about 70% of the cost with this regime is due to the time warned, we also sought to evaluate the profile of the opening hours, in order to better understand this problem and identify opportunities for adjusting financial resources. During the analyzed period, there were 281 BIP firings, the most frequent firing times were 19:00 hours (61.2%), 13:00 hours (7.8%), 12:00 (5.3%) and 11:00 hours (2.5%). It was noted that during the night there are practically no activations via BIP; if we consider the period from 00:00 to 06:00 in the morning, there are only 2 activations, corresponding to 0.6% of the total activations from 16/11/2015 to 15/05/2017 (Figure 2).

Of the two operations performed between 00:00 and 06:00 hours, one of them was on December 8, 2015, at 4:50 am for hemodialysis in the patient JAON. The client in question was admitted to the institution on December 3, 2015 to perform cineangiography and surgical programming (diagnosis of major aortic

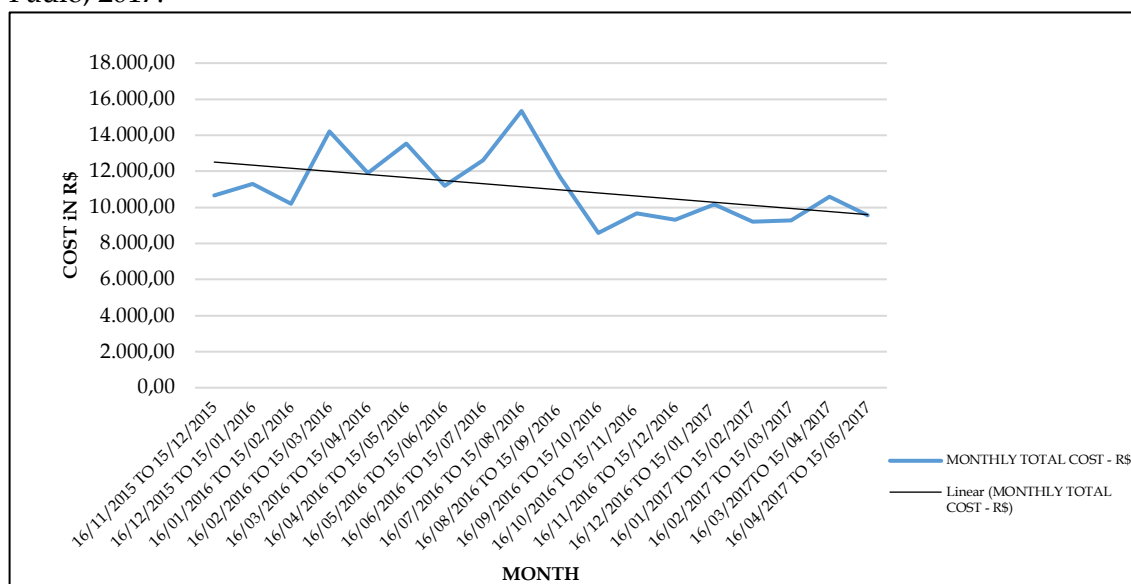


stenosis), even in the preoperative period he developed acute pulmonary edema, associated with worsening renal function after cineangiocoronariography, with need for dialysis session. JAON performed only 2 dialysis sessions before surgery, after the procedure the kidney function remained stable, not needing new sessions; was discharged to the home in 19/12/2015.

The other activation was performed on August 6, 2016, at 6:00 am at the request of the unit, considering that the demand for the morning period was high.

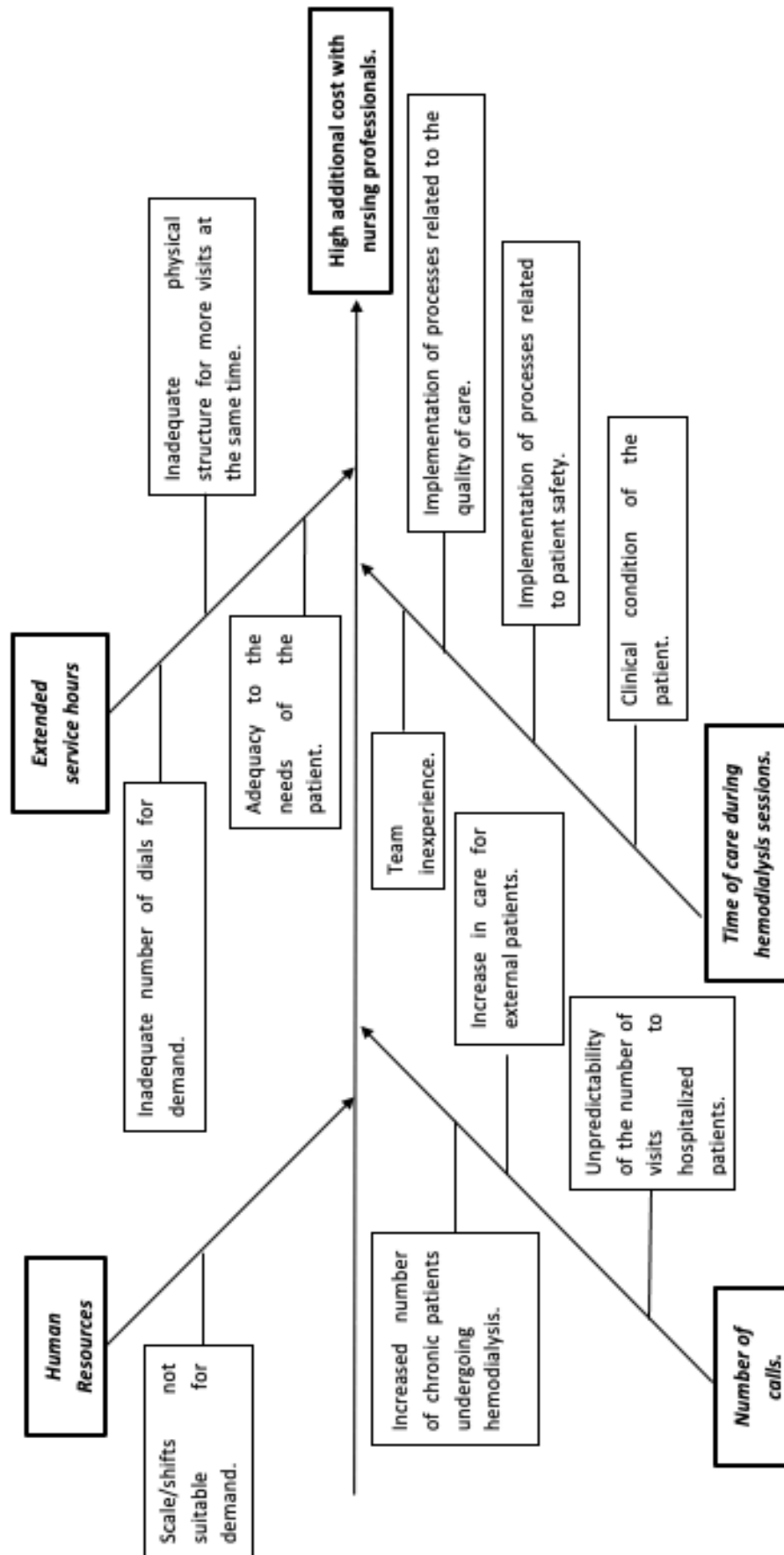
The graph below shows the distribution of the total cost with the over-warning and overtime regime in the Hemodialysis sector, there is a downward trend in costs (with small fluctuations) from 07/16/2017. The decline in costs occurred after adjusting the scale and working shifts according to the demand for the service (Figure 3).

**Figure 3** - Distribution of the total cost with the over-warning and overtime regime in the Hemodialysis sector of the Hospital Beneficente de Senhoras Sírío Libanês, São Paulo, 2017.



The data described above show a high financial cost with this regime, with the need for a more careful analysis. For a better understanding of this problem and the associated causes, the diagram below was constructed:

Figure 4 - Diagram on the additional cost with nursing professionals in the Hemodialysis Sector of the Syrian Lebanese Hospital, 2017.



### Intervention Proposal

The steps taken to idealize this proposal were carried out as described in the table below:

**Table 2-** Description of the application proposal operations.

Action	Strategy	Actors Involved
Survey of relevant literature	Search for pertinent information in articles, books, scientific articles and Brazilian legislation on the subject.	Resident and Coordinator of the hemodialysis sector.
Recognition of the problem	Data collection through documents (time sheets, over-warning scale, overtime description, taxi payment vouchers and mileage reimbursement).	Resident, Coordinator of the hemodialysis sector and administrative professionals (Personnel Administration and Compensation sector).
Elaboration of intervention proposals	Analysis of the financial viability of the interventions and their impact on assistance (quality and safety).	Resident, Coordinator of the hemodialysis sector and employees of the hemodialysis sector.
Forwarding the proposal to the responsible managers	Sending the written proposal via e-mail with all the surveys carried out.	Resident, Coordinator of the hemodialysis sector.

In order to rationalize financial resources in the Hemodialysis sector, in order to maintain and or expand the financial viability of this service, without influencing the quality and safety of the assistance provided, some measures are proposed, as described in the tables below:

**Table 3-** Description of the action of Proposal 1 to reduce additional costs with the over-warning and overtime regime.

Proposal 1	Cost/mont.	Cost em 18 months.	Financial savings/month. *	Financial savings in 18 months. *
Action 1. Hiring 2 nursing technicians to work in periods of greatest demand.	~\$ 9.265,00	~\$ 166.608,00	~\$ 1.799,36	~\$ 32.388,59

\* Total savings considering only the over-warning and overtime regime as a whole.

**Table 4-** Description of the actions of Proposal 2 to reduce additional costs with the over-warning and overtime regime.

Proposal 2	Cost/mont.	Cost em 18 months.	Financial savings/month *	Financial savings in 18 months. *
Action 1. Change the notice period, effective: - Monday, Wednesday and Friday: 19:00 to 00:00.	~\$1.533,60	~\$ 27.604,80	~\$ 6.162,21	~ \$ 110.920,75

Action 2. Change the notice period, effective:	~\$ 3.271,68	~\$ 58.890,24	~ \$ 4.424,13	~ \$ 7.634,31
- Tuesday, Thursday, Saturday and Sunday: 7:00 pm to 3:00 am.				
Sum total economy *	--	--	~\$ 10.586,34	~ \$ 118.555,06

\*Economia total considerando apenas o regime de sobre aviso.

## Plan management

The action plan for this Application proposal was developed based on the reality of the hemodialysis sector at Hospital Sírio Libanês of the Bela Vista unit. However, it is worth mentioning that prior to the implementation of any measures, it is necessary the approval of the local managers and later of the institution's top management.

The forecast of the team involved in this proposal will vary according to the chosen proposal. In the case of proposal 1, in addition to the existing quantity, it will be necessary to have two more professionals (nursing technicians), with an additional budget to the institution's expenses sheet of ~ \$ 9,256.00 per month. Proposal 2, on the other hand, would include only the professionals already hired by the institution, with no additional costs to those already existing. The role of managers, especially nurse managers and doctors, are fundamental for the proposal to be put into practice.

The future assessment and monitoring of the feasibility of the intervention proposal should be carried out continuously over time, monitoring of which is the responsibility of the managers of this unit. Such an assessment should be carried out based on the monitoring of the number of visits in the hemodialysis sector, the number of calls via BIP, total expenses with the over-warning and overtime regime and verification of possible changes in the quality of care provided. A minimum three-month monitoring is recommended for a real assessment of the savings made.

## Final Considerations

The action plans evidenced in this Application proposal were prepared in accordance with the reality of the Hospital Beneficente de Senhoras Sírio Libanês and the Hemodialysis Sector of this institution. However, it is worth mentioning that due to the unavailability of time and the need for approval by the managers involved, it was not possible to put them into practice. It is suggested the implementation of any of the proposals described and their monitoring over a minimum of three months, in order to analyze their effectiveness and make changes if necessary.

The construction of this proposal contributed in a way to improve and develop theoretical and practical knowledge about financial management and optimization of resources, and can also serve as an incentive / model for other units to initiate actions aimed at the rationalization of financial resources.

As a limitation of this work, the short period for the development of the proposal (culminating in the non-implementation of it) stands out, which consequently prevents the evaluation of the possible savings resulting from the actions. Another limitation to be cited was the lack of comparison between the costs spent on hemodialysis procedures and the amounts received for carrying them out, therefore, it cannot be analyzed whether the process as a whole is profitable or costly for the institution.

It points out the need to expand actions / studies and benchmarking in the scope of cost management, considering the gap found in the literary search on the subject; and above all the survival of this organization, which is in an increasingly competitive market.

## Acknowledgment

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# Production of nursing care for the LGBTQIA + population in primary care

## Produção do cuidado de enfermagem à população LGBTQIA+ na atenção primária

## Producción de cuidados de enfermería para la población LGBTQIA + en atención primaria

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### RESUMO

**Objetivo:** descrever a produção do cuidado em Enfermagem à saúde de Lésbicas, Gays, Bissexuais, Travestites e Pessoas Trans Queers Intersexos, Assexuais e outras identidades sexuais e de gênero, a partir das reflexões acerca do trabalho da enfermeira. **Método:** Estudo qualitativo, realizado com 18 enfermeiras que atuavam na Atenção Primária à Saúde em um município da Bahia, Brasil entre o ano de 2018. Realizou-se entrevista individual em profundidade, analisadas pelo método do Discurso do Sujeito Coletivo. **Resultados:** O cenário da produção do cuidado de enfermagem a partir do trabalho da enfermeira na Atenção Primária direcionado à população LGBTQIA+ esteve permeado por fragilidades no reconhecimento desta população no território de atuação, no atendimento clínico empregado na consulta de Enfermagem e no reconhecimento das vulnerabilidades e necessidades de saúde da população LGBTQIA+. **Conclusão:** Há fragilidades, barreiras e dificuldades na produção do cuidado à saúde da população LGBTQIA+ que envolvem dimensões distintas que perpassam pela formação acadêmica, profissional, estrutural, administrativa/institucional e da gestão do cuidado e atenção à saúde no contexto da Atenção Primária. Este cenário é provocador da manutenção de desigualdades e iniquidades em saúde que necessitam ser superados.

**Descritores:** Análise de Gênero na Saúde. Diversidade de Gênero. Minorias Sexuais e de Gênero. Enfermagem. Atenção Primária à Saúde.

### ABSTRACT

**Objective:** to describe the production of nursing care for the health of Lesbians, Gays, Bisexuals, Transvestites and Trans Queers, Intersex, Asexual and other sexual and gender identities, based on reflections about the nurse's work. **Method:** Qualitative study, conducted with 18 nurses who worked in Primary Health Care in a municipality in Bahia, Brazil between 2018. An in-depth individual interview was conducted, analyzed using the Collective Subject Discourse method. **Results:** The scenario of the production of nursing care based on the work of nurses in Primary Care directed to the LGBTQIA + population was permeated by weaknesses in the recognition of this population in the territory in which they operate, in the clinical care used in the Nursing consultation and in the recognition of vulnerabilities and health needs of the LGBTQIA + population. **Conclusion:** There are weaknesses, barriers and difficulties in the production of health care for the LGBTQIA + population that involve different dimensions that go through academic, professional, structural, administrative / institutional training and the management of care and health care in the context of Primary Care. This scenario provokes the maintenance of health inequalities and inequities that need to be overcome.

**Descriptors:** Gender Analysis in Health. Gender Diversity. Sexual and Gender Minorities. Nursing. Primary Health Care.

### RESUMEN

**Objetivo:** describir la producción de cuidados de enfermería para la salud de Lesbianas, Gays, Bisexuales, Travestis y Trans Queers, Intersexuales, Asexuales y otras identidades sexuales y de género, a partir de reflexiones sobre el trabajo de la enfermera. **Método:** Estudio cualitativo, realizado con 18 enfermeros que laboraron en Atención Primaria de Salud en un municipio de Bahía, Brasil entre 2018. Se realizó una entrevista individual en profundidad, analizada mediante el método Discurso Colectivo del Sujeto. **Resultados:** El escenario de la producción de cuidados de enfermería a partir del trabajo de enfermeros en Atención Primaria dirigido a la población LGBTQIA + estuvo permeado por debilidades en el reconocimiento de esta población en el territorio en el que se desenvuelve, en la atención clínica utilizada en la consulta de Enfermería y en el reconocimiento de vulnerabilidades y necesidades de salud de la población LGBTQIA +. **Conclusión:** Existen debilidades, barreras y dificultades en la producción de atención en salud para la población LGBTQIA + que involucran diferentes dimensiones que pasan por la formación académica, profesional, estructural, administrativa / institucional y la gestión de la atención y la atención de la salud en el contexto de la Atención Primaria. Este escenario provoca el mantenimiento de desigualdades e inequidades en salud que es necesario superar.

**Descriptores:** Análisis de género en salud; Diversidad de género; Minorías sexuales y de género; Enfermería; Primeros auxilios.

## Introduction

In Brazil, in the 1980s, the LGBTQIA + movement became one of the most significant and apparent, for making social demands in search of respect for a sexual identity different from heteronormative standards, the autonomy of the homosexual movement and the right to exercise and freedom for sexual experiences.<sup>1</sup> This mobilization had a positive impact, while gaining visibility and inciting great national and international debates. The way the groups organize themselves gain global strength, the parades appear as a major event capable of awakening many looks at the problems that afflict the LGBTQIA + population, including the violence resulting from homophobia.<sup>2</sup>

The LGBT Policy was an initiative stemming from the requirement of social movements in articulation with the academy and the management of SUS to build an inclusive assistance elaborated from the principles of equity, universality and integrality. The Ministry of Health, aiming to reduce inequalities, set up the Mais Saúde Program - Everyone's Right, which presents specific goals to promote actions to tackle inequalities in health, with emphasis on population groups of blacks, quilombolas, LGBTQIA +, Roma, workers sex, homeless population, among others.<sup>1,3</sup>

The demand for health services by the LGBTQIA + population is limited, certainly influenced by the discriminatory and exclusive context in which health care is organized. The predominant logic of thinking the subjects in terms of a presumed heterosexuality interferes with the quality of the services offered, since they do not meet the real needs of the LGBTQIA + population, in addition to the health practices developed are based on personal values and preconceived concepts. which often repels vulnerable subjects.

Thus, the Ministry of Health determines that sexual and gender identities are properties that expose this specific population to discrimination and the violation of human rights, including restricting full access to health, due to the non-adequacy of gender to biological sex or heteronormative sexual identity. This condition produces setbacks and reinforces the situation of vulnerabilities in which LGBTQIA + people are already.<sup>4</sup>

In the Brazilian context, advances in the health area, with regard to the LGBTQIA + population, are insufficient; since the uniqueness of these identities, being often permeated by stigma and prejudices regarding the adequacy of gender with biological sex,<sup>5</sup> even after the implementation of the National Policy for Integral Health of LGBTQIA +.

It is considered that the inclusion of the LGBTQIA + population in health care depends to a large extent on changes in the way of thinking and acting of health professionals. These subjects must be welcomed, have humanized care free from discrimination, the rights to privacy, autonomy and the free development of personality must be respected, regardless of sexual orientation or gender identity<sup>6</sup>.

The scientific production about health care for this population group requires an increase, therefore, we adopted as a research question: how is the production of nursing care configured in primary care directed to the health of the LBTQIA + population? As an objective, this study sought to describe the production of nursing care in primary care directed to the health of the LBTQIA+ population.



## Method

Descriptive, qualitative study, conducted with 18 nurses who worked in the Primary Health Care network in a municipality in Bahia-Brazil. The participants had cisgender gender identity, heterosexual sexual identity, age group between 26 and 33 years old, self-reported brown race / color, average family income of R \$ 2,862.00 reais, Catholic religion / belief, graduate education. Other professionals from the family health team, nurses not registered in the territory, who did not work in Primary Care, coordinators of health services and programs, ferists and who were on leave were excluded.

Data collection took place from a hybrid, individual, in-depth interview, scheduled according to the availability of the participants, guided by a semi-structured script, carried out in a reserved place in their workspace, Family Health Units and Basic Health Units, with guaranteed individuality, privacy, image preservation and anonymity in the information collected.

The interviews had an average time of 30 minutes, were recorded with their own recorder and later transcribed in full, coded and organized, with the authorization of the participants and in compliance with the criteria established by the COREQ, for qualitative research.<sup>7</sup>

The seized data were organized and systematized under the support of the NVIVO® 11 Software and subsequently submitted to codification that made it possible to emerge the formulation of Synthetic Discourses, structured through the application of the Collective Subject Discourse (DSC) method. For that, the methodological figures were apprehended: Key Expressions and later the Central Ideas and made it possible to analyze the phenomenon that expresses the thought of a collective.<sup>8-9</sup>

It is worth mentioning that for its execution the project was submitted and approved by the Research Ethics Committee of Faculdade Nobre, under protocol CAAE: 80261917.9.0000.5654, number: 2,395,929 and was in line with the criteria of the Revised Standards for Quality Improvement Reporting Excellence, SQUIRE 2.0. For interviews, the study was presented to the participants and the Free and Informed Consent Form (ICF) was applied to the participants. The term was read and explained, subsequently signed in two copies, one of which is the responsible researchers and the other of the interviewee, in compliance with Resolution 466/2012.

## Results

The collective speeches allowed to explain the empirical phenomena from three macro categories of discourse-synthesis, composed by the subcategories of Central Ideas that composed the object under analysis.

### **Synthesis 1: scenario of care production from the perspective of recognition of the LGBTQIA + population in the territory**

#### **Central Idea 1A: Stereotypes of the LBTQI + population**

*I realize that he is an LGBTQIA + person due to his behavior and sometimes the Community Health Agent who reports, although since the time I entered the unit where*

*I work, I have not seen anyone. I am not close to the LGBTQIA + public registered in the unit where I work. (DSC of nurses from ABS).*

### **Central Idea 1B: Invisibility of LGBTQIA + identity**

*In my appointments, I never identified and never reported I attend childcare, prenatal care that is everyone at first straight, in family planning I also did not identify anyone with a homosexual relationship, in HYPERTENSION, they are older and I didn't notice and I don't ask the option their sexual The LGBTQIA + audience that I can most easily recognize are gay men. Transvestites are more difficult to appear in the unit, as well as lesbians, as they do not usually report during consultations. I find it difficult to differentiate what it is to be homosexual or transsexual. I care for many patients who are registered in the unit where I work, but sexual orientation is not a requirement to be worthy of investigation in the history of Nursing in the medical record. (DSC of nurses from ABS).*

### **Central Idea 1C: Ignorance of the demands for care directed to the LGBTQIA + population**

*Indirectly I attend the LGBTQIA + public, after all, the demand for care is free, but I never made a specific consultation. The public does not report that it is LGBTQIA +. Here at the unit there is no specific LGBTQIA + group, the care demands are for childcare, children's health, women's health, men's health, we don't have LGBTQIA + health. I imagine that they exist in my area of coverage because I care for many men and women, and some are yes homosexuals, others I end up not knowing because particularly I think invasive is asking if the person is LGBTQIA +, it's kind of embarrassing. Once, during the cervical cancer preventive exam, during the questions about sexual intercourse, the patient reported having sex, but not with a man. When I heard that report, I was a little scared, because I didn't expect to come across that answer. It is still something that scares and makes me apprehensive because I don't know how to deal with this person. (DSC of nurses from ABS).*

### **Synthesis 02: scenario of care production from the perspective of needs and demands**

#### **Central Idea 2A: Reception**

*I have tried to provide the service with welcome and receptivity, without dealing with difference or any prejudice. The service does not change due to sexual orientation, there are no impediments in my practice for this reason. Before arriving at the nursing office, patients are received by the reception, hygiene and nursing technicians and need, as well as me to attend spontaneously.*

#### **Central Idea 2B: Nursing Assistance in Sexual and Reproductive Health**

*The patients I recognize who are LGBTQIA + tend to show up at the family planning program. I perform testing for the detection of Sexually Transmitted Infections (STIs) such as Syphilis and HIV. I request serological exams, distribute condoms and attend to emergency demands related to sexual health, for example, discharge and urethral pain and emergency contraception. I also provide guidance on STI prevention, safe sexual intercourse and reproductive planning. (DSC of nurses from ABS).*

### **Central Idea 2C: Nursing Care in Endocrine Health - Hormone**

*In the case of the trans population, the demand for hormonal control has come to the service, especially in relation to the interruption of menstrual flow and contraception. (DSC of nurses from ABS)*

### **Central Idea 2D: Nursing care in immunological health - immunization**

*During the consultation I seek to provide guidance related to immunization and provide care about the vaccines, their effects, contributions and possible adverse effects.*

### **Central Idea 2E: Recognition of health vulnerabilities**

*The few patients I saw were experiencing prejudice and health risks. They were afraid during the service, afraid to be in the unit and with a significant lack of guidance on health care, preventive measures, condom use during sexual relations and vulnerability to STIs, such as HIV. Some were in a situation of prostitution and came to the clinic more frequently to perform preventive exams and access condoms. They had social problems such as low financial condition, precarious employment, family problems and violence expressed in mistreatment and even beatings and beatings. (DSC of nurses from ABS).*

### **Synthesis 03: care production scenario from the perspective of frailties**

#### **Central Idea 3A: Weaknesses in health education**

*We try to give lectures, health actions to carry out rapid tests, but it is restricted only to this area. We need more disclosure because the lack of knowledge of the professional health team is very large. Health education is essential and our team has already tried to form a group with the LGBTQIA + population, but it was not very successful, on the day there was only one person and since there are few of those who come to us, they end up going unnoticed. (DSC of nurses from ABS).*

#### **Central Idea 3B: Weaknesses in professional training**

*In Primary Care, we should have greater support to serve the LGBTQIA + population. Specific training and qualifications are lacking. I never received specific training to work with the health demands of the LGBTQIA + population here at the unit. Because of these reasons, I end up facing greater difficulties in dealing, approaching and providing care to the LGBTQIA + population, which makes me feel unprepared. (DSC of nurses from ABS).*

#### **Central Idea 3C: Weaknesses in interprofessional health work**

*The health unit is always open to receive the LGBTQIA + public, but I face great difficulty in establishing strategies with the team to reach this audience. The number of Community Health Agents in the unit is low, medical professionals are not sensitive and creates difficulties in performing health work dedicated to this area. (DSC of nurses from ABS).*

#### **Central Idea 3D: Weaknesses in overcoming stigma and discrimination**

*I have been looking for conversations with my team at meetings to disentangle any kind of prejudice from users. Even though there was no situation of embarrassment on the part of the team I work with, it has been a challenge to attend LGBTQIA + free from discrimination. One problematic factor found is religion, as many professionals who work in the health unit end up treating patients differently due to sexual orientation. (DSC of nurses from ABS).*

### **Central Idea 3E: Weaknesses in matrix support**

*The team that works with me has not carried out actions to map and monitor the population in the territory. We are not sure how many LGBTQIA + people are part of the health unit's coverage area. The home visit aimed at serving the LGBTQIA + population is absent and the active search carried out by Community Health Agents is precarious. (DSC of nurses from ABS).*

### **Central Idea 3F: Weaknesses in the development of specific actions**

*I do not have a program or health care directed at the LGBTQIA + population in the territory where I work. Concrete health policy actions aimed at this population are lacking. We do not have a specific day of service for the LGBTQIA + population as I fear for non-LGBTQIA + women and men. The campaign actions carried out by the municipal health department also do not address the health issues of the LGBTQIA + population, which affects the link of this population to the health unit in your locality. (DSC of nurses from ABS).*

### **Central Idea 3G: Weaknesses in the fulfillment of the social name in the Unified Health System (UHS)**

*I already know about the social name in health facilities at UHS, but in the unit where I work, the reality is that this right is not respected. Health professionals are not yet qualified to ensure that the name is guaranteed. There is a great lack of information that results in non-compliance. (DSC of nurses from ABS).*

## **Discussion**

The study revealed the production of Nursing care for the health of Lesbians, Gays, Bisexuals, Transvestites and Trans Queers, Intersex, Asexual and other sexual and gender identities. It became expressed by invisibilities, difficulties in recognizing the population in the territory, as well as the fragility of the professionals' approach to work aimed at contemplating sexual diversity and gender identities.

It also proved to be a work based on rigid organizations of the work process in the Family Health Strategy, without the construction of actions aimed at serving the LGBTQIA + public, such as the production of specific and singular care for the same, which expresses the existence of weaknesses in the performance of professionals to conduct assistance and incipience regarding the research carried out in the Nursing consultation, by demonstrating that they feel ashamed or uncomfortable in approaching patients about their sexual orientation and gender identity.

As for the care for the LGBTQIA + population, nurses mentioned that they did not receive this public frequently, which may be associated with fragility in the active search and even recognition of the territory, and even the presence of prejudices.<sup>11-12</sup> Therefore, it is important to highlight existence of symbolic barriers in accessing services, especially due to the manifestation of stigma and discrimination in health, which reinforce stereotypes, formulate and strengthen prejudices and cause the erasure of people and the expression of their sexual and gender identities.

Thus, it is emphasized that among the LGBTQIA + population, Transvestites and Transsexuals are the ones who suffer the most from prejudice and discrimination in the family and social environment, as well as in health services.<sup>13</sup> The prejudice of health professionals towards the public LGBTQIA + results in the disqualification of health care for this population, showing the extent of these discriminatory processes to the health system itself.

The LGBTQIA + population has its basic rights attacked and is in a situation of vulnerability. In the context of confronting prejudice and discrimination, organized social movements such as the Brazilian LGBTQIA + Movement appear, in which they demand the free expression of their sexual identity, the change of name in identification documents, access to health policies and protection the State in the face of violence motivated by prejudice.

Regarding the recognition of the health demands required by the LGBTQIA + population, the study revealed, based on the collective discourse that nurses mentioned, that this LGBTQIA + population when accessing the service, seeks health care directed to family planning, as well as to attention to Sexually Transmitted Infections (STIs), conducting rapid tests and purchasing condoms. It was also noted that these specific demands, such as those related to sexual health, are only exposed by the population when there is a development of the bond between professional and user.

The identification of the LGBTQIA + population as a key population for the STI affection, with emphasis on HIV / AIDS, led to specific health actions for this population, which contributed to the discrimination of homosexuality in the general and scientific community.<sup>13-14</sup>

The vulnerabilities of the LGBTQIA + population, recognized by nurses, were associated with fear, prejudice, stigma, family breakdown, financial difficulties, exposure to STI, lack of knowledge and lack of education and guidance and violence, factors that, according to them, are determinant for dismissal of this public of health services.

In this context, efforts should be made to develop actions aimed at combating institutional invisibilities towards this population, with an emphasis on women, who are in a greater situation of vulnerabilities and erasures of their sexuality, with increased access and guaranteeing the integrality of attention.<sup>16</sup>

Faced with this reality, the Ministry of Health recognizes that sexual and gender identities are attributes that expose the LGBTQIA + population to discrimination and violation of human rights, including non-integral access to health, which must be constantly reflected on by health professionals and managers, as well as social control bodies.<sup>17</sup>

Regarding the health care produced by health professionals, the results show that nurses reported providing the same care to anyone, and claimed not to know how to deal differently with the LGBTQIA + population. However, it is relevant to reflect that the search for respect for multiple identities runs through the issue of equity in health care, as in Nursing. In this sense, it would not be just a matter of treating everyone "as anyone", which would be a basic aspect to be guaranteed, when we reflect on the concept of equality, but, rather, to direct care from the deconstruction of barriers that exist between those who can be served and those who want to be served, in addition to those who cannot be served, and pay attention to those who do not feel belonging to services, as they are marginalized and segregated.<sup>18</sup>

It is noteworthy that entry into services, as in the Family Health Strategy, demands awareness of the different modalities of constitution of family networks, distinct from the heterosexual pattern, striving for respect for the singularity of the subjects and combating all forms of standardization that involve exclusion and discrimination of people. This is only achieved by breaking institutionalized discriminatory processes.

Assistance to the LGBTQIA + population currently provokes public health professionals to create care actions aimed at this population that overcome the historical stigmatizing and limited approach, but that are associated with the creation of these identity categories and health needs that are not met.<sup>19</sup>

From the point of view of health needs, it should be noted that they are organized into four groups, namely: good living conditions; the need to have access to and be able to take advantage of all health technology capable of improving and prolonging life; the creation of effective links between each user and a team and / or a professional; and finally, the autonomy of each subject in the way they conduct their lives<sup>20</sup>, which is necessary to contemplate the production of health care for the LGBTQIA + population. Thus, they need to be considered in the production of nursing care for the health of these people.

The greatest actions taken by nurses at the units were based on health education, such as lectures and waiting rooms. The LGBTQIA + population experiences some disparities in health care, resulting in reduced production of care in health services, becoming limited.<sup>21</sup>

The professionals' unpreparedness and lack of knowledge regarding the needs of this population are evident, resulting in insecurity on the part of users and resistance in seeking specialized services.<sup>22</sup>

Access to the guarantee of care and the construction of bonds between subjects, for example, are influenced by the way in which institutions provide assistance to individual and collective health needs. The attitude of the health worker, when placing himself in the user's place and perceiving his needs, is understood as one of the forms of reception as he meets and responds to these demands. Access, a determining factor for the effective use of health services, also results from individual, contextual and quality-of-care factors that influence the use and effectiveness of care.<sup>23</sup>

The idea of resistance of this population to go to work, for fear of repression or prejudice, is prevalent in all nurses' statements. A study showed that the population in question is highly resistant to seeking health services, which demonstrates the existing discriminatory context, constituted by a presumed heterosexuality, the lack of qualification and the prejudice of health professionals to serve this population.<sup>13</sup>

Thus, it is observed that the LGBTQIA + population does not have its health needs met because it is subordinated to rejection or irrational intolerance to homosexuality and other sexualities deviating from heterosexuality and heteronorm. The authors add that the group does not expose their sexual orientation in health services, thinking of the negative impact that this will bring to the quality of care.<sup>13</sup> A discussion about the assistance of nurses to the LGBTQIA + community is necessary, collaborating to trace a diagnosis of local reality, identifying needs and creating opportunities to rethink professional practice.<sup>11</sup>

Some health professionals, if influenced by the heterosexual standard imposed by our culture, make use of discriminatory practice, which can constitute a harmful obstacle to the access of the LGBTQIA + population to health services.<sup>24</sup> One of the ways to generate quality in health services is listen to these users, knowing their opinion in relation to the services and access to them.<sup>22</sup>

During the interviews, there was a lack of knowledge about comprehensive health policies for the LGBTQIA + population. A further consideration of the complexity of the health of LGBTQIA + people determined the creation of more comprehensive public health policies in order to meet the demands that would protect the specificities of lesbians, gays, bisexuals, transvestites and transsexuals and more related to the process health-disease-care.<sup>25</sup>

Based on the Brazil without Homophobia Program and in accordance with SUS guidelines, in 2010, a historic landmark was created to recognize the health demands of this population in vulnerable conditions: the National Policy for Comprehensive Health for Lesbians, Gays, Bisexuals, Transvestites and Transsexuals.<sup>15</sup> Their guidelines and objectives are, therefore, geared to changes in the social determination of health, in order to reduce inequalities related to the health of the LGBTQIA + population. HUS guidelines reaffirm the commitment to universality, integrality and effective popular participation, for the recognition of the needs for actions, for the promotion, prevention, recovery and rehabilitation of health.<sup>25</sup>

Among the limitations expressed by nurses, the lack of knowledge about the characteristics of the LGBTQIA + population was mentioned, as well as the lack of training promoted for the workers of the units. Thus, recognizing the full citizenship of all human beings, more specifically, of the LGBTQIA + population, one can think about the search for coexistence between these users and health professionals. The changes in the health networks for the better care of this population also depend on the changes in the way of thinking and acting of health professionals. Cultural issues arising from the heterosexual pattern subjectively influence the care provided by health professionals to this population.<sup>12</sup>

Thus, the difficulty of accessing transvestites, transsexuals and transgender people to health services is a dilemma that must be discussed by health agencies, demonstrating the fragility of the user and health professional relationship with respect to the communication process, in which important issues about sexuality end up being omitted, missing opportunities for health promotion.<sup>13,26</sup>

In the field of health, important advances are noted in the Brazilian context, such as the Brazil Without Homophobia Program and the Comprehensive Health Care Policy of the LGBT population.<sup>27</sup> However, there is still a difficulty to be faced by the LGBTQIA + population in the face of violence and discrimination experienced as a result of free sexual identity. In addition, access to health care goes through difficulties, such as discriminatory care by professionals in the units, inappropriate conduct, constraints, prejudiced connotations or even verbal offenses said by professionals during care.<sup>13</sup>

In view of this context, "there are still several obstacles regarding the implementation of government proposals".<sup>28</sup> Thus, for health policy to be integrated, investment in professional training focused on the development of

professionals' communication skills is necessary, in order to enable them to use non-discriminatory language in serving the LGBTQIA + population.<sup>25</sup>

## Conclusion

The collective discourse of nurses working in Primary Health Care allowed to reveal the production of Nursing care for the health of Lesbians, Gays, Bisexuals, Transvestites and Trans Queers, Intersex, Asexual and other sexual and gender identities.

The study is limited to highlighting the assistance reality of a Brazilian municipality, however in view of the still incipient production on the theme, this framework offers subsidies for the development of strategies to improve the health care of the population LGBTQIA +, as gaps and weaknesses of the attendance.

Here we can point out possibilities to qualify the production of nursing care, considering the hard work to be done from training to uninterrupted in-service training, involving the different sectors and spheres of care. The responsibility for free access, production of inclusive and resolving practices must be shared between the social subjects who use the service and health professionals.

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# Health of men experiencing intrafamily and conjugal violence criminally prosecuted

## Saúde de homens em vivência de violência intrafamiliar e conjugal processados criminalmente

## Salud de los hombres que sufren violencia intrafamiliar y conyugal procesados penalmente

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# REVISIA

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### RESUMO

**Objetivo:** descrever o comprometimento da saúde de homens em vivência de violência intrafamiliar e conjugal. **Método:** Estudo descritivo, qualitativo, com participação de 44 homens que respondiam a processo criminal por violência conjugal nas 1ª e 2ª Vara de Justiça Pela Paz em Casa do município de Salvador, Bahia, Brasil, por meio da criação de Grupos Reflexivos em 5 edições entre os anos de 2014 e 2018. **Resultados:** A vivência de violência intrafamiliar e conjugal comprometeu a saúde dos homens com sintomatologia física e psíquica, manifestada por dores no peito, falta de ar e perda de peso; irritabilidade, vigilância, alteração no padrão de sono, tristeza, sentimento de impotência e comportamento suicida; impactos em perda da função laboral ou dificuldade de empregabilidade; rompimento de vínculos afetivos familiares e da rede de apoio; constrangimento e isolamento social. **Conclusão:** Vivenciar a violência intrafamiliar e perpetrar a violência conjugal provoca nos homens processados criminalmente a autodestruição com repercussões de expressividade danosa à sua identidade, sua saúde e a vida.

**Descritores:** Masculinidade; Saúde do Homem; Conflito Familiar; Violência Baseada em Gênero.

### ABSTRACT

**Objective:** to describe the health compromise of men experiencing intrafamily and conjugal violence. **Method:** Descriptive, qualitative study, with the participation of 44 men who respond to criminal proceedings for conjugal violence in the 1st and 2nd Court of Justice for Peace at Home in the municipality of Salvador, Bahia, Brazil, through the creation of Reflective Groups in 5 editions between 2014 and 2018. **Results:** The experience of intrafamily violence and marital commitment to the health of men with physical and psychological symptoms, manifested by chest pains, shortness of breath and weight loss; irritability, vigilance, changes in sleep patterns, sadness, feelings of helplessness and suicidal behavior; impacts on loss of work function or difficulty in employability; disruption of family affective bonds and the support network; constraint and social isolation. **Conclusion:** Experiencing intrafamily violence and perpetrating conjugal violence causes self-destruction in men who are criminally prosecuted, with repercussions of harmful expression to their identity, health and life.

**Descriptors:** Masculinity; Men's Health; Family conflict; Gender Based Violence.

### RESUMEN

**Objetivo:** describir el compromiso de salud de los hombres que sufren violencia intrafamiliar y conyugal. **Método:** Estudio descriptivo, cualitativo, con la participación de 44 hombres que responden a procesos penales por violencia conyugal en el 1er y 2do Juzgado de Justicia para la Paz en el Hogar del municipio de Salvador, Bahía, Brasil, mediante la creación de Grupos Reflexivos en 5 ediciones entre 2014 y 2018. **Resultados:** La experiencia de violencia intrafamiliar y compromiso conyugal con la salud de hombres con síntomas físicos y psicológicos, manifestados por dolores de pecho, disnea y pérdida de peso; irritabilidad, vigilancia, cambios en los patrones de sueño, tristeza, sentimientos de impotencia y comportamiento suicida; impactos en la pérdida de la función laboral o dificultad en la empleabilidad; ruptura de los lazos afectivos familiares y la red de apoyo; restricción y aislamiento social. **Conclusión:** Experimentar violencia intrafamiliar y perpetrar violencia conyugal provoca la autodestrucción en los hombres procesados penalmente, con repercusiones de expresión nociva para su identidad, salud y vida.

**Descritores:** Masculinidad; Salud de los hombres; Conflicto familiar; La violencia de género.

ORIGINAL

## Introduction

Marital and intrafamily violence are configured as a complex and multi-causal phenomenon, based on the existing asymmetry between genders, marked by intersectional, trans and intergenerational characteristics. From the experience of violence, significant repercussions are generated for women, families, communities, and also for men, affecting them in different dimensions such as health.

Intra-family violence is understood as any form of abuse directed at children or adolescents by people who are considered to be members of the family, even if these people do not have inbreeding relationships. It has been considered a serious social problem, reaching the entire population, requiring studies in different areas. The recurrence of this type of violence makes it part of the daily lives of families, passing from generation to generation without suffering even any modification of such practices. This occurrence makes intrafamily violence important for the health sector, considering the impacts generated to the condition of human life.<sup>1</sup>

This phenomenon has been perpetuated, with repercussions on the generation of violence in adulthood and is assimilated and naturalized by those who experience it.<sup>1</sup> This process occurs given the generational transmission of violence committed against women who also affects their children, whether as spectators of violence motherhood, or as an actual victim of such an act. These experiences have influenced marital choices, causing the situations witnessed in their families of origin to be revived, even if there is a desire to build relationships based on premises that differ from those already experienced.<sup>2</sup>

In Brazil, the perpetuation of violence and its occurrence in the conjugal sphere is a public health problem. It is estimated that five women are beaten every 2 minutes; the partner (husband, boyfriend or ex) is responsible for more than 80% of the reported cases, according to the survey Brazilian Women in the Public and Private Spaces.<sup>3</sup> In 2017, 452,988 new case records entered state courts domestic violence against women, an increase of 12% compared to 2016, with 402,695 new cases. In the same year, 236,641 emergency protective measures were granted, an increase of 21% in relation to 2016, when 194,812 measures were issued.<sup>4</sup> In this context, the promulgation of the Femicide Law (Law No. 13,104 of 2015) clarified the understanding of violence fatal against women for gender reasons.<sup>5</sup>

In this scenario, it draws attention to the place occupied by the masculine, given that the identities of men reinforce the rejection of the feminine and the condition of fragility of the woman. Thus, the male identity construction is shaped by patterns of violence, in which power and domination are intertwined with the traditional way in which masculinities are structured.<sup>6</sup>

Hegemonic masculinity has put men at risk, given that it reinforces the self-affirmation of power in relationships, making it vulnerable to situations such as suicide.<sup>7</sup> The abusive use of alcohol and illicit drugs and access to firearms have been identified as elements of male socialization, with high potential for involving men in episodes of violence, such as the aggression of their consorts.<sup>8</sup>

As a consequence of conjugal violence, men have been subjected to police and legal provisions, from the experience of prison or from the legal-criminal process for this cause. In this sense, the actions established with the enactment of

Law 11,340 of 2006, known as the Maria da Penha Law, stand out. Stricter legal measures are created from this Law for the perpetrators of violence, including the need to create assistance programs aimed at this public.<sup>5</sup>

With the creation of this legal provision, an important response to the impunity committed and perpetrated by men who commit aggressions was carried out. However, the measures accentuated the punishment for men, but it did not advance in thinking what recovery and re-education programs are, nor how they should be implemented and what is their relationship with health services. In this sense, the question arises, what is the place of care provided to this public in HUS? How do these men access the health system? How are they welcomed and what are the consonances with the integrality of care?<sup>9</sup>

Usually the man who finds himself in this context is seen from the condition of aggressor, which strengthens the stigma and obfuscates the need to pay attention to them. A review study that analyzed national publications on the subject revealed that the problem involving men and conjugal violence has a financial impact on the country, due to the increase in costs generated by spending on the legal-penitentiary sector, however the costs have not been measured. generated in the health sector, contrary to what happens with women, making it possible to observe how undersized and invisible this problem is.<sup>10</sup>

Contrary to what has been evidenced, the experience of intrafamily violence and conjugal violence perpetrated by men, has generated significant repercussions in the condition of male health, in such a way that physical and mental illnesses are generated, as a result of the somatizations from the beginning. experienced stress. These commitments expand, affecting public life, the family, current and future affective and marital relationships, financial and labor, which are enhanced by the emergence of prison and the process.<sup>11</sup> Such a scenario should imply the expansion of interventions that include men authors of violence against women, causing new meanings and expressions of being a man to emerge, which modify violence in affective relationships, such as the creation of reflective groups and prevention social technologies.<sup>9,12-13</sup>

In view of this context, in order to promote actions aimed at preventing vulnerability factors and elements that precipitate and intensify intrafamily and conjugal violence and minimizing the occurrence of damage to health from the experience of the phenomenon, we sought to investigate: What commitments are they generated for the health of men who experienced intrafamily violence and were prosecuted for conjugal violence?

In order to answer the question, this article aims to: In order to answer the question, this article aims to: describe the health compromise of men who experienced intrafamily violence and were prosecuted for conjugal violence?

## Method

This is a descriptive, qualitative study, linked to a matrix research project, entitled: *Re-education of men and women involved in criminal proceedings: a strategy to face conjugal violence*. The project is part of the Study Group on Violence and Quality of Life (VID @), from the Nursing School of the Federal University of Bahia (NSUFBA), funded by the Research Support Foundation of the State of Bahia (FAPESB).

It was approved by the NSUFBA Research Ethics Committee, under opinion n. 877,905 / 2014, in line with the ethical and legal recommendations highlighted through Resolution No. 466/12, of the National Health Council, which provides for research involving human beings. The ethical aspects of the research were respected, guaranteeing anonymity, confidentiality, free decision to participate in the study, and the men were invited to participate in the research, by presenting the Informed Consent Term, which allowed after the consent, the beginning of the study.

The research was carried out in partnership with the 1st and 2nd Courts of Justice for Peace at Home against Women in the municipality of Salvador, Bahia, Brazil. The Courts were created by an initiative advocated by Law No. 11,340, enacted in 2006, called the Maria da Penha Law, which in its Art. 35 provides for the need to develop actions directed at men who commit violence.

As an initiative to implement these actions, and for the purpose of scientific investigation, Reflective Groups (GRs) of gender education were carried out, in the operating group mode, of the task-centered type, proposed by Pichon-Rivière and anchored driving based on the framework theoretical proposal proposed by Paulo Freire. The GRs were operationalized in 5 editions of 8 meetings each, with an average duration of two hours, which took place between 2014 and 2018, in partnership with a state public school linked to the project.

The following themes were contemplated in the meetings: Presentation of the GR; influence of the family in the formation of the Self; social construction and gender inequalities; masculinities and the formation of the new man; men's health and encouraging self-care; perception of violent conduct; peaceful conflict resolution and GR assessment.

The study included 44 men involved in the legal-criminal process for conjugal violence in the aforementioned Courts, who met the inclusion criteria: having a history of experiencing intrafamily violence, responding to the legal-criminal process for conjugal violence and preventive detention for this cause, presenting satisfactory psychological and emotional condition. The psychological assessment was carried out with the support of a psychologist linked to the study group.

Participants were aged 27 to 65 years old, self-reported race / color black, incomplete high school education, marital status in a stable relationship, average time of marital relationship ranging from 03 to 30 years, 2 to 3 children on average and all lived alone in the current period of the research, having experienced preventive detention for a period of up to 30 days on average. These worked with precarious labor ties, and occupations such as: watchman, waiter, driver, cashier, production assistant, assistant general services, mechanic, charger and electrician, reaching an income of 1 to 2 minimum wages, and 3 were police officers with a higher income than the others. During the process of operationalization of the research 3 men repeatedly committed the practice of violence, being again charged with legal and police provisions.

For data collection, individual in-depth interviews and group interviews were conducted. Individual interviews took place under the scheduling and convenience of the participants, in a reserved environment at the facilities of the supporting public school. Collective interviews took place through the GRs. Both were guided by a previously elaborated instrument, submitted to evaluation in the research group and with the participants through a pilot test.

The interviews lasted an average of one hour (individual interview) and two hours (group interviews), recorded, later transcribed in full and submitted to treatment. These were carried out by trained researchers, under the supervision of professors in the research area, in *Consolidated Criteria for Reporting Qualitative Research (COREQ)*.

The organization of the data was carried out under the support of the NVIVO®<sup>11</sup> Software, which allowed categorizing and coding major and minor themes. For analysis, we used the Collective Subject Discourse, anchored in the theoretical frameworks provided by Bandura's Theory of Social Learning,<sup>14</sup> as a way to understand the phenomenon of transgenerational violence, the Ecological Model proposed by Heise to explain conjugal violence and the Psychosomatics for understanding the health repercussions.

## Results

### **Synthesis 01: health compromise in the face of intrafamily violence suffered.**

The experience of intrafamily violence suffered in childhood brought compromises to the health of men, with psychological impacts, expressed by the negative self-perception of identity, demarcated by physical and emotional abuse and visualization of maternal violence, which generated suffering that reflected in its self-realization:

*[...] I really was a very mistreated guy, so much so that I have marks on my body due to the physical aggressions I suffered. My father drank a lot [...] he attacked my mother and me. I threw myself into the wardrobe, hit me with pieces of wood and even with iron [...] that made me very nervous. I cried for my mother to be beaten. Today I cry a lot, for the dreams that I could not achieve. (CSD of men experiencing domestic and domestic violence).*

### **Synthesis 02: health compromise after the violence committed against the spouse.**

In adulthood, in the context of conjugality, during and after having experienced the marital conflict, men revealed the presence of health compromises. Physical symptoms emerged, manifested by chest pain, shortness of breath, elevated blood pressure and psycho-emotional changes expressed through anger, guilt, crying and changes in sleep quality:

*[...] at the moment of disagreement with my partner I felt chest pain and shortness of breath [...] My blood pressure went up. I was nervous, upset. After the fight I cried a lot, I felt angry because I made a mistake. I had a tightness in my heart, a pain in my conscience, I felt dejected because it really was a situation that was never supposed to happen. I couldn't sleep well thinking about the situation. (CSD of men experiencing domestic and domestic violence).*

### **Synthesis 03: health compromise resulting from preventive detention**

As a consequence of the conjugal violence committed, prison emerged as a factor that generates health compromises, with significant repercussions in the family sphere, through the separation of children and family. They also had a



social impact (generated by isolation and stigma), psychological, manifested by hypervigilance, suicidal thinking and the need to use drugs to treat mental illness and work, identified through the alternations generated in the quality of the performance of functions in the work environment, job:

*[...] when I was arrested they took me to the police station. There is suffering, there is no place for anyone to go. When giving testimony, when I had the opportunity to be heard, the delegate was very aggressive, not giving me much opportunity to speak and explain myself. It was a great humiliation, because they only treated me like an aggressor. Being stuck, away from home, family, people you care about is very bad. Because of the prison, I had problems with my family members and the removal of some of them, I was scared, anxious, scared, I thought about suicide and that all caused me problems, so much so that today I use controlled medications. Sometimes when I'm working, I remember everything I went through at the police station and I start to cry, I get really upset and I can't keep working and this has interfered with my service. (CSD of men experiencing domestic and domestic violence).*

#### **Synthesis 04: health compromise resulting from the legal-criminal process**

As a result of the crime to which they were accused, the men revealed that their health was compromised as a result of the legal-criminal process. Such commitment, impaired you in maintaining physical well-being, manifested by weight loss, difficulty in practicing physical activity, in mental health, resulting from fear, sadness, feeling of helplessness and depression, and social, marked by stigma and embarrassment :

*[...] going through all these embarrassing issues in the process, involving my friends and family is very difficult. I am afraid of being able to generate problems with the protective measure, due to the fact that I still have a certain proximity to it (it refers to the proximity to the spouse, with whom she responds to the process). People started to look at me differently, and because of that, I'm afraid someone will call the police and say that I'm looking for them or that I'm making some kind of threat, because anyone can call and make a report, putting me at having problems with justice and it affects my mind, brings discomfort, makes me depressed. Because of the process I lost weight, I was never able to practice physical activity anymore, I can't concentrate on training. I don't feel like the guy I used to be, in that mood. I feel sad, humiliated, a defendant, useless. (CSD of men experiencing intrafamily and conjugal violence).*

## **Discussion**

From the male discourse, it was evidenced that men, when they experience childhood with a family imbalance, especially with the presence of severe physical and psychological violence in this period, and / or that the father raped the mother, presented future delinquent behavior, in this case, against their wives , through the practice of conjugal violence.

The disturbance caused by violence against women in family relationships, results from a generational transition process about violent behavior, with significant social dimensions and for public health. For a better understanding of the phenomenon, it is necessary to understand the family dynamics and the social relationships established in order to know the meanings attributed to the

social roles to be played by men and women and how these are being transmitted in the shaping of family models across generations.<sup>15</sup>

This question can be better understood based on the social learning theory, or sociocognitive theory, developed by Albert Bandura, who proposes the support and understanding of aggressiveness as a response pattern that is learned through reinforcement and modeling, which it consists in the elaboration of a mental representation of the learning object. Learning in this sense focuses on observing the behavior of others, the rewards received and addictive experiences.<sup>14</sup> This model of learning based on observation, was unveiled in male discourse.

Children who have experienced experiences of violence in childhood may have similar experiences in adulthood. Maternal abandonment, abusive use of alcohol and other drugs by parents, practice and / or repetition of violent behaviors are found to be risk factors that generate / influence the perpetration of violence. In contrast, the establishment of loving and healthy models, a strengthened and structured support network, psychotherapeutic treatment, has contributed to interrupting the transgenerationality of violence.<sup>1</sup>

In the perspective of social learning, this reproduction can occur from the development of cognitive processes that mediate the modeling, causing a complex process to emerge, and not a simple imitation or exact reproduction of what was observed. In this context, attention processes are present, which act in the selection of models and behaviors towards the recipient individual, highlighting the models of the usual contexts of life, such as family, school, work, or others considered as attractive.<sup>14</sup>

Such learning is followed by the process of representation and memory, which presents itself as essential to enable the transition from what was observed to the construction of a behavioral response of action, coding and integrating the information collected, as well as the process of reproduction or behavioral response, which comprises the apprehended behavior put into practice, already apprehended, associated, self-observed and self-evaluated and finally the motivation process, which consists of the facilitating or embarrassing process of the action, causing it to reproduce or question the model apprehended.<sup>14</sup>

With regard to the practice of violence, the theory of social learning, makes it possible to clarify that violent acts are not congenital, and cannot be spontaneous, but rather need to be apprehended and trained to enable their execution. In this way, this learning starts to be built slowly and they need models that exercise them, such as families, peers, such as consorts, that demonstrate types of actions that offer rewards.<sup>14</sup> In the scope studied, rewards could be associated with the fact of the guarantee of privileges attributed to men in the beginning of the domination over women.

The construction of the male identity of the men studied was marked by a feeling of disapproval, hostility and lack of affection that culminated in sentimental repercussions that lasted until adulthood. The suffering resulted from the mutual experience of being raped and, at the same time, living in an environment in which their mother witnessed violence. Such a lived experience may have been internalized by men as a situation understood as a normal behavioral model to be followed and replicated.

The lack of affectivity and the presence of the violation of rights, demarcated by experiences of physical and psychological violence in the

intrafamily scope of the boys' identity formation, make it possible to manage psychological suffering. Such behaviors witnessed as a child can be reproduced in adulthood, as pointed out in a study carried out with men who committed conjugal violence in the city of Salvador, Bahia, Brazil.<sup>16</sup> The absence of a father figure in the family context, associated with situations of separations, divorces of the parents, has unveiled contours of the perpetration of conjugal violence, and if better understood it could become an important tool for the development of interventions with the purpose of protecting new family relationships.<sup>1</sup>

Other childhood adversities that permeate the transgenerational character of violence, such as child abuse, neglect, and bullying, have been identified as enhancing the phenomenon. The repercussions resulting from violence are permeated by emotional, physical and financial factors, present in childhood. Such generational repercussion has been studied with greater amplitude in the female population and in Western contexts, as highlighted by studies carried out in Siri Lanka and in South Africa,<sup>1</sup> lacking investigations directed to the male condition.

In this context, the family appears as a prone field for the transmission of violence, while in it the first models or systems of beliefs and values that an individual can acquire are configured, being able to modify or not change throughout his life. In this way, psychic transitions, or transgenerationality, can be considered a form of alienation, in which an individual unexpectedly reproduces such action or content, without being aware of such an act, even constituting a way of automating attitudes and behaviors, reproducing without being able to disconnect from the cycle already immersed.<sup>17</sup>

The relationship models are also permeated by the transgenerational construction, both for similarity, as for complementarity, to be followed by the children or to be rejected by them, but in any case, these motivations will exert a great influence on the marital choice.<sup>18</sup> Thus, accompanying the acts and behavior of boys during childhood, in the school environment, for example, presents itself as a crucial element for the identification of the reproduction of violence. In this regard, it has been identified that women victims of neglect, physical and sexual abuse, and who have witnessed intrafamily violence between their parents, were more vulnerable to victimization in their marital relationships as adults. In turn, men when victims of physical or sexual violence in the family context, were more likely to perpetrate violence in their romantic relationships.<sup>19</sup>

By viewing the father beating the mother, the men demonstrated to have suffered a negative influence on their biopsychosocial health condition, through the manifestation of the psychological impact, which caused them emotional stress as a child, with reflexes in adult life, revealed by the feeling of decline in self-perception and self-realization. Intrafamily violence impacts on child psychic development. As a consequence of the present psychological violence, significant losses emerge, affecting intrapersonal thoughts, causing fear, low self-esteem, symptoms of anxiety, depression and suicidal thoughts. They also degrade emotional health, with the emergence of emotional instabilities, uncontrolled impulses, disorders such as eating and influence on substance abuse.<sup>20</sup>

In addition, social skills are affected, resulting in antisocial behavior, detachment, low social competence, sympathy and empathy for other people and

for criminality, in affective relationships, in the way love relationships are constituted. They also affect learning, generating low achievement, moral damage and damage to physical health, with the appearance of somatic complaints, developmental failure and high mortality, and putting an end to the transgenerational nature of violence, which causes the problem to perpetuate itself.<sup>20</sup>

Men who experience this context, lack social support, making it possible to broaden the understanding of psychological functioning, and, therefore, the planning of interventions to be promoted for the purpose of solving problems and raising self-esteem.<sup>20</sup> As a reflection of a transgenerational process, the practice of violence was presented as a daily action in the relationships established by men, experiencing in this context experiences of marital conflicts and violent conduct against their partners.

Violence in the interaction reproduced between different levels, involving the individual, family, community and socio-cultural spheres of violence against women is understood from the ecological model, which signals the existence of levels of causality, found not only in a single determinant, but in the interaction of different operating factors, favoring or protecting the individual from the phenomenon, which allows the ways to be followed for prevention and coping to be observed.<sup>21</sup>

Due to the multi-faceted and multifaceted characteristic of violence, the ecological model allows the analysis of the interaction of the different elements that influence behavior and precipitate and / or intensify the likelihood of people becoming victims and / or perpetrators of violent acts. In this sense, biological factors, personal history, such as sociodemographic characteristics, such as the history of aggressive behaviors, psychological disorders, personality, connection with the abuse of alcohol and other drugs and self-depreciation are highlighted.<sup>21</sup>

Relationships of intimate forum are also incorporated, such as those maintained by couples and other family members, and friends, in community contexts, permeated by the influence of everyday social relations, present in schools, workplaces and in the surrounding community. The problem can also arise from the propensity to risk violent acts in these places, due to exposure to vulnerability (unemployment, drug trafficking) .<sup>21</sup>

Last but not least, the relationship that exists at the structural level of society, in which the social construction of creating a climate that stimulates or prevents the practice of violence, rooted in socio-cultural norms, can confer a high degree of determination. At this level, the possession of a weapon, police conflicts, parenting conditions, suicide, male domination over women and children, racism, deficit in public policies and maintenance of economic and social inequalities stand out.<sup>21</sup> When knowing these dimensions, it is highlighted the need for the phenomenon of violence, especially that which affects women, to be analyzed and addressed in an intersectoral and interdisciplinary manner.

In this regard, it should be noted that the men investigated compose a portrait of the disadvantaged social strata of the citizen devices, with an expressive profile of vulnerability, being marked by low education, deficits in access to employability, income, weaknesses in the establishment of affective, family and conjugal, and crossed by the race / color item.

This problem cannot be seen only by a single Eurocentric identity, intersectionality, it presents itself as a concept that situates and subsidizes the

recognition of discriminatory practices and the maintenance of inequalities, thus constituting a theoretical and critical framework.<sup>22</sup> that opens the agenda for a expanded debate and has contributed significantly to the reframing of health actions and conduct. The intersectional perspective has allowed experiences to be observed from the different perceptions through the intertwining of markers of gender, class and racialization processes, as conditioning factors in the social and political context, causing an expansion of gender oppressions , such as conjugal violence.<sup>23</sup>

From the speech, the men revealed to have suffered repercussions to their health during and after the occurrence of the violence committed against their consorts. The appearance of sensations such as chest pain, shortness of breath and elevated blood pressure marked the physical repercussions. Manifestations such as changes in mood, albeit brief, changes in the sleep-wake cycle, feelings of guilt and remorse characterizing somatic symptomatology, configured the psycho-emotional impairment.

Somatization emerges while any type of transition to the act, such as substance use, increased vulnerability to bodily accidents, failures in immunological mechanisms.<sup>24</sup> When subjected to a situation of severe stress, men may have developed mental disorders , such as adjustment disorders. These disorders are considered as a direct consequence of severe acute stressor or continued trauma.

Manifestations of aggravation to mental health, including changes in depressed, anxious and / or irritable moods, as well as persistent concerns related to stressor, behavioral changes such as social isolation and somatization, which are physical symptoms with no evident organic basis, are found .

The men analyzed in this study, explicitly and spontaneously verbalized their psycho-emotional and psychosomatic complaints, in the revealed speeches. These unpleasant manifestations are temporarily associated with psychological symptoms secondary to stressful situations experienced, in theory, approximately six months after the resolution of the related problems. However, some individuals may evolve into a true depressive condition, as evidenced by the discourse on the need for drug intervention and psychiatric treatment.

As a result of conjugal violence, men experienced prison, and it was possible to evidence the presentation of situations that generated compromises to their health. The male health condition in this context was affected by issues influenced by the experienced family breakdown, caused by the deprivation of freedom, which caused the distance from the home environment, separation from children and the development of conflicts between family members.

The prison has been causing men to become ill, with repercussions on the appearance of various physical and mental symptoms. This fact was evidenced in a study carried out in the United States that identified that more than half of all inmates in an American prison group had some mental health problem in a situation of physical somatization.<sup>25</sup>

This same situation converges with the evidence presented in that study. Prison has also contributed to generate personal changes of a subjective character in men, from the unveiling of feelings of worthlessness, low self-esteem and self-realization, interfering in the ability to perform daily activities such as physical activity and concentration. This fact may even be closely linked to the

construction of masculinities, in which the feeling of being losing strength causes manifestations of declining well-being.<sup>11</sup>

In addition to family problems, social issues also influenced the quality of men's health, especially due to the isolation caused by the prison situation. This isolation led to the removal of the space for daily social interaction, friends and other structures present in the support network. In addition, his condition and social status were affected by the stigma of being considered an aggressor, a situation experienced within the prison system, expressed by the way they were treated at the police station.

In addition to these health compromises of men experiencing prison for conjugal violence, problems such as gastric changes, loss of appetite, reduced muscle strength, headache and tachycardia were found in a study with a similar public, triggering psychic illness, the result of somatization, with impacts on the family, on the male financial and employment condition.<sup>11</sup> Such a phenomenon, should trigger the development of actions beyond the penalty, as a way to reduce the rich potential of male illness due to the deprivation of freedom.

In the context of mental health as a result of imprisonment, it was possible to identify in the speech, the presence of records of depressive symptoms, suicidal thoughts and the beginning of a psychiatric treatment, resulting from a probable true anxious depression. Such a situation makes it known that men experience situations of transient stress, eventually developing a mental disorder itself. Such aggravation caused the men to have their work activities impaired, making them vulnerable to their permanence in the job due to this commitment.

A study that investigated the experience of pre-trial detention for men, found that in the first instance, the arrest caused the male public to feel that they were being wronged, especially with the reinforcement of the naturalization of violence present in conjugal relations. After making violent conduct recognized, men reveal the desire to have violence-free relationships, which means that social support is given to them, in different instances, in order to provide support in the development of self-responsibility that is capable of allow the re-signification of acts and the reconstruction of conjugal relationships through a harmonic maintenance.<sup>8</sup> Anchored in this evidence, it is reinforced the importance of expanding the implementation of actions aimed at this audience.

When they had to respond to a criminal case for conjugal violence, added to the experience of the prison, the men revealed in the speech that they started to have an unsatisfactory weight reduction, difficulty in the practice of physical activity and problems with concentration. In addition to the impairment of physical health, men also referred again to the permanence of depressive, anxious symptoms, ideas of worthlessness, feelings of incapacity, hopelessness and thoughts of death, which constitute a real illness of the psychic condition.

Among the main dilemmas experienced by men is the protective measure issued by the courts, causing him to distance himself from his spouse, his children and the domestic environment. The men said they were afraid of being fined by the police due to some non-compliance, attributing this possibility to the occurrence of denunciations made by third parties. The fear of being reported has been causing damage to well-being, configuring itself as an agent that disturbs the mental state, identified by the presence of discomfort, hypervigilance and low self-esteem.

The need to carry out programs to address the problem involving men who are the perpetrators of conjugal violence has been observed, most of these initiatives are linked to the judicial system and the challenges have included the perpetration of violence during the execution of actions and the criminal recurrence, which generates an absence of evidence to identify the effectiveness of the measures, such as psychotherapeutic treatment.<sup>26</sup> As a factor to be overcome, there is the need to understand violence as a criminal act on the part of men, which naturalizes, minimizes and is not responsible, transferring the cause to women, a situation that is permeated by the construction of hegemonic masculinities that reinforce the practice of violence against women, as a masculine attribute.

## Conclusion

The speeches revealed that men's health is compromised in the face of the experience of intrafamily violence suffered and the conjugal violence performed. These commitments affected well-being in the dimensions of physical, psycho-emotional, social, family and work health.

When experiencing intrafamily violence, men suffer health compromises that affect their physical dimensions, when they suffer the bodily aggressions used by their parents, and the psycho-emotional and mental dimensions expressed by traumatic memories that manifested feelings of helplessness, frustration, and loss of sense of self-realization.

In addition, regarding the health compromise generated after the conflict occurred and the practice of violence committed by men against their spouses, changes in physical status were highlighted, through cardiovascular and respiratory problems and the psychological state manifested by emotional destabilization and changes sleep pattern intensified by the feeling of guilt.

As a consequence of the violence committed, when they are subjected to prison, health compromises imply withdrawal from work, family and friends, as well as exposing them to hostility and subsequent impact on the performance of work functions and psychological and mental changes with the suicidal surveillance and thinking. In addition to the prison, the men unveiled in their speeches the commitments arising from the legal-criminal process that includes the issuance of the protective measure, due to the crime in which they were accused by the spouses, demarcated by fear, embarrassment, humiliation, depersonalization, physical symptoms such as loss of weight, decline in the practice of physical and psychological activity such as difficulty concentrating, sadness and discomfort.

It was evidenced that the experiences of intrafamily and conjugal violence are intersected by the relations of gender, race / ethnicity, class and by the intergenerational construction that demarcate the masculinity constructs of the studied public. Male subjectivities are also formed based on the social markers of difference. Despite the intersectional relationship providing support for analysis of the phenomenon, the study is limited to the fact that masculinities are Latin American and can be expressed in different ways in other contexts and territories, as well as the relationships of conjugal relations and forms and meanings of violence presented.



In view of the health commitments presented, there is an urgent need to develop intersectoral and interdisciplinary actions with a focus on building new models of masculinity that value self-care and non-violence. Furthermore, it is important that actions aimed at preventing and addressing intrafamily and conjugal violence and gender-based education are implemented and strengthened in focal areas such as schools, but which go beyond other spaces such as health services, such as health care. to the health of children and adolescents, and in the context of adulthood, but also in work environments, professional and academic training processes, religious institutions, in traffic, in transportation and public environments of great circulation such as subway stations, in movements and entities and in spaces for leisure and coexistence, such as soccer fields, barber shops, bars where there is ample male socialization.

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# Health care praxiology men living with diabetes and hypertension

## Praxiologia do cuidado de saúde homens que convivem com a Diabetes e a Hipertensão Arterial

### Hombres de praxiología de la salud que viven con diabetes e hipertensión

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#### RESUMO

**Objetivo:** Aprender as práticas de cuidado de saúde exercitadas por homens em situação de adoecimento crônico. **Método:** Estudo qualitativo realizado com 38 homens idosos que conviviam com a Diabetes e a Hipertensão Arterial Sistêmica em um município da Bahia, Brasil. Realizamos entrevista individual submetida à análise pelo método do Discurso do Sujeito Coletivo, suportado pela Teoria das Transições. **Resultados:** A praxiologia do cuidado de saúde dos homens esteve configurada pelo desenvolvimento de aprendizados e aquisições de habilidades específicas sobre a doença crônica; reeducação familiar; adesão às terapêuticas tradicionais face a utilização dos fitoterápicos, de saberes ancestrais e populares; a promoção de atividade física e repouso; o controle de modificações nos órgãos e no corpo e a promoção do bem-estar psicológico e a superação do sofrimento. **Conclusão:** As práticas de cuidado estão constituídas a partir das vivências masculinas na experiência do adoecimento crônico pela Diabetes Mellitus e a Hipertensão Arterial, que ao seu modo, implicam em mobilizações das masculinidades ao encontro de atos, atitudes, ações direcionadas à convivência com a doença, o seu enfrentamento e a significação a partir das oportunidades e dos acessos que estão disponíveis no território.

**Descritores:** Praxiologia; Cuidados de Enfermagem; Adoecimento crônico; Saúde do Idoso; Saúde do Homem.

#### ABSTRACT

**Objective:** To learn the health care practices exercised by men in a situation of chronic illness. **Method:** Qualitative study carried out with 38 elderly men who lived with Diabetes and Systemic Arterial Hypertension in a city in Bahia, Brazil. We conducted an individual interview submitted to analysis using the Collective Subject Discourse method, supported by the Transition Theory. **Results:** The praxiology of men's health care was shaped by the development of learning and the acquisition of specific skills about chronic disease; family reeducation; adherence to traditional therapies in view of the use of herbal medicines, ancestral and popular knowledge; the promotion of physical activity and rest; the control of changes in organs and body and the promotion of psychological well-being and the overcoming of suffering. **Conclusion:** Care practices are constituted from male experiences in the experience of chronic illness due to Diabetes Mellitus and Arterial Hypertension, which, in their own way, imply mobilizations of masculinities to meet acts, attitudes, actions directed to living with the disease, its confrontation and the significance from the opportunities and accesses that are available in the territory.

**Descriptors:** Praxiology; Nursing care; Chronic illness; Health of the Elderly; Men's Health.

#### RESUMEN

**Objetivo:** Conocer las prácticas asistenciales que ejercen los hombres en situación de enfermedad crónica. **Método:** Estudio cualitativo realizado con 38 hombres mayores que vivían con Diabetes e Hipertensión Arterial Sistémica en una ciudad de Bahía, Brasil. Realizamos una entrevista individual sometida a análisis utilizando el método del Discurso Colectivo del Sujeto, apoyado en la Teoría de la Transición. **Resultados:** La praxiología del cuidado de la salud de los hombres fue moldeada por el desarrollo del aprendizaje y la adquisición de habilidades específicas sobre enfermedades crónicas; reeducación familiar; adherencia a las terapias tradicionales en vista del uso de hierbas medicinales, conocimientos ancestrales y populares; la promoción de la actividad física y el descanso; el control de los cambios en los órganos y el cuerpo y la promoción del bienestar psicológico y la superación del sufrimiento. **Conclusión:** Las prácticas de cuidado se constituyen a partir de vivencias masculinas en la vivencia de enfermedad crónica por Diabetes Mellitus e Hipertensión Arterial, que, a su manera, implican movilizaciones de masculinidades para enfrentar actos, actitudes, acciones encaminadas a convivir con la enfermedad, su enfrentamiento y la trascendencia de las oportunidades y accesos que se encuentran disponibles en el territorio.

**Descriptores:** Praxiología; Cuidado de enfermera; Enfermedad crónica; Salud de los ancianos; Salud de los hombres.

ORIGINAL

## Introduction

Chronic Noncommunicable Diseases (CNCDs) are responsible for more than 41 million deaths annually and are major factors for the emergence of disabilities and premature deaths in society worldwide. To cope with this, the use of health interventions, especially in Primary Care, with the promotion of adherence to treatments and improvement of actions that guarantee the adoption of healthy habits that stimulate the control of these diseases, are mostly quite effective.<sup>1</sup>

The impacts generated by the CNCDs are observed in several areas and range from family issues due to inability in provision to the emergence of economic imbalances resulting from high costs with ends in treatments.<sup>2</sup> Faced with this problem, the World Health Organization (2014),<sup>3</sup> defined some global goals to be achieved by 2025. These goals converge with disease control and include improving eating habits, reducing obesity and encouraging therapeutic measures.

In this area that involves the context of chronic illness in the experience of health and illness, they are confronted with gender relational issues, which highlight the social constructions of masculinities.<sup>4</sup> It is based on the understanding of this intersection that the National Policy was instituted in Brazil of Integral Attention to Men's Health.<sup>5</sup> Thus, this normative mark of the development of a focal health policy for the male population has triggered attention to contexts such as the perception of invulnerability, resistance in the search for institutional health services, concern reduced with the health situation, exercise of normative gender standards - position of provider and the culture of carelessness that permeate much of the male construction in Brazil, which can occur with elderly men.<sup>5-8</sup>

In view of this scenario that raises visibility in relation to the way men conceive and exercise health care, attention is paid to practices. In this light, it is essential to recognize that such practices have their own political ontology, which structures the logic of care.<sup>9</sup> In this way, it is increasingly necessary to work with health professionals with a focus on health care practices. and in the planning and execution of promotion, education, prevention, control, coping, treatment and rehabilitation actions, which include nursing professionals.

In view of the presented scenario, this study was guided by the research question: How to configure a health care praxiology for men who live with Diabetes and Arterial Hypertension? This article aims to learn the health care practices exercised by men who live with Diabetes and Arterial Hypertension.

## Method

Qualitative study, structured on the socio-anthropological bases of health and nursing. The research was carried out in two scenarios: a Family Health Unit and a Diabetic and Hypertensive Care Center - CADH, located in a municipality in the state of Bahia, Brazil. 38 elderly men participated in the study, who attended health services in the Primary Care network and in Medium Complexity in the Unified Health System.

The data were collected using an instrument previously prepared and validated by researchers with expertise in the area, applied to the participants in



the facilities of the health services surveyed, at previously scheduled times, under the availability of the participants and the organization of the services. The instrument used was composed of closed questions, which dealt with sociodemographic, clinical, therapeutic and related to chronic illness and open questions about the empirical object, namely: Tell us about your experience of health care in the context of chronic illness?

For data collection, the study followed the application of a semi-structured form, composed of guiding questions regarding the proposed theme and sociodemographic issues, health conditions and chronic illness, in addition to the use of herbal medicines.

As a way of approaching the participants, they were accessed by a trained researcher, who performed observation strategies not participating in the service, and made the invitation to participate in the study, considering the ethical and bioethical requirements for conducting research involving human beings, as recommendations proposed by Resolution 466 of 2012 from the National Health Council. Therefore, the Free and Informed Consent Term (ICF) was presented, which was read, explained and signed in two copies, considering the digital signature, for those who did not. were literate

The methodological analysis of the data was performed using the Collective Subject Discourse - CSD, an inductive method, which enables the organization of qualitative data to locate phenomena of social representation. From the accurate systematization and standardization of convergent discourses, Key Expressions and Central Ideas / Anchorages emerged that theoretically support the synthesis discourses of the investigated object.<sup>10</sup>

The interview was conducted individually in order to guarantee the reliability and confidentiality of the data, with an average duration of approximately 30 minutes, being guided by the pre-established script, being recorded in a single recorder, later transcribed under a reliable record of the empirical material collected. , for further organization, coding and analysis, in compliance with the criteria established by the Consolidated Criteria for Reporting Qualitative Research (COREQ), in order to guarantee rigor in qualitative research.

Through the process of organization and subsequent initial categorization of the transcribed material, developed through the NVIVO 11® Software, analysis and interpretation was carried out, which was guided by the Collective Subject Discourse (CSD) method proposed by Lefèvre and Lefèvre<sup>10</sup>, which made the in Key Expressions, later, Central Ideas, and the Synthesis Speeches.

Social representations are socio-cognitive schemes that people use to make judgments or opinions in their daily lives; they are a form of knowledge, socially elaborated and shared, of a reality common to a social group.<sup>10</sup> The interpretation of the findings was structured in the theoretical framework of Anne Marie Mol from concepts such as ontology, the logic of care and practices in given praxiology exercise employed by the author.<sup>11-14</sup>

The ethical aspects of research have been fulfilled in all stages of research development. The project was approved by the Research Ethics Committee under the opinion of: CAAE: 83710017.8.0000.5654 and n. 2.518.617.

## Results

The study consisted of 38 elderly men experiencing chronic illness due to Diabetes Mellitus and Arterial Hypertension. The sociodemographic, labor and clinical / health characteristics are presented in the infographic below:

**Figure 01** – Characterization of participants. Bahia, Brazil. 2017.



The speeches-syntheses and their respective Central Ideas that support the knowledge of the phenomenon, exposes the typology of care practices adopted by elderly men experiencing chronic illness due to Diabetes and Arterial Hypertension. The praxiology of care of the investigated public takes place in the daily routine of health services, especially within the scope of the specialized care of the Unified Health System, and reveals the centrality of practices aimed at approaching, knowing, negotiating and incorporating the dynamics presented by illnesses, and the path in the search for support, support, intervention, monitoring, adaptation and repairs.

**Synthesis 1: response patterns**

This category of discourse-syntheses expresses the collectivity of elderly men in the face of care practices that are directed to the experience of the disease due to Diabetes and Hypertension. They denounce the development and



acquisition of learning about the disease, the changes imposed by the repercussions and the construction of adaptive and coping strategies.

### **Central Idea 1A: Development of learning and acquisition of specific skills on chronic disease**

The development of the development of care practices based on learning and the acquisition of specific skills on chronic disease, constituted the type of care by this group. In addition, perceptions about their social constructions of masculinities are elucidated in the discourse of men and interface this care:

*[...] women are more concerned with health, they are more prudent. Men tend to be more relaxed with their health care. I did that too. I lacked interest, but it wasn't because I didn't like taking care of myself, it was carelessness and ignorance, laziness and lack of motivation. In addition, there was also prejudice, which was great and shame. I also lacked guidance, as I started looking for care after 65 years old. The discovery of the diseases generated a lot of precaution, after all nobody wants to have Diabetes, nor Hypertension, because it is terrible, it is a negative subject, something bad, a hindrance, they are the worst diseases that exist, mainly for not allowing me to carry out the activities that I did before. However, even living with this situation, I started looking for improvements and even though I'm slowly trying to face it, wanting to live better, overcome difficulties, learn more about the disease, learn more with the professionals, especially about the side effects that these diseases bring, and applying the teachings in my daily life, because today I understand that taking care of health is fundamental to avoid future complications for men and health care cannot wait. (CSD de homens idosos).*

### **Ideia Central 1B: Mudanças de hábitos, novas formas de ser e adoção de comportamentos saudáveis**

As práticas de cuidado direcionadas às mudanças de hábitos e a adoção de atitudes positivas e comportamentos saudáveis se dão face a necessidade da interrupção de práticas danosas à nova condição de saúde, especialmente, as doenças crônicas. Destarte, também implicou em novas formas de ser, na busca por restabelecer sua condição saudável. Tais mudanças ocorrem mobilizadas pelos impactos deletérios e incapacitantes do adoecimento crônico:

*[...] após o surgimento da Diabetes e da Hipertensão as preocupações aumentaram. Tive que mudar muitas atitudes na vida, e eliminar comportamentos que eu realizava antes. Agora eu não faço mais o que fazia: beber cerveja, fumar, comer de forma desregrada e tudo isso por conta dessas doenças e também por conta da idade que já está ficando avançada. Também estou tendo dificuldade para andar sozinho, pois estou começando a perder a visão e tive que amputar um pé. Por conta disso, a minha família já comentou até de adquirir um andador, o que não me agrada. Agora já tenho consciência de que não pode só pensar em se cuidar só quando os problemas na saúde chegam, mas quanto antes melhor. (DSC of elderly men).*

### **Central Idea 1C: Adaptations and coping strategies to the new therapeutic / medication routines**

Care practices aimed at adaptation and coping strategies performed by elderly men are directed towards adherence to new routines, compliance with drug therapies, glycemic control, and whether they are influenced by changes in work capacities and the exercise of activities of daily living in your daily life:

*[...] before I was a more active man, I didn't care much about health, but today I am a cautious man. The routine of life was totally changed after the appearance of diseases. I stopped working because of the fluctuation of blood glucose. I started to use several medicines daily, I follow the prescription that the doctor gave me and I had to stop performing some daily activities because I lost a little bit of capacity. (DSC of elderly men).*

### **Central Idea 1E: Adaptations and coping strategies to affective and sexual changes**

The fragments of the speeches of elderly men reveal that there are impacts on the dimension of family, affective and conjugal life and on sexual performance. In view of this experience, men seek to establish new socio-affective bonds, which take place in the institution of new conjugal relationships, in the exercise of fatherhood in the old age phase and in the search for knowledge and professional support to deal with the present sexual dysfunction:

*[...] I have tried to be closer to the family, because I know that even after illnesses, our relationship has not changed, they are always supporting me, but the sex life changes. I have sexual impotence, I am no longer the man I used to be. The marital relationship has also changed. I separated from my first wife because of the illness. She didn't want to stay with me. I am now married and have two more children with my second wife. She is younger and old enough to be my daughter, but she takes care of me. Now I have been trying to start the approaches again and to overcome the difficulties in relation to sex, seeking to know more and carry out the treatments in the health service. (CSD of elderly men).*

### **Central Idea 1F: Adaptations and coping strategies to changes in work and finances**

Adaptations and coping strategies to the changes caused by chronic illness to the dimensions of the world of work and financial relationships emerged as care practices among men, and are structured through the experience of impacts, such as deprivation, income decline, loss the productive capacity for work, the removal of poses, the change of place of the man-product, for the man - "disabled", through the advent of retirement, the increase in the costs of maintaining therapies and the need for financial support by fostered by the children:

*[...] Since I started to suffer more with the advance of Diabetes and Hypertension, I went through a lot of difficulties, especially in financial terms. I had difficulty accessing the sickness allowance, I had to stop working and I was retired due to disability, and from then on my financial life changed completely, because for those who earned a lot and today living with retirement money is bad. Working I lived in a good situation, but without*

*working it is another very unpleasant one, mainly because I am no longer exercising what I used to do before. Even though I am retired, the expenses with the disease are large and the value of the pensioner is small, which made me need to do some activity to earn more money. I also had to count on my children's financial support, which has helped me with some monthly bills. I had to sell some poses that I had, for not having anyone to take care of. (CSD of elderly men).*

### **Central Idea 1D: Food reeducation**

The care practices directed to food take place through the restrictive measures recommended by health professionals in the service that elderly men attend and perform specialized monitoring, especially those of nutrition, approaching a food reeducation. Among the components of this practice, there is a change in eating habits, the restriction of consumption of processed foods, with high glycemic and lipid content. It was noted the presence of health professionals and family members as agents to support compliance with dietary diets and the positive perception of the investigated regarding the improvement of the clinical condition and the distance from practices considered "harmful":

*[...] I had to change my diet because of illness, and now I can't eat everything. I stopped drinking beer and drips and also eating some foods, especially fatty and industrialized ones, besides sweets and breads. I have followed a diet where I cannot eat everything, it is well regulated, because the nutritionist, professionals and my family are always supervising me. I then had to undergo a dietary reeducation and started to eat better, to eat less and several times a day, through a varied diet and avoid everything that harms. (CSD of elderly men).*

### **Central Idea 3A: Adherence to traditional therapies - use of herbal medicines**

Mobilized by the desire to cure Diabetes and Hypertension, elderly men used care practices anchored in traditional medicine, especially in the use of herbal medicines:

*[...] I have used plants, herbs and natural products. I also looked for information in the book "Plants heal". Use not only for Diabetes and Hypertension, but for other diseases, such as pain, flu and stuck intestines. To lower the sugar level and consume "cow leg", "stick lieutenant", "stick iron", "jamelão", "juá de boi", "juá mirim". I make tea from plants such as "graviola leaf", "quina-quina", "okra", "chia" and "moringa". I consume "alumã" and "boldo", whenever the belly is bad and tea of "stone breaker" for the kidneys. I use "aroeira" to bathe my leg when it hurts, and also to heal the wound and "lemongrass" and "capim santo" and "chayote" tea to calm down, lower the pressure and make me sleep well. I have been looking for plants and herbs in a store that sells natural products and also in my backyard or in the fields, on a farm or in the neighbor's yard and even on the curb of the street. (CSD of elderly men).*

### **Central Idea 3B: Adherence to ancestral and popular knowledge**

Care practices linked to ancestry and popular knowledge constitute the repertoire of the typification of care for elderly men. The findings showed the rescue of maternal knowledge acquired in childhood, the search for information

and advice provided by friends and older people and accumulation of experience on the management of chronic diseases, the consumption of teas, medicinal drinks, access to popular fairs and the search for healers:

*[...] after I found out I had Diabetes and Hypertension, I started taking information with older people, to find out with more experienced people. I remembered my mother's guidelines, that since she was a child, she used to make teas and we drank, and now I'm doing the same. I sought information from friends about the disease and how I could improve it, and the advice was important. Friends have also been using teas, and they told me to do it because it was good. I looked for people who had more knowledge about herbs and baths, and started to go to places to buy, which are usually in the street markets, there I received guidance on what was good, which could bring relief. It was easy to buy and quick to use. I also started to take medicinal bottles that are made by a healer and also to seek guidance from people who live in the fields and in the bush. (CSD of elderly men).*

### **Central Idea 1D: Promotion of physical activity and rest**

Motivated by the need to maintain body functionality, mobility, and motor performance, male discourse revealed the practice of promoting physical activity and rest. In the use of these care practices, the therapeutic participation of the physiotherapy professional stands out:

*[...] I miss the physical activity I used to do, now as I'm old I no longer have the same disposition, but still, because of the diseases I have, I walk in the yard and on the street during the day, and sometimes I do activity I do physical therapy at the health unit in my neighborhood, because of the leg I had to amputate and also rest and rest during the day. (CSD of elderly men).*

### **Central Idea 1D: Control of changes in organs and body**

When suffering from the impacts of organic and bodily deterioration, elderly men performed repairing, restored and rehabilitation care practices, such as in the search for and carrying out surgical interventions, access to medical therapies:

*[...] Diabetes and Hypertension deformed me and because I was in an advanced stage I had to seek medical help and health service professionals. When going through medical consultations, evaluations, performing various exams, I needed to perform surgery for amputation of the leg and foot. I also had problems with my hearing and I had a stroke. Because of that today I do medical monitoring and follow the recommendations that are passed on in the service. I still face problems with circulation, and I started to use a kind of boot to facilitate the circulation of blood and prevent it from generating a new wound on the other leg. I lost a lot of weight, the body is not developed as it was, I feel very tired, I feel very dizzy when the sugar level drops and I no longer have the same disposition as before. Now I have to weigh myself and take the pressure measurement every week, to prevent me from weakening. (CSD of elderly men).*

### **Central Idea 1D: Promoting psychological well-being and overcoming suffering**

Although in a discreet way the male discourse revealed that elderly men when they are experiencing disruptions in psychological well-being, seek to employ positive care practices aimed at promoting physical rest, stress control:

*[...] sometimes I feel a little down, sad, discouraged, nervous and uneasy in the face of the complications that diseases bring, but I try to rest, to distract myself to relieve the mind. There are days that are really bad, but I make teas to calm down and prevent me from being shaken. I seek to improve my relationship of pleasure in living, and not complaining, always saying it is good, because if I say it is bad, it gets worse and all I want is to face and live better, as much as I can. (CSD of elderly men).*

## Discussion

The findings of this study are able to show how praxiology of care operates with elderly men in chronic illness experiences, from the experience of the disease and the development of care strategies for adaptation and coping. Thus, the results show that there are care practices centered on the disease and others that are transposed to the different dimensions of life and health that were affected by the repercussions of the chronic illness of men. Thus, the data also allow to identify the expressions of attributes of masculinities self perceived by elderly men, which permeate their constructions and ideas in relation to the relationship with care, thus revealing their originality.

As a practice to deal with and cope with chronic illness, men developed certain learnings along the clinical trajectory and experience of the disease and acquired skills that conferred specificities to the disease in its chronic character. Such practices provide advances in health and disease knowledge, drug therapies, treatment modalities and lifestyle habits.<sup>15</sup> In this regard, differences between genders are identified in a study on women and men with Diabetes Mellitus and lifestyle and showed that men like unsatisfactory hygiene and inadequate nail cutting. They also presented less practice of scalding feet, the use of inappropriate shoes, less healthy behaviors, less food control and laboratory tests to monitor the recommended lipid profile.<sup>16</sup>

It is important to emphasize the performative character of the practices, which configure the ways of being, knowing and intervening in the face of male health care.<sup>15</sup> The scope of the notions of ontological policy present in the way men exercise self-care of health must be part of professional health care from a social perspective.<sup>11-12</sup>

Family reeducation has become a health care practice adopted by men when living with Diabetes and Arterial Hypertension, especially with regard to the male approach to the family, and their participation and support offered. In a mutual relationship, it is possible to recognize the emergence of tribes that establish themselves in the care practice of those who are in contexts of chronic illness.<sup>2,4</sup> Furthermore, family support has made a significant contribution to the self-management of chronic disease, as revealed by the theory's assumptions. of Self-management.<sup>17</sup>

Adherence to traditional therapies, especially those derived from plants, medicinal knowledge that cultivates herbs and promotes herbal medicines. In this light, it is relevant to infer that most of the participants in this study are located in a rural territorial context, and are residents of a municipality whose

popular free markets have an expressive historical and cultural demarcation and, therefore, are already part of the everyday life of men, which can strengthen the use of herbal practices along with the health and disease process that permeate the experience of Diabetes Mellitus and Arterial Hypertension. In addition, it is necessary to understand the belief systems present among men regarding the concepts attributed to chronic diseases and the stories they build about the disease process, the causes, prevention, the link that is established with the diagnostic strategies and with health services, such as, for example, the bond that is built with health professionals.<sup>18</sup>

In line with herbal health care practices, men also incorporate ancestral and popular knowledge into their experiences, which are influenced by the age and generation categories, especially the popular sayings of the elderly and religion, based on religious teachings linked to recovery and healing. Such practices make up the social representations of men about chronic diseases with regard to causes, concerns, recognition of signs and symptoms, and the adoption of care practices - purchase of medicines and other medicines, food, treatment, which are intertwined in the practices popular health and common sense knowledge so peculiar to the informal care network and ruralities.<sup>19-20</sup>

Although representative among the study group, it was not possible to evidence whether such practices are oriented, if they follow expert recommendations, if they were proposed by health professionals, or if they are used in isolation without correlation with the therapies instituted in the services. What was observed was a variety of herbs with which men manipulate and make use, especially in the formulation of teas, with direct purposes in the management of chronic diseases, but also of other associated clinical conditions.

Given the context of the use of herbal medicines in the context of chronic diseases with Diabetes Mellitus and Arterial Hypertension, attention is drawn to their empirical use, and the existing concern with the use, cultivation, access and manipulation of herbal medicines, the dosage, and complicating factors such as intoxications and the phenomenon of self-medication, which is expressive among the male population.<sup>21-22</sup>

The promotion of physical activities and rest were present among male care practices. Such practices are positive because they give men aspects of improvements in sexual functioning, metabolic control and quality of life.<sup>23</sup> It was not possible to deepen the investigation plan to find out whether such practices were already considered to be common among men in their daily lives. What was possible to learn is that they started to incorporate such practices after experiencing Diabetes Mellitus and Hypertension. These aspects are being placed to draw the attention of what puts Mol<sup>11-14</sup>, when he recommends that we make a turn to the field of research on practices, and that we investigate daily practices, as it did in its research paths on practices of living with diabetes and arteriosclerosis.

In turn, the control of bodily and organic changes generated by the investigated chronic diseases, such as dysfunctionality, disabilities, deformities, mobilize men to exercise their health care. Mol in her investigations about the coexistence of people with Diabetes Mellitus and Arteriosclerosis, brings significant contributions to the recognition that care emerges as a broader dimension such as citizenship, and that it would not necessarily be linked only to the logic of choice individual, but of conjunctural opportunities,

such as access to services, socioeconomic status, health literacy and more.<sup>12,14</sup>

In addition to the dimension of physical health, the men surveyed revealed from the collective discourse the practices of mental health care, especially those aimed at promoting psychological well-being and minimizing the suffering related to the experience of chronic illness by Diabetes and Arterial hypertension. It is known that chronic conditions have important relationships with the onset of psychic disorders, especially due to the production of stress, psychosomatic effects that, in a progressive and chronic character, generate harmful effects to the subject's mental health situation.<sup>24-27</sup>

Given the possibility already evidenced in the literature of psychological distress associated with the experience of chronic illness, it is necessary that health professionals, such as those in nursing, are attentive and trained to recognize signs suggestive of mental disorders, such as imbalances and / or mood disorders, anxiety, depression, post-traumatic stress disorder, as well as those that imply a higher level of complexity such as suicidal behavior. In addition, it emphasizes the essentiality that the professional team is able to identify and value the positive individual, singular and autonomous practices that are employed by men.

When considering the social construction of masculinities, which in a great way can be structured in hegemonic molds, which does not prioritize health care for themselves, delays the search for help in health services, accesses the medium and high complexity of care more, hides emotions and feelings, including those related to the clinical contexts of chronic disease, it is essential that the health team is well positioned to support men in coping with the negative circumstances that may be generated by the development of the disease.<sup>28-29</sup> Thus, the masculinity marker needs to be inserted in the daily routine of the clinical conduct adopted by the health professional, being the same analyzed with sensitivity, free of stereotypes, in order to collaborate with the more harmonious experience of men with the illness.

Even elaborating an assumption that the men investigated are circumscribed in a normative pattern of construction of masculinities, when analyzing the practices they exercise, it is important to know that they are inserted in multiple realities, as well as being multiple and heterogeneous bodies the articulations between the different human and non-human actors in the social network.<sup>14-15</sup> Thus, it is relevant to know the appropriate ways to infer about the practices adopted by men with regard to the context of chronic non-transmissible illness.

In the context of mental health, paying attention to the relationship that may exist between men's masculinity constructs with the psycho-emotional and mental context, may lead professionals to early identify existing vulnerabilities, such as suffering - their level of intensity and complexity, and later, find

the best and most coherent mental health interventions to be applied to the male population within the scope of health care practices in the face of chronic illness. Such aspects reinforce the need for men's health to be a real priority within the scope of public policies, management of services and assistance and in the daily practice of professional care production, with the awakening to the multiple dimensions of health care. health - physical, mental, spiritual, religious, bioenergetic, social, work and other.<sup>30</sup>

In a study carried out with a similar population, however, at the Family Health Unit, male experiences in the context of chronic illness found findings that outlined health care practices, such as health control, the disposition for self-care and for spiritual well-being and the improvement of family processes.<sup>31</sup> Such results reinforce the need to pay attention to the analysis of the praxeology of care<sup>11-14</sup> as a way of typifying, accurately knowing and being able to constitute more specific lines of care, design therapeutic plans and more personalized care, coherently adapted and compatible with the realities experienced by men in their territories and social, cultural, managerial and historical and political constructions.

From the results obtained, it is possible to advance the knowledge produced on the topic, especially in the field of science and nursing practice, in which the investigations involving the male audience are still discreet. Thus, there is relevance in the study insofar as a heterogeneous group is explored, but with presentations of care practices that are consistent and that may be demonstrating a response pattern, and even of performance, be it individual or also community, the which can imply ease in the management of nursing professionals in their daily work in services.

In addition, it is possible to condense substantial information for the progress of the nursing clinic in the care of elderly men, allowing to identify the specificities existing between the ways of being, the existing inter and cross-cultural relationships, the masculinity models of which men are circumscribed, the therapies that are more coherent and more easily accepted and the impacts, repercussions and difficulties that surround them, in the quest to live in a healthy and less harmful way possible with chronic diseases.

This study was carried out on the use of a unique data collection technique, which can limit the depth of the investigated phenomenon. Data collection occurred with the participants in different scenarios and at different levels of health care and complexity, which can also influence the apprehension of the empirical material, which configured in the limitations of this study.

The contributions of this study are focused on the prospect of advancing scientific knowledge and the practice of gerontological nursing, in the field of aging and health, as well as the approximation with the socio-pathological markers of the experience of the disease and masculinities, together with the production of nursing care men's health. The findings of this study may also contribute to: a) a deeper understanding of the typology of



male care practices in old age; b) redirection of lines of care in Nursing and health within the scope of Chronic Non-Communicable Diseases; c) in the design of clinical practice and the management of Nursing and health services in the health care network; d) in the expansion and strengthening of research and insertion of Integrative and Complementary Practices in Health - PICS, in making professional services and e) in directing the valorization of popular knowledge along with biomedical knowledge.

## Conclusion

The praxiology of men's health care was shaped by the development of learning and the acquisition of specific skills about chronic disease; family reeducation; adherence to traditional therapies in view of the use of herbal medicines, ancestral and popular knowledge; promoting physical activity and rest; the control of changes in the organs and body and the promotion of psychological well-being and the overcoming of suffering.

Care practices are based on male experiences in the experience of chronic illness due to Diabetes Mellitus and Arterial Hypertension, which, in their own way, imply mobilization of masculinities to meet acts, attitudes, actions aimed at living with the disease, the its confrontation and the significance from the opportunities and accesses that are available in the territory.

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# What facilitates and hinders the Systematization of Nursing Care in the perception of nurses in family health units?

## O que facilita e dificulta a Sistematização da Assistência de Enfermagem na percepção dos enfermeiros das Unidades de Saúde da Família?

## ¿Qué facilita y dificulta la Sistematización de la Atención de Enfermería en la percepción de los enfermeros en las Unidades de Salud de la Familia?

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# REVISA

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### RESUMO

**Objetivo:** analisar os elementos facilitadores e dificultadores na realização da Sistematização da Assistência de Enfermagem e Processo de enfermagem a partir da percepção dos enfermeiros das Unidades de Estratégia Saúde da Família. **Método:** Estudo descritivo-exploratório, de corte transversal e abordagem quantitativa, por meio da aplicação de um questionário auto aplicado. **Resultados:** perfil de profissionais predominantemente do sexo feminino com idade prevalente entre 30-40 anos e um equilíbrio entre tempo de atuação profissional (média 10,7 anos) entre 2-10 anos e maior do que 10 anos, além de uma média de atuação na APS de 8,8 anos, demonstrando uma equipe com boa experiência, o que facilitou a interpretação dos resultados. **Elementos facilitadores:** reconhecimento da importância da realização do Processo de enfermagem sobre o desenvolvimento do raciocínio clínico do enfermeiro, o benefício para o paciente e para a equipe de saúde. **Elementos dificultadores:** falta de linguagem universal padronizada; despreparo do profissional para realização da Sistematização da Assistência de Enfermagem na APS; sobrecarga de atendimentos ao longo do dia; falta de colaboração da equipe durante a consulta, com muitas interrupções; baixa oferta de capacitação sobre Sistematização da Assistência de Enfermagem/Processo de enfermagem pela instituição; baixa valorização da consulta de enfermagem tanto pela equipe, quanto pela população em geral; falta de impressos com diagnósticos e prescrição de enfermagem. **Conclusão:** Para facilitar a implementação da Sistematização da Assistência de Enfermagem/Processo de enfermagem, os enfermeiros referiram que: há a necessidade do conhecimento de Sistematização da Assistência de Enfermagem/Processo de enfermagem pelo enfermeiro, a necessidade de capacitação da equipe pela unidade de saúde, a adoção de linguagem padronizada e a adoção de protocolos.

**Descritores:** Cuidados de enfermagem; Organização e Administração; Atenção Primária a Saúde; Processos de enfermagem; Legislação de enfermagem.

### ABSTRACT

**Objective:** to analyze the elements that facilitate and hinder the accomplishment of the Systematization of Nursing Care and Nursing Process from the perception of nurses from the Family Health Strategy Units. **Method:** Descriptive-exploratory study, cross-sectional and quantitative approach, through the application of a self-processed questionnaire. **Results:** profile of predominantly female professionals with a prevalent age between 30-40 years and a balance between professional experience (average 10.7 years) between 2-10 years and greater than 10 years, in addition to an average performance in the PHC of 8.8 years, showing a team with good experience, which facilitated the interpretation of the results. **Facilitating elements:** recognition of the importance of carrying out the Nursing Process on the development of the nurse's clinical reasoning, the benefit for the patient and the health team. **Difficult elements:** lack of standardized universal language; unpreparedness of the professional to carry out the Systematization of Nursing Care in PHC; overload of assistance throughout the day; lack of team collaboration during the consultation, with many interruptions; low training offer on Nursing Care Systematization / Nursing process by the institution; low valuation of the nursing consultation by both the team and the population in general; lack of printed forms with nursing diagnoses and prescription. **Conclusion:** To facilitate the implementation of the Systematization of Nursing Assistance / Nursing Process, nurses reported that: there is a need for knowledge of Systematization of Nursing Assistance / Nursing Process by nurses, the need for staff training by the health unit, an adoption of standardized language and an adoption of protocols.

**Descriptors:** Nursing education; Organization and Administration; Primary Health Care; Nursing Process; Nursing Legislation.

### RESUMEN

**Objetivo:** analizar los elementos facilitadores y obstaculizadores en la realización del Proceso de Sistematización de la Atención y Enfermería desde la percepción de los enfermeros de las Unidades de Estrategia de Salud de la Familia. **Método:** Estudio descriptivo-exploratorio, de abordaje transversal y cuantitativo, mediante la aplicación de un cuestionario autoprosesado. **Resultados:** perfil de profesionales predominantemente mujeres con una edad prevalente entre 30-40 años y un balance entre tiempo de experiencia profesional (promedio 10,7 años) entre 2-10 años y mayor de 10 años, además de un desempeño promedio en la APS de 8,8 años, mostrando un equipo con buena experiencia, lo que facilitó la interpretación de los resultados. **Elementos facilitadores:** reconocimiento de la importancia de la realización del Proceso de Enfermería en el desarrollo del razonamiento clínico del enfermero, el beneficio para el paciente y el equipo de salud. **Elementos difíciles:** falta de lenguaje universal estandarizado; falta de preparación del profesional para realizar la Sistematización de la Atención de Enfermería en la APS; sobrecarga de asistencia a lo largo del día; falta de colaboración en equipo durante la consulta, con muchas interrupciones; baja oferta formativa en Sistematización de la Atención de Enfermería / Proceso de Enfermería por parte de la institución; baja valoración de la consulta de enfermería tanto por parte del equipo como de la población en general; falta de formularios impresos con diagnósticos de enfermería y prescripción. **Conclusión:** Para facilitar la implementación de la Sistematización de la Asistencia / Proceso de Enfermería, las enfermeras informaron que: existe la necesidad de conocimiento de la Sistematización de la Asistencia / Proceso de Enfermería por parte de las enfermeras, la necesidad de capacitación del personal por parte de la unidad de salud, una adopción de lenguaje estandarizado y adopción de protocolos.

**Descriptorios:** Atención, Organización y Administración; Atención Primaria de Salud; Procesos de Enfermería; Legislación de Enfermería.

## Introduction

The Systematization of Nursing Care (SAE) organizes the activities of the nursing team and the flow of care, corroborating in the practice of the team's action in interdisciplinarity and care for care in a humanized way. The SAE also benefits the health establishment generating safety in the planning, execution and evaluation of the conduct of the nursing professional, autonomy for the nurse, reduces hospitalization time and use of resources.<sup>1</sup>

SAE is not exactly new. It can be said that it is an evolution of the organization of care in the field hospital during the Crimean war, conceived by Florence Nightingale, in which she advocates, together with 38 other women in 1864, that nurses should submit to a disciplinary organization.<sup>2</sup>

In our country, in 1970, Wanda Horta elaborated the Nursing Process (PE) composed of five stages: 1) collection of nursing data or Nursing History; 2) Nursing diagnosis; 3) Nursing Planning; 4) Implementation of the plan and 5) Nursing Assessment.<sup>3</sup>

The implementation of the SAE, which takes place through the EP, began to be required with its regulation from 2002, being a methodology developed from the practice of nurses to sustain management and care in the nursing process, that is, nurses should perform their work based on THE, which allows organizing and systematizing care management, providing better quality of care.<sup>3-4</sup>

From the perspective of COFEN resolution 358/2009, which determines that SAE should be applied in all services where nursing operates, it can be affirmed that THE had its beginning and expanded in hospital services. It seems to us that Primary Health Care (PHC) in Brazil does not use the usual and customary use of SAE. This difficulty may be related to the traditional structuring of NCS and PE, more widely developed in hospital care and which has anchored in the biological model.<sup>5-7</sup>

The phC is required to restructure the SAE, based on the principles established by the Unified Health System for this point of the care network that considers the uniqueness of individuals who are part of the family and social group, groups that are residents of a given territory.<sup>8</sup>

In this sense, nursing can systematize its care in several ways, directed by management/care models and, based on administrative theories, but it is important to be clear that to adapt the different models to the reality of each health institution, it is necessary to base its methodology based on a solid theoretical and scientific structure, in order to plan, organize and systematize care.<sup>9</sup>

In this sense, since SAE is a legal prerogative of the practice of nurses, following a premise of solid scientific methodology, there is doubt about how phC nurses, specifically in the Family Health Strategy Unit, perceive sae.

Recognizing the importance of SAE and PE in PHC, this study aimed to analyze the facilitating and hindering elements in the realization of the Systematization of Nursing Care and Nursing Process from the perception of nurses from the Family Health Strategy Units.



## Method

This is a descriptive-exploratory study, cross-sectional and quantitative approach, through the application of a self-applied questionnaire.

The study was carried out in the city of São Paulo, which has 300 ESF sfs of 464 UBSs under the management of the Municipal Health Department and co-management with different Social Organizations (OS) in 2021. The Western Coordination was elected, composed of 29 UBSs, 15 of which were ESF and one of the Community Health Agents Strategy Teams (EACS). The UBS that participated in this have a management contract with the Family Health Association (ASF) and associação Paulista para o Desenvolvimento da Medicina (SPDM).

The study subjects were nurses from the UBS of the West CRS with esf, excluding professionals who were on vacation or away for any reason during the period in which the research data were collected. There was no distinction between nurses and technical nurses. The 70 nurses working at CRS Oeste do Estado de São Paulo, making up the entire study population, accepted participation in the study, 46 of which were technical supervision of Butantã and 24 respondents corresponded to lapa/pinheiros supervision.

The questionnaire was completed by the nurses from July to December 2019, invited to participate in the research voluntarily by the researcher in an alignment meeting of technical supervisions.

The instrument used was a modified and structured questionnaire, with answers that characterize the professional nurse to better understand their relationship with THE and PE and is composed of an initial part that analyzes the characteristics of the interviewee (age, gender/gender, type of educational institution, time of professional activity and type of health unit that operates); a second part in which it assesses the individual perception of SAE and PE in the following aspects: knowledge, benefits and hindering or facilitating elements; and a third part that analyzes the individual perception about the situation of SAE and PE in the unit in which the nurse works.<sup>10</sup> For the last two parts, the instrument has a Likert scale response scale, considering five response levels: 1) I totally disagree, disagree, I am in doubt, I agree and I totally agree; 2) never, rarely, sometimes, often and always. In the present study, we chose to demonstrate the results, the answers that contained these scales were adapted to only three results, being 1) disagree, neutral and agree; and 2) never, sometimes and always. In these situations, the answers positioned at the extremes would be unified, so "I totally disagree" and "disagree" turn into "disagree", "totally agree" and "agree" turn into "agree", "never" and "rarely" become never and, finally, "often" and "always" become "always". The intermediate levels of both scales remain with the same classifications, called "I am in doubt" and "sometimes".

The responses were consolidated into a database in Microsoft's Excel Spreadsheet version 2013. The data were evaluated by descriptive analysis, using absolute and relative distribution of the answers obtained by the form and were presented in the form of tables and tables.

The project was approved, on December 22, 2018, by the CEP - Ethics and Research Committee of the Municipal Health Department - SMS, of the City Of São Paulo - PMSP and CEP of EEUSP according to resolution of the National Health Council, through the opinion embodied n°90561718.7.3001.0086.

## Results

There is a predominance of females (69.94%), a mean age of 35.9 years and a mean professional performance of 10.7 years with an average of 8.8 years of phC, and 37.1% of nurses work in PHC for more than 10 years (Table 1).

**Table 1-** Sociodemographic characteristics of the Nurse Coordination of Health West of the State of São Paulo. Sao Paulo, 2019.

Variable	Characteristics	Nurses (n=70)	
		n	%
Age (Mean = 35,9 years) (24 - 60 years)	< 30 years	12	17,1
	30 - 40 years	45	64,3
	41 - 50 years	9	12,9
	> 50 years	4	5,7
Gender	Female	65	92,9
	Male	4	5,7
	Unanswered	1	1,4
Time of professional performance (Mean = 10,7 years) (1 - 35 years)	until 1year	2	2,9
	2 - 10 years	31	44,3
	> 10 years	33	47,1
	Unanswered	4	5,7
Time of professional performance in PHC (Average = 8.8 years) (3 months - 30 years)	up to 1 year	5	7,1
	2 - 10 years	38	54,3
	> 10 years	26	37,1
	Unanswered	1	1,4
Institution where you did your professional training	Public	20	28,6
	Private	50	71,4
Took lessons on SAE during vocational training	Yes	70	100
	No	0	0
Postgraduate course held	Did not perform	1	1,4
	Yes - public health	23	32,9
	Yes - public health	14	20,0
	Yes - family health	48	68,6
	Yes - Epidemiology other	1	1,4
Have you taken courses or training in the last five years?	Yes	69	98,6
	No	1	1,4
	Unanswered	0	0

Among the nurses participating in this study, more than 85% know what IS SAE and know the EP and pointed out eight problems as hindering for the implementation of THE and PE with a percentage above 55% of the responders, considering that neutral responses are more favorable to agreement than disagreement, as can be observed in Table 2.



**Table 2** - Main hindering factors listed for the implementation of NcS and PE. West Health. Sao Paulo, 2019.

Hindering factors	Disagree		Neuter		Agree		In Blank	
	N	%	N	%	N	%	N	%
Demand pressure with excess patients	16	22,9	5	7,1	49	70,0	0	0,0
Little training offer on SAE/PE by the institution	32	45,7	12	17,1	26	37,1	0	0,0
Interruptions by the team at the time of the nursing consultation hinder the development of the EP.	12	17,1	10	14,3	47	67,1	1	1,4
Failure of the nurse to perform the EP	11	15,7	13	18,6	45	64,3	1	1,4
Lack of appreciation of health professionals in relation to nursing consultation	28	40,0	8	11,4	34	48,6	0	0,0
Lack of appreciation of the population in relation to the nursing consultation	29	41,4	9	12,9	32	45,7	0	0,0
Lack of adequate structure for the implementation of the SAE/EP by the institution	23	32,9	9	12,9	36	51,4	2	2,9
Lack of familiarity with the nomenclatures existing by nurses	19	27,1	16	22,9	35	50,0	0	0,0

We observed that practically unanimously, the nursing professionals interviewed stated that THE can bring benefits to the health service user by promoting the individualization of care and, for the team, supports the organization of the work process (Table 3), showing the importance of understanding the difficulties for implementing THE/PE in health institutions to act in solving these difficulties.

**Table 3** - Distribution of nurses' answers about the benefits that the use of SAE and PE can bring. West Health. Sao Paulo, 2019.

Question	Disagree		Neuter		Agree		In Blank	
	N	%	N	%	N	%	N	%
The use of PE improves the quality of the nursing consultation	3	4,3	3	4,3	64	91,4	0	0,0
The implementation of the standardized nomenclature in the nursing consultation favors the documentation of the nurse's work	1	1,4	3	4,3	66	94,3	0	0,0

The execution of the EP favors the development of the nurses' clinical reasoning	1	1,4	1	1,4	68	97,1	0	0,0
The performance of the SAE/PE increases the autonomy of nurses in their work process	5	7,1	8	11,4	57	81,4	0	0,0
The sae and the nursing PE can bring benefit to the patient through the individualization of the	0	0,0	2	2,9	68	97,1	0	0,0
SAE can bring benefits to the team by organizing the work process	0	0,0	1	1,4	69	98,6	0	0,0

On the other hand, analyzing the nurses' responses in relation to what can facilitate the implementation of SAE/PE in the health unit (Table 4), it is clear that they agree that there are elements that may favor the implementation of the SAE/PE. Almost 100% agree that when nurses have knowledge about SAE and PE facilitates its implementation and that having a standardized language facilitates the application of THE, as well as the adoption of protocols, provision of training on SAE/PE for the team and, when the nurse is involved with the work, observing a level of agreement above 90% for all these questions. Above 80% agreement was found related to the need to prepare printed forms with nursing diagnosis and prescription as a facilitating tool for the application of THE, ensuring an adequate number of human resources to the recommendations of the Ministry of Health and the need of the institution to provide space for permanent education. In lower agreement, but still expressive in view of the disagreement observed (68.6% versus 11.4%), the existence of electronic medical records is considered important as a facilitator for the implementation of the EP.

**Table 4** - Distribution of responses according to the perception of what could facilitate the implementation of SAE and PE in its unit of work. West Health. Sao Paulo, 2019.

Question	Disagree		Neuter		Agree		In blank	
	N	%	N	%	N	%	N	%
The existence of electronic medical records facilitates the implantation of NP	8	11,4	13	18,6	48	68,6	1	1,4
The elaboration of a form with nursing diagnoses and prescriptions facilitates the application of the NP	4	5,7	6	8,6	60	85,7	0	0,0
Offering training on SAE / PE to staff facilitates its effectiveness.	0	0,0	1	1,4	67	95,7	2	2,9
The institution offers space for permanent education for nurses, focusing on SAE, facilitates the application of SAE and PE.	6	8,6	8	11,4	56	80,0	0	0,0

The guarantee of human resources in an adequate number to that recommended by the Ministry of Health facilitates the implementation of the SAE and the realization of the EP in primary care	2	2,9	6	8,6	62	88,6	0	0,0
When nurses are involved with work, it facilitates the implementation of The SAE/PE	0	0,0	3	4,3	66	94,3	1	1,4
The adoption of a standardized language facilitates the application of the EP	1	1,4	3	4,3	66	94,3	0	0,0
Adoption of protocols facilitates the implementation of SAE/PE	1	1,4	3	4,3	66	94,3	0	0,0
When nurses have knowledge about SAE and PE facilitates its implementation	0	0,0	1	1,4	69	98,6	0	0,0

## Discussion

### Facilitating elements

In this study, it was possible to observe that the majority not only know the SAE but also understand its need according to the current legislation. In part, this knowledge may be related to the time of action and professional training highlighted in Table 1.

The benefits of SAE are recognized by the nurses surveyed, whose advantages are both for the team and for users and reinforces the importance of the implementation of THE in health units, corroborating the literature that reports benefits at various levels of intensity, such as: relative to the organization of services, improvement in the quality of care, greater autonomy of nurses, increased patient safety, optimization of professional time and better management in the quality process.<sup>11-13</sup>

It is part of a good Management the presence of protocols aiming to optimize the time of health professionals, as well as ensure a routine for the implementation of the SAE/PE, facilitator observed in this study and, recommended by COFEN that published in 2018 guidelines to assist managers in the creation of these protocols to optimize the work process of the nursing professional.<sup>14-15</sup>

The use of terminologies is fundamental nowadays, in scientific, technological and professional communications. Among the nursing terminology there is already an important number of classification systems that allows a documentation that considers the steps of the EP.<sup>16</sup>

Training and continuing and continuing education is essential to enable the use of SAE/PE, otherwise the nursing team will incorrectly fill out specific forms, making it difficult to implement user recovery actions in care.<sup>13</sup> Another important aspect pointed out by the nurses of this research as a facilitator for the

implementation of THE/PE, is the presence of computerized systems to facilitate communication and, therefore, it is essential the presence of a standardized language among the management processes.<sup>17</sup>

For more than 10 years Brazil has been the country with the most publications on SIS with embedded terminologies, making it clear that it is providing to facilitate the realization of the EP in a computerized way. In the administrative area, the support of electronic systems is already a reality and these provide support to care work processes, since, through electronic medical records it is possible to enter health problems faster, effectively improve care through better reach to the results of treatments performed and optimization of resources among others.<sup>18</sup>

Considering the results of the research, considering mainly the benefits of SAE/PE, it is a fact that there needs to be an effort of the health care sector for the SAE to be implemented in our country. In São Paulo, COREN-SP has carried out actions with health services to implement THE, through Resolution COFEN 358/2009, which provides for the implementation of SAE in all environments where nursing care occurs, whether public or private.<sup>13,19</sup>

### **Hindering factors**

A study conducted by Salvador et al (2017), states that SAE is partially implemented in most Brazilian health institutions and the causes are related to organizational deficit, work overload, little cultural appreciation of THE, lack of habit and difficulty in acquiring skills, in addition to the resistance of working with new methodologies.<sup>20</sup>

According to Costa & Silva 2018, even though it is compulsory to use THE by legislative bodies of nursing competence, it is still not a reality in our country and, despite being present in the teaching grid, the implementation of THE among health services in Brazil are still below what is established by nursing legislation. The impediments found are work overload, low number of nurses who, in turn, prioritize bureaucratic and administrative activities, which also hinder in this research.<sup>9</sup>

The low value of nursing consultation by health professionals and the population is an important aspect to be evaluated in management, on the other hand, THE is a means of recognition and professional valorization of nurses. The incorporation of knowledge from the administrative area was interesting to influence the systematization of nursing care in work units and to value the performance of the nursing professional.<sup>13</sup>

The lack of familiarity with nomenclatures was raised as a complicating point, although a lower proportion, an issue also found in other studies of the same theme. It is believed that standardizing language for SAE is important and, it should be shared this implementation with the entire nursing team to facilitate the execution of the process and obtain better acceptance about the changes following the dynamics of each health institution<sup>21</sup>

No less important, is the need to maintain a team in an adequate number to perform the SAE/PE effectively, following RESOLUTION COFEN 293/2004, which establishes parameters for personnel dimensioning to be followed by each health institution, in order to implement the SAE in order not to overload the health team.<sup>13,18</sup>

An essential pillar for the realization of The SAE is also to think about aspects that deal with the infrastructure of services, according to Asunción & Pimenta (2020), health services are not always able to adapt infrastructure and the environment in general to propose an adequate development of the activities of this team.<sup>22</sup>

## Conclusion

The results of this research showed a profile of predominantly female professionals with a prevalent age between 30-40 years and a balance between working time (measured 10.7 years) between 2-10 years and older than 10 years, in addition to an average performance in PHC of 8.8 years, demonstrating a team with good experience, which facilitated the interpretation of the results.

The facilitating elements: recognition of the importance of performing the PE on the development of the nurse's clinical reasoning, the benefit for the patient and the health team.

In order to facilitate the implementation of SAE/PE in the health unit, many were reported, with greater emphasis on: need for knowledge of SAE/PE by nurses, need for training for the team by the health unit, adoption of standardized language and adoption of protocols.

Analyzing the items referred as hindering the implementation of THE, the following stand out: lack of standardized universal language; unpreparedness of the professional to perform THE in PHC; overload of attendances throughout the day; lack of team collaboration during the consultation, with many interruptions; low offer of training on SAE/PE by the institution; low appreciation of nursing consultation both by the team and by the general population; lack of forms with nursing diagnoses and prescriptions.

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# De novo mutation in the DEAF1 gene and its relation to autism: a case study

## Mutação de novo no gene DEAF1 e sua relação com o autismo: estudo de caso

## Mutación de nuevo en el gen DEAF1 y su relación con el autismo: estudio de caso

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### RESUMO

**Objetivo:** Analisar as implicações, impactos e o desenvolvimento de um indivíduo diagnosticado com TEA e portador da mutação de novo no gene DEAF1, a partir das várias perspectivas de intervenções realizadas. **Método:** Trata-se de um estudo descritivo com histórico dos tratamentos, resultados laboratoriais e genéticos mais recentes do paciente. **Resultados:** Sintomas notados aos 2 anos e diagnóstico específico aos 5. Aos 8 anos teve a primeira crise convulsiva tônico-clônica e o Eletroencefalograma alterado. Após obteve o diagnóstico molecular confirmado. Possuía epilepsia refratária de difícil controle, que houve piora com uma tentativa do uso de derivados canabinoides em conjunto com estimulação elétrica transcraniana. No momento, com os tratamentos, atendimentos multidisciplinares, dieta de exclusão de alérgenos e medicações de controle individual, diminuíram a intensidade das crises epiléticas e houve melhor controle do seu estado geral. **Conclusão:** Este estudo descreve como a mutação de novo no gene DEAF1 está relacionada com o TEA e com o comprometimento do desenvolvimento neurocognitivo. As terapias e métodos devem respeitar cada paciente na sua individualidade.

**Descritores:** Cromossomos Humanos Par 11; Mutação Pontual; Transtorno do Espectro Autista.

### ABSTRACT

**Objective:** To analyze the implications, impacts and development of an individual diagnosed with ASD and carrying a de novo mutation in the DEAF1 gene, from the various perspectives of interventions performed. **Method:** This is a descriptive study, with the patient's history of treatments, and most recent laboratory and genetic results. **Results:** Symptoms were noticed at 2 years old and specific diagnosis at 5. At 8 years old he had his first tonic-clonic seizure and the electroencephalogram was altered. After, it was obtained the confirmed molecular diagnosis. He had refractory epilepsy that was difficult to control and aggravated with an attempt to use cannabinoid derivatives in conjunction with transcranial electrical stimulation. At the moment, treatments, multidisciplinary care, allergen exclusion diet and individual control medications, reduced the intensity of epileptic seizures and there was better control of his general condition. **Conclusion:** This study describes how the de novo mutation in the DEAF1 gene is related to ASD and neurocognitive development impairment. Therapies and methods must respect each patient in their individuality.

**Descriptors:** Chromosomes Human Pair 11; Point Mutation; Autism Spectrum Disorder.

### RESUMEN

**Objetivo:** Analizar las implicaciones, impactos y desarrollo de un individuo diagnosticado de TEA y portador de una mutación de novo en el gen DEAF1, desde las distintas perspectivas de las intervenciones realizadas. **Método:** Este es un estudio descriptivo, con el historico de tratamientos del paciente y los resultados genéticos y de laboratorio más recientes. **Resultados:** Los síntomas se notaron a los 2 años y el diagnóstico específico a los 5. A los 8 años tuvo su primera crisis tónico-clónica y se alteró el electroencefalograma. Posteriormente se obtuvo el diagnóstico molecular confirmado. Tenía epilepsia refractaria que era difícil de controlar y se agravaba con un intento de utilizar derivados cannabinoideos junto con estimulación eléctrica transcranial. En el momento, los tratamientos, la atención multidisciplinar, la dieta de exclusión de alérgenos y los medicamentos de control individual, redujeron la intensidad de las crisis epiléticas y hubo un mejor control de su estado general. **Conclusión:** Este estudio describe cómo la mutación de novo en el gen DEAF1 se relaciona con el TEA y el deterioro del desarrollo neurocognitivo. Las terapias y los métodos deben respetar a cada paciente en su individualidad.

**Descriptor:** Cromosomas par humano 11; Mutación puntual; Trastorno del Espectro Autista.

ORIGINAL



## Introduction

Autism is a spectrum of phenotypic disorders of multifactorial origin, involving genetic and environmental components. Being qualified with phenotypes other than neurodevelopment is considered autistic spectrum disorder (ASD).<sup>1</sup>

This disease often has other associated conditions, including depression, epilepsy, anxiety, attention deficit hyperactivity disorder (ADHD). Some children with ASD stop talking and lose certain social skills already acquired around 12 to 24 months.<sup>2</sup>

Some risk conditions include infections and the use of certain medications during pregnancy, low birth weight, having a brother with ASD, older parents, having certain genetic requirements such as Down syndrome, fragile X syndrome, Rett syndrome, among others. It is estimated that ASD is hereditary in about 50 to 90% of cases, which demonstrates the importance of genetic factors in the pathogenesis of the disease. Most cases of ASD are idiopathic and apparently due to complex patterns of genetic inheritance.<sup>1-3</sup>

However, other cases of ASD present rare mutations with great deleterious effect on neuronal development. Only a single high-risk mutation is associated with high genetic penetrance. In these cases, when the mutation was not inherited from any of the parents, but developed during the formation of gametes or zygotes, being exclusive to the child, it is called the mutation "de novo".<sup>4-5</sup>

The DEAF1 gene encodes a transcriptional binding factor, is highly expressed in the central nervous system and is a serotonin receptor regulator 1A receptor (5HT1A). The longer transcribed gene results in polypeptides of 565 amino acids, which is fundamental for transcriptional regulation of serotonergic synapses. Mutations described in the DEAF1 gene have already been associated with dyslexia, seizures, recurrent infections, cancer, epilepsy, type 1 diabetes mellitus, ASD, speech impairment and intellectual development.<sup>5-7</sup>

To date, there is no biological marker for ASD, as it is a multifactorial disorder, and, likewise, a therapy that completely reverses its symptoms. Most treatments for the central symptoms of ASD are based on behavioral and cognitive interventions.<sup>8</sup>

Therefore, new mutations in the DEAF1 gene are poorly described in the scientific literature, with the vast majority of studies published in other countries and only recently have their impacts on human health been shown. In this sense, the objective of this study was to report the implications and impacts of the new mutation in the DEAF1 gene, as well as the treatments and clinical history of an 11-year-old male patient in autism spectrum disorder.

## Method

The study was conducted from March to November 2019. To obtain data, patient information was collected through semi-structured interviews with the child's mother. The data obtained were analyzed from the prenatal family history up to the moment of the interview, based on the results of laboratory tests, genetics, images and treatments used. Retrospective data were observed as a

method of analysis of pathophysiological characteristics and impairments of case evolution.

It is emphasized that all examinations, conducts and prescriptions analyzed were requested by physicians responsible for the treatment of the patient and the procedures and therapies were followed by a multidisciplinary team. The information contained in this article is intended for individual interpretation of the case described for academic purposes and is not intended to be interpreted as generalized medical advice. Only the physicians responsible for each case can diagnose diseases and prescribe treatments and medications.

The study had all ethical procedures required by CNS Resolution 466/2012 complied with and was approved by the Ethics Committee on Research in Human Beings of the Paulista University (UNIP), Campus Indianópolis - SP, number 3.425.613 - CAAE 15143519.5.0000.5512. The term free and informed consent (TCLE) was signed by the person responsible for free will before the interview.

## Results

The child under study is male, 11 years old, lives with parents and a neurotypical brother of 13 years. The primary diagnosis of autism was at 2 years and 5 months of age and the specific diagnosis at 5 years of age.

The parents are healthy and non-consanguineous, presented two spontaneous abortions after the birth of the firstborn and the patient's pregnancy. They do not have relevant cases of neurocognitive diseases in family history.

### *Development and first symptoms of ASD*

During pregnancy the mother had gestational diabetes, the delivery was cesarean section and the Kristeller maneuver was performed. The Apgar 9/10 test had severe Jaundice ABO and found the difference in blood typing after birth (patient is B+ and mother O+). The baby did not require an incubator or oxygen and did not present infectious disease. Birth weight: 3600g, Length at birth: 50cm, Head circumference: 36cm.

She breastfed exclusively until she was 5 months old and did not receive supplements or formulas before 6 months of age. Food was introduced at 5 months, and breastfed until 2 years of age. He raised his head at 3 months, kittened about 8 months, walking with 1 year and fully balanced with 1 year and 4 months.

She presented orality before 18 months of age and since the age of two years she undertook uninterrupted speech therapy. His oral expressiveness is really an unelucidated part of the diagnosis, he had speech and gradually lost this aptitude. The fever improves his oral expression, especially high fever, as he returned to speak for a whole week after an episode of fever. The higher, the greater the improvement of the overall picture. Even after epilepsy.

Ever since I was a baby, I've been crying excessively at night. The nocturnal awakening only stopped with the anticonvulsants, this condition is called "night terror", is an abnormal activity of sleep and is part of a category of nocturnal manifestations known as parasomnia. He ceased with the episode when he started the Digestive System Syndrome and Psychology Diet (GAPS),

but still woke up at night, euphoric and interacting for hours. This pattern continued until the beginning of epileptic conditions, from then on the diet had no more beneficial effect.

Eye contact alternated from epileptic seizures, even developed a mild strabismus. It presents self-injuring behaviors and only stopped hitting the head excessively after 6 months with the inclusion of the gluten-free diet, without casein and with anticonvulsants. It has gait alterations, hyperactive behavior and stereotypes. He gained control of the urethral sphincter about 7 years after quelation treatment in the United States and still does not have control of the anal canal sphincter. However, with the period of 100 daily seizures, urethral control was lost.

It has greater tolerance to pain, at times where there is a worsening of the general condition this tolerance is more pronounced. Fever improves your oral expression, especially high fever. But rarely (before anticonvulsants) became ill or had a fever. The mother clearly describes an improvement in oral communication skills in fever and inflammation events such as infections. And reports that the child returned to speak for a whole week after an episode of fever. The higher, the greater the improvement of the overall picture. Even after epilepsy. Currently seizures and absence seizures are daily and at intervals of 20 minutes.

The symptoms of autism began to be noticed at 2 years and 4 months by the kindergarten teacher. The mother reports progressive regression in speech since he entered school, 1 year and 11 months old. At 2 years and 5 months he was diagnosed with Invasive Developmental Disorder (EDT), where he began to present stereotyped movements and at 3 years of age he ceased to speak after a period of regressions of communication skills.

At 5 years of age, absence crises and spasms were observed, with intervals of up to 20 days between one crisis and another, but without changes in the Electroencephalogram (EEG). Specific diagnosis of autism (ICD 10 - F84.1) was given at 5 years by a Neuropediatrician. At 8 years and 9 months, he had the first tonic-clonic convulsive crisis, altered EEG and slowing the base rhythm. A notable aspect of his epilepsy is that events began after transcranial electrical stimulation and seizure control worsened with the use of cannabinoid derivatives.

### *Molecular diagnosis*

Due to refractory epilepsy that was difficult to control, which at the time was already having many daily seizures, they were referred to a geneticist and in January 2018 did the Complete Sequencing of exoma (SCE). The diagnosis of the mutation was made by means of the SCE, carried out in a private laboratory, with an exon capture method with Agilent SureSelect Clinical Research Exome V2®, followed by new generation sequencing with Illumina HiSeq®. Alignment and identification of variants using bioinformatics protocols, using as reference the GRCh37 version of the human genome. It was identified, in heterozygosis, in the DEAF1 gene (Deformed epidermal autoregulatory factor 1, homolog, OMIM 602635) variant Chr11:681.080 C>G (or alternatively c.880 G>A - ENST0000382409), promoting the replacement of the mistellin amino acid at position 294 by leucine (p. Val294Leu), missense mutation. This variant has not

been previously described in the medical literature and is absent among about 140,000 individuals in the world population.

The combination of the molecular mechanism, characteristics of the region where it is located and the correlation of this gene with clinical symptoms, suggest that this variant is probably pathogenic. Additionally, the variant p.Valina 294Leukin was confirmed by sequencing by the Sanger method in the patient, but is not present in its parents. This variant was then classified as a mutational event "again", thus reinforcing its deleterious character.

### *Socio-environmental factors*

He started school at 1 year and 11 months and attended approximately up to 3 years and 5 months of age, returned at 7 years to the class of global development disorders (TGD). At home they are working on parallel literacy, basic science content, geography and psychomotricity. They conducted online training at the Autism Treatment Center of America and follow the therapeutic form Son-Rise®, a home therapy for children with autism spectrum. Hippotherapy, skateboarding and swimming were interrupted due to epileptic seizures and discontinued with Occupational Therapy over the years. Currently, after a crisis control, he has assistance by psychologist, speech therapist, psychopedagogue, intermediated therapy with animals, psychomotricity and art therapy. In total, including the two hours a day you spend at school, there are about 40 hours of weekly stimulation.

It has dietary restrictions to gluten, casein, soy, sugar, maltodextrin, chemical yeast, purple cabbage, coffee, pork, dyes, cocoa, almond, coconut, beans, fish, ginger and white rice. They also avoid mint, mint and large doses of orange, because of epilepsy. The parents observed that with the exclusion of allergens there was a better response of the general picture. She had gastroesophageal reflux from the first month of life and up to 8 months was constant.

### *Ineffective treatments / partially effective*

All treatments are within therapeutic protocols for ASD and epilepsy and have been recommended by medical experts, as well as clinical observations.

- Injectable macrophage activation therapy (GcMaf) to restore the immune system, but there was an increase in absence seizures.
- Chlorine dioxide to promote bacteria detoxification. At the beginning of treatment there was an improvement in cognition and decreased hyperactivity, but increased absence crises.
- Nystatin for *Candida albicans*, made him more hyperactive.
- SCIA Protocol - Ibuprofen, to promote decreased brain inflammation and viral replication, there were no adverse reactions or improvements.
- Intravenous rectal ozone therapy, get improvement in the immune system, there was hyperactivity and rapid intoxication.
- Digestive enzymes and lactobacilli to improve the intestinal microbiota. There were no significant changes and the coprological examination continued to accuse poorly digested foods.

- Carnosine, for improvement of oralization and central nervous system, no benefit was observed.
- Carnitine, repair the metabolism of cellular energy, also without changes.
- Omega 3 for anti-inflammatory action, the patient became more hyperactive and with rapid intoxication.
- Methyl-B12 injectable, improve cognition and prevent oxidative stress. It got more communicative, but the improvement was irrelevant.
- REAC - therapy with electromagnetic waves, to optimize the response of the nervous system through the use of asymmetric electrical radio currents making possible the optimization of Neuro-Psycho-Relational Physics. There was a slight improvement in cognition, but spasms worsened.
- Ding Xian Wan - Chinese phytotherapy, used to contain seizures and epilepsy. For a month he was calm, then self-aggressive for 15 days.
- Houston complex homeopathy, improve the immune system. He became less hyperactive, but during the homeopathic quelling of the polio vaccine he had fever and became prostrate.
- Neocate® infant food formula. With 3 doses he became spasmodic and hyperactive, he seemed to convulse.
- Implantation of hematopoietic stem cells with platelet-rich Plasma Implant, integrated with Transcranial Magnetic Stimulation, in order to minimize the behavioral symptoms of ASD. He returned from the spasmodic implant and after one month had the first clonic tonic seizure and started epilepsy difficult to control.
- Cannabidiol without THC - Associated with Depakene®, minimize behavioral symptoms and epilepsy. He became more hyperactive and with about 1 month of use he went into a state of ill and went to the ICU.
- Valpakine®, for the treatment of epilepsy and seizures. It's decreased the tonic clonic seizures, it's already dependent and convulsion if they withdraw. She had severe anemia and decreased the dose.
- Acetazolamine, adjuvant treatment of edema due to epilepsy. Increased the frequency of seizures.
- Urbanil, for anxiolytic use. It accelerated for a few hours after administration of the drug. They discontinued, as it altered the mood and created dependence.
- Etossuximine, treatment for absence and epilepsy seizures. He had more spasms and tonic clonic seizures.
- Phenobarbital, anticonvulsant. Self-aggression, headaches and uncontrollable hyperactivity.
- Lamotrigine, an adjunct to the treatment of partial and generalized seizures, including tonic-clonic seizures. Hyperactivity after administration of the drug and discontinued because it did not have effects on seizures.
- Trileptal®, treatment of epilepsy and seizures. Tremor in the hands, less fine motor coordination and drowsiness after administration of the drug.
- Keppra, antiepileptic therapy. He held the seizures, but had headaches, self-aggression and hyperactivity.
- Vimpat, an adjunct medicine used to treat uncontrolled epilepsy. It showed priapism.
- Hydrogenius homeopathy, helps minimize behavioral symptoms and epilepsy. From 100 seizures went to 30 a day, but after a flu stopped having any effect.

- Hyosciamus homeopathy, calming effect. Improved behavior and reactions to anticonvulsants, but after a period there was no further therapeutic effect.
- 5HTP – Hydroxytryptophan, promote increased serotonin production. No adverse reactions.

### *Effective treatments*

Better control of epileptic seizures, seizures, sleep, motor coordination, hyperactivity, absence crises, digestion and gastric functions was observed.

- Melatonin, improve sleep quality. He fell asleep more easily.
- Magnesium citrate, repair neuronal function and muscle stiffness. Improved muscle stiffness, spasms and use sporadically.
- Quelation (DMSO and EDTA), intravenous therapy to eliminate heavy metals. Improved hyperactivity, spasms and acquired control of the sphincters.
- Implantation of autologous adipose stem cells to minimize behavioral symptoms of ASD. There was an improvement in fine motor coordination, urea rate and cognition. In addition to rapid rapid recovery liposuction.
- Rivotril® and Diazepam use in emergencies in case of illness or risk of respiratory arrest. It makes you more relaxed and takes you out of epileptic status.
- Zonegran®, a side-adjunct medicine used to treat epilepsy. It decreased the diurnal seizures to almost zero, but initiated the nocturnal clonic tonic seizures. More jerky during the day and touch-sensitive.
- Traditional Chinese medicine with use of herbs to reduce side effects of Zonegran®. Decreased the amount and intensity of nocturnal seizures.

### *Laboratory tests*

The results of laboratory tests of the patient relevant to ASD were performed in October 2019. The reference values are according to gender and age of the patient under study (Table 1). Another characteristic present, which is not necessarily autism and has been accompanying it for about 3 years, is pulmonary hyperventilation, which was confirmed on venous blood gas analysis and urine acid testing.

**Table 1** - Relevant examinations in relation to people with ASD.

Test	Result	Alteration	Reference Value
Vitamin D3	15,36 ng/mL	Low	30 to 60 ng/mL
Vitamin K	0,3 µg/L	Low	0,5- 5 µg/L
Vitamin B6	43,5 mcg/L	Stable	5,0 to 30,0 mcg/L
Selenium	64,2 µg/L	Stable	55,0 to 135,0 µg/L
Eric Zinc	74,00 mcg/dL	Low	75,0 to 129,0 mcg/dL
Ammonia	96,1 mcg/dL	High	19,0 to 60,0 mcg/dl
Urea	58 mg/dl	High	19 to 49 mg/dl
Creatine	37,2mcmol/L	Stable	25 to 69 mcmol/L
Serotonin	80,50 ng/mL	Stable	50,00 to 250,00 ng/mL
Histamine	0,13 µg/dL	High	Below 0,11 µg/dl
Specific Enolase	16,76 mcg/L	High	Until 18,3 mcg/L

Ceruloplasmin	24,0 mg/dl	Stable	20 to 60 mg/dl
Antistreptolysin "O"	< 25 IU/mL	Stable	Until 200 IU/mL
Alpha-1 glycoprotein	Acid 64,5 mg/dL	Stable	58 to 155 mg/dL
Ferritin	47,8 ng/dL	Stable	22,0 to 322,0 ng/dL
Eric Iron	90 µg/dL	Stable	65 to 175 µg/dL
Uric Acid	4,8 mg/dL	Stable	2,0 to 5,0 mg/dL
Glucose 6 Phosphate	13,3 U/g Hb	Stable	> = 6,7 U/g Hb
Homocysteine	7,8 µmol/L	Stable	5,0 to 12,0 µmol/L
Creatinine	0,44 mg/dL	Stable	0,42 to 0,71 mg/dL
Covers	87,0 mcg/dL	Stable	80,0 to 160,0 mcg/dL
Glucose Fasting	68 mg/dL	Low	70 to 99 mg/dL
Calcium	9,0 mg/dL	High	4,0 to 7,0 mg/dL
Phosphorus	5,9 mg/dL	Stable	4,0 to 7,0 mg/dL
Magnesium	2,3 mg/dL	Stable	1,3 to 2,7 mg/dL
Potassium	3,9 mEq/L	Stable	3,5 to 5,5 mEq/L
Vitamin B12	514 pg/mL	Stable	180 to 900 pg/dL
Vitamin B1	69,1 mcg/L	Stable	28,0 to 85,0 mcg/L
Vitamin A	53,0 mcg/dL	High	26,0 to 49,0 mcg/dL
Total Lipids	446 mg/dL	Stable	317 to 819 mg/dL
Cortisol	16,28 µg/L	Stable	5,27 to 22,45 µg/L
Biotin	184 ng/L	Low	Over 200 ng/L
Oxcarbazepine	25,5 mcg/mL	Stable	Therapeutic level: 13 to 30 mcg/mL
T3 Hormone	Triiodothyronine 127 ng/dL	Stable	105 to 207 ng/dL
T4 Hormone	Thyroxine 5,00 mcg/dL	Low	5,5 to 12,1 mcg/dL
Thyroid TSH	2,77mcUI/mL	Stable	0,51 to 4,94 mcUI/mL
Rheumatoide Factor	< 9,3 IU/mL	Stable	Below 14 IU/mL
ANA - autoantibodies	NEGATIVE	Stable	NEGATIVE
Tumor Necrosis Factor (TNF)	27,20 pg/mL	High	Below 8,1 pg/mL
Interleukin 6	7,30 pg/mL	High	Below 3,4 pg/mL
Fecal calprotectin	< 5.00 mcg/g	Stable	Below 50 mcg/g

**Source:** Sabin Laboratory reference values, Brasília, DF, 2019.

## Discussion

The DEAF1 variants of new missense described in the literature result in a nonspecific phenotype, more frequent in males, born to healthy and non-consanguineous parents. As observed in the patient in question, the other patients also present developmental delay, epilepsy, seizures, ASD, high threshold pain, gait abnormalities, speech, gastrointestinal abnormalities, hyperactivity and sleep disorders.<sup>6</sup> In the literature there is also a case report of microcephaly.<sup>7</sup>

The use of reliable evaluation scales developed from research and systematizations are useful, as they give objectivity to observation without risking forgetting details. It is interesting, in cases of ASD and mutation in the

DEAF1 gene, to verify the family history for other cases of developmental or neuropsychiatric disorders, as evidence is consolidated in the scientific literature that there are associations between these conditions.<sup>6-7</sup> In this sense, the present study was useful to explain the patient's history. Early intervention in treatment consists of a set of therapeutic modalities aimed at increasing the potential of physiological, social and communication development of the child, protecting intellectual functioning by reducing harm and improving quality of life. Parents should observe the individualized need of each child with ASD and that is in accordance with its functionality, because the treatment involves multidisciplinary.<sup>3,5,9</sup>

The onset of seizures was observed in the patient using cannabinoid derivatives, Transcranial Magnetic Stimulation, with hematopoietic stem cell implantation and platelet-rich plasma. Usually, these therapies are used to reduce seizures. In addition to being recommended for sleep disorders, ADHD, anxiety and other psychiatric problems.<sup>10</sup> There is a gap on recommended treatments and studies are needed before stating any conclusion on the therapeutic potential to prevent or mitigate crises and disorders associated with ASD.<sup>11-12</sup>

The use of modern tools such as genetic analysis, electroencephalographic study, magnetoencephalography, proton emission tomography (PET), neuronal interaction network studies and neurotransmitter analyses are fundamental to establish a better association between ASD and epilepsy. They also enable accurate diagnosis and better planning of therapeutic management.<sup>13</sup>

Laboratory markers are important to check the general status or detect diseases by preventive character, in addition to verifying whether the treatments used, as well as nutritional therapy, are presenting beneficial effect on the patient. Caregivers should monitor the consumption of certain supplements relevant to neuronal development, such as Selenium, Serotonin, Zinc, among others. In addition to checking vitamin D3 levels, hormonal and intoxication by the use of medications.<sup>12</sup> As observed, the patient in this study presented changes in some of the tests and stability in others, showing the clinical diversity in which people with ASD may present.<sup>6</sup>

Children born to mothers with type 1, type 2 or gestational diabetes are more likely to receive a diagnosis of ASD compared to children born to mothers without diabetes during pregnancy. Maternal diabetes, if not well treated, means hyperglycemia in the uterus, which increases uterine inflammation, oxidative stress and hypoxia. These conditions can alter gene expression, disrupt the development of the fetal brain, increasing the risk of neural behavior disorders such as autism.<sup>10</sup> Other risk factors during pregnancy are associated with obesity, hypertension, antidepressant use, low vitamin D levels, advanced maternal and paternal age, smoking and exposure to pollution<sup>14</sup>, but these were not observed in the present study.

Newborns who suffer jaundice, such as the patient in this study, have a higher risk of suffering autism. The high rate of bilirubin is neurotoxic and can cause long-term developmental problems. Babies genetically predisposed to autism are likely to be more vulnerable to more severe cases of jaundice.<sup>15</sup>

As also observed in the present study, in cases of ASD, changes in eating habits and associations of gastrointestinal symptoms may occur, such as



constipation, diarrhea, gas distension and abdominal pain. However, working diet therapy individually can improve these symptoms.<sup>16</sup>

## Conclusion

This study describes how the de novo mutation in the DEAF1 gene is related to autism and impaired neurocognitive development. Different standard or alternative therapies were used in the patient, which resulted in improved behavior and frequency of epileptic seizures. The practice of personalized dietary interventions seems to favor children with ASD and have action on the central nervous system, such as the exclusion of allergenic foods. The need for specific interventions is emphasized, respecting the individuality of each person and highlighting the importance of the multidisciplinary team, having an impact on the patient's quality of life.

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# The humanization of nursing care to children hospitalized in the maternal look

## A humanização da assistência de enfermagem à criança hospitalizada no olhar materno

## La humanización de la atención de enfermería al niño hospitalizado en la mirada materna

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### RESUMO

**Objetivo:** Descrever o olhar materno em relação ao caráter humanizado da assistência de enfermagem à criança hospitalizada. **Método:** Trata-se de um estudo de abordagem qualitativa, seguindo o método de história oral. A coleta de dados foi realizada com um número de 8 participantes que atenderam aos critérios de inclusão da pesquisa, por meio de entrevista virtual no grupo do Facebook chamado "Mães e Filhas do Guará - Brasília DF". **Resultados:** A discussão apresentou-se por meio de 7 categorias, sendo elas: sobre a compreensão do que é humanização da assistência; sobre a presença ou ausência de uma assistência humanizada durante a hospitalização; sobre a importância de um ambiente recreativo para a criança hospitalizada; sobre ações essenciais no atendimento à criança hospitalizada; sobre a influência de uma assistência humanizada no estado geral da criança; sobre o conhecimento acerca da existência da pedagogia hospitalar. **Conclusão:** O presente estudo atendeu aos objetivos da pesquisa, pois através das histórias relatadas pelas mães participantes, foi provado o impacto da humanização na assistência sob o estado da criança, assim como, apesar de ter tido exceções em algumas situações acerca do atendimento, ainda assim, foi salientado como a humanização é necessária e deve ser colocada em prática.

**Descritores:** Assistência de Enfermagem; Humanização; Internação Pediátrica.

### ABSTRACT

**Objective:** To describe the maternal view in relation to the humanized character of nursing care to hospitalized children. **Method:** This is a qualitative study, following the method of oral history. Data collection was carried out with a number of 8 participants who met the inclusion criteria of the survey, through a virtual interview in the Facebook group called "Mães e Filhas do Guará - Brasília DF". **Results:** The discussion was presented through 7 categories, being them: on the understanding of what is humanization of care; on the presence or absence of a humanized assistance during hospitalization; on the importance of a recreational environment for the hospitalized child; on essential actions in the care of the hospitalized child; on the influence of a humanized assistance in the general state of the child; on the knowledge about the existence of hospital pedagogy. **Conclusion:** The present study met the objectives of the research, because through the stories reported by the participating mothers, the impact of humanization on child care was proven, as well as, despite having had exceptions in some situations regarding care. Nevertheless, it was stressed that humanization is necessary and must be put into practice.

**Descriptors:** Nursing Assistance; Humanization; Pediatric Hospitalization.

### RESUMEN

**Objetivo:** Describir la mirada materna en relación al carácter humanizado de la asistencia de enfermería al niño hospitalizado. **Método:** Se trata de un estudio de abordaje cualitativo, siguiendo el método de historia oral. La recolección de datos fue realizada con un número de 8 participantes que atendieron a los criterios de inclusión de la investigación, por medio de entrevista virtual en el grupo de Facebook llamado "Madres e Hijas de Guará - Brasília DF". **Resultados:** La discusión se presentó por medio de 7 categorías, siendo ellas: sobre la comprensión de lo que es humanización de la asistencia; sobre la presencia o ausencia de una asistencia humanizada durante la hospitalización; sobre la importancia de un ambiente recreativo para el niño hospitalizado; sobre acciones esenciales en la atención al niño hospitalizado; sobre la influencia de una asistencia humanizada en el estado general del niño; sobre el conocimiento acerca de la existencia de la pedagogía hospitalaria. **Conclusión:** El presente estudio atendió a los objetivos de la investigación, pues através de las historias relatadas por las madres participantes, fue probado el impacto de la humanización en la atención bajo el estado del niño, así como, a pesar de haber tenido excepciones en algunas situaciones acerca de la atención, Sin embargo, se ha puesto de relieve que la humanización es necesaria y debe ponerse en práctica.

**Descritores:** Asistencia de Enfermería; Humanización; Internación Pediátrica.

ORIGINAL

## Introduction

It becomes increasingly noticeable the existence of a significant impact of humanization in nursing care, especially with regard to the care of children, since from the moment a child is admitted to hospital, the environment appears as cause of a fear, due to the image that the child has about him and the sudden change of routine. Thus, the creation of a humanized character on the part of the health professional promotes an environment where the patient feels welcomed, consequently, collaborating in the healing process.<sup>1</sup>

Humanization can be conceptualized as a set of strategies that aim to achieve the qualification of health care and management in HUS, establishing itself as the construction / activation of ethical-aesthetic-political attitudes in line with a project of co-responsibility and training of inter-professional bonds and between these and users in health production. Ethics for the reason of taking the defense of life as the axis of their actions. Aesthetic because they are directed towards the invention of the rules that regulate life, in addition to the creation of processes that constitute the most specific of man related to other living beings. Policies because it is in the polis, that is, in the union between men that social and power relations operate, that the world is made.<sup>2</sup>

Children who are under care during hospitalization due to cases of medium or high complexity, postoperative or some pathology, need careful monitoring and treatments that count on the involvement of users, guardians, managers and health professionals at all stages. Such moments also have resources and instruments from the hospital environment, in addition to a highly specialized professional multidisciplinary team.<sup>3</sup>

On July 13, 1990, Law No. 8069, the Child and Adolescent Statute (CAS), was decreed, having stipulated in Article 12 that health care establishments in cases of hospitalization, must provide conditions for the permanence in full time of the child's guardian. Furthermore, in 2003, the National Humanization Policy (PNH) was created, with the purpose of impacting other health policies, influencing the qualification of HUS care and management.<sup>2;4</sup>

One way to minimize or avoid the trauma of hospitalization can be done through a pediatric unit that provides conditions that meet all the child's needs, including physical, cultural, emotional, educational, social, and developmental needs. There is an indispensability to invest in a recreational environment, in which it contains safe games, books and toys to stimulate the child's self expression. In addition, it is necessary that the professionals who care for these children are satisfied with the conditions of the hospital and the work itself, providing humanized care to the children and their companions, in order to reduce the hospitalization period and the traumas resulting from the same.<sup>5</sup>

It is also worth explaining the right of all to education established by the Constitution of the Federative Republic of Brazil of 1988. Linked to this and concomitantly with the CAS, it is essential that even hospitalized children have this right.<sup>4</sup>

Hospital pedagogy is a teaching method that demonstrates the integrated action of the teacher in the hospital environment, helping educationally in the education of the child so that it does not cause loss in the educational process and its development. This pedagogical performance applies to assist children with special educational needs, as they are in a different school environment.<sup>6</sup>

This perspective guides the idea that the professionals' way of acting, the games played as a form of distraction and the humanization itself culminate in undeniably positive effects in the nursing care process, especially with regard to the child's satisfaction.<sup>5</sup>

The service focused on the user and the creation of humanized spaces, centered on the patient, collaborate for their autonomy and establish adequate psychological relationships with the space that welcomes them, resulting in a response to the health crisis evidenced in the last decades.<sup>7</sup>

That said, the present study focused on the following research question: how does the humanization of nursing care to hospitalized children take place, in the mother's eyes?

This study is fundamental with regard to the various aspects related to the cure of a child, not only including the existing treatments for each purpose, but also how the coexistence with health professionals and the conditions of the hospital environment become influential in this process. , so there is a need to understand that nursing care goes beyond science and technologies in the health field.

In this sense, the objective of this study was to describe the maternal view in relation to the humanized character of nursing care for hospitalized children, by the members of the Group "Mothers and Daughters of Guara - Brasılia DF" of the social network Facebook.

## Method

This study had a qualitative approach, following the Oral History method following the assumptions of the Maurice Halbwachs.<sup>8</sup>

The place for the study was a Facebook group called "Mothers and Daughters of Guara- Brasılia DF", which is visible where anyone can find it, but it is a private group in which only members can see who is in the group and what is published in it. It was created on January 7, 2014, having more than 44000 members recently, and has two administrators.

The participants in this study were mothers inserted in the context of the experience of children who were in hospital. These mothers, called participants in this research, are women who for different reasons were or are part of the routine experienced in the hospital, encompassing the integrality of care by health professionals and coping in this period, consequently, directly participating in the care process by nursing.

Mothers who met the following inclusion criteria were able to participate in the research:

Mothers who agreed to participate in the research and signed the informed consent form;

- Mothers aged 18 or over;
- Mothers who have experienced and or are experiencing their child's hospitalization;
- Mothers who have been in good mental health.

Women who met any of the following exclusion criteria could not participate in the survey:

- Mothers who did not authorize to be part of this study;

- Mothers under the age of 18;
- Mothers who have not experienced their child's hospitalization;
- They were unable to participate in the study.

There was no exclusion factor for any criteria related to race, color, ethnicity, religion, culture, belief, values, social class or gender.

The interview took place with a number of 8 participants from the Facebook group called “Mothers and Daughters of Guar - Braslia DF”. This was carried out and recorded through Zoom, which is a remote conference service that combines video conferencing, online meetings, chat and mobile collaboration by cell phone or computer.

For this study, the collection instrument was a questionnaire composed of 07 questions, offering ways for participants to express their feelings and perceptions from their experience. The situations of interest that arose during the interview could be explored and deepened by the researcher.

Resolution 510 of April 7, 2016 incorporates, under the perspective of the individual and collectivities, references of bioethics, following the principles of recognition of the freedom and autonomy of those involved, respect for individual values and customs, without discrimination or prejudice, not maleficence, justice and equity, ensuring the consent of participants, in addition to the confidentiality of information.<sup>9</sup>

For data analysis, the interviews were organized, read and grouped by affinity, thus originating the categories for the study's discussion.

## Results

The participants in this study were 08 women who were given fictitious names of flowers, as shown in the table below:

**Table 1.** Profile of study participants

N	Fictitious Name	Number of children	Age	Marital Status
1	Azalia	1	44	Married
2	Begnia	1	31	Single
3	Rosa	3	53	Married
4	Gardnia	1	41	Married
5	ris	1	19	Single
6	Tulipa	2	43	Divorced
7	Hortnsia	2	41	Married
8	Penia	2	36	Single

## Discussion

For the discussion of the theme, the data found were organized in the form of categories. Thus, there were 7 categories, as follows:

## **On the understanding of what is humanization of assistance**

Regarding the understanding of the meaning of humanization, all participants emphasized the “human look”, in addition to the concepts that mainly involve empathy, care and affection.

It is for people to see as a human being, and not for example “oh, a special child was born”, you have to see a human being, and not a disability, see a mother who will live many new things ahead, see with her heart . So humanization is not only seeing as a patient, but as a being, it is knowing that he suffers, that he has limitations or not, the professional has to be prepared for that [...] P3

I understand that it is doing the job in a more humane way, seeing the patient's real need, analyzing whether he is sad or happy, seeing if he needs something besides the medication and meal that is offered at the hospital, helping emotionally too, [...] finally treating as human, even if it is a child, asking her if she is okay and if she needs something, I think that is it. P6

It is necessary to understand that the humanization of hospital care for children and family members is a strategy that demands the rescue of respect for human life, considering the specific differences to each being - social, ethical, educational and psychological aspects - and is materialized in the construction of a therapeutic project that promotes changes in the hospital environment, respecting the binomial as citizens, with the right to quality humanized health care that meets their needs.<sup>10</sup>

Since the concept in question is largely polysemic, in the field of health, it is officially assumed through the National Humanization Policy (NHP), launched in 2003 as a proposal aimed at a new relationship between users and health professionals , mainly with regard to welcoming and resolute work within the scope of the Unified Health System (HUS). The NHP has some of its guiding principles - welcoming, autonomy, protagonism and co-responsibility - which should serve as a basis for these changes in relationships.<sup>11</sup>

## **About the presence or absence of humanized assistance during hospitalization**

There were disagreements regarding humanized assistance during hospitalization, the participants stated that they depended on the professional for this to happen, while some emanated tranquility and love, others played the role in the automatic.

I think so, looking at the team as a whole, yes, but some or others could see that they did it automatically, and not out of love, doing it just because it was an opportunity, unlike other people who did it because they liked being there, and they were very human and empathetic people, not only with the child, but with the mother as well, they gave a lot of assistance and support. P5

In part, it depended on the person, you know? There were some who even gave us peace of mind, now others were not like that, they arrived stressed, nor spoke to us properly, it seems that everything was done automatically. P6

Nursing as a profession deals with people and technological devices in this nosocomial period, meanwhile, the care for human beings must be a priority to the detriment of technological issues. The technological situation versus humanization in nursing care constitutes an ethical dilemma and makes it imperative that the nursing team reports on bioethical principles that make them think and become aware of the consequences of their actions.<sup>12</sup>

A conscientious professional is needed to deal with a child, since the assistance provided to him goes beyond the care focused on the pathology itself, since his emotional needs during hospitalization must also be visualized. All children need explanations about what is happening to them, why the procedure is being performed and who can react effectively if they feel pain. It also includes making them feel comfortable and welcomed, as any unusual element can cause bad reactions, interfering with the treatment; then, the nurse must show that he is also there to play and talk.<sup>13</sup>

During hospitalization, the child is under several stressors, which can generate temporary or permanent trauma, either due to the change in routine or the existing painful procedures. In this sense, the humanization of hospital care is configured in the most significant act in the prevention and / or minimization of such traumas arising from hospitalization. Humanizing is an experiential process that permeates all activity of the people involved, seeking to offer the appropriate treatment, within the circumstances in which each patient is.<sup>14</sup>

### **On the importance of a recreational environment for hospitalized children**

With reference to the importance of a recreational environment, the responses were coincident among the participants, mainly due to the distraction provided by the entertainment and fun on the part of the children, who end up forgetting that they are in a hospital.

Very important! When he was admitted to the hospital, there was a playroom there, and every morning there was a drawing, there were games, and that distracted him. At the second hospital we stayed in, there was nothing for him to play with, so it was quite different. P2

Very important, there was a period when my daughter was released from bed and we went to the playroom, and this interaction with a different place is very good for the child to rejoice a little, to be with other people, to walk and see other environments beyond from that same place on the bed, with a lot of medication, oxygen hoses and people in white, finally go to a more colorful environment. P6

In addition to interacting with the family, some simple yet effective strategies can be adopted in order to stimulate the hospitalized child and minimize the fear arising from the hospital environment. Play becomes a necessity for the child, and must be put into practice during hospitalization, as it is through play that he develops as a whole and expresses his desires. Hospitalization should not be an obstacle for children to continue expanding their capacities, and the hospital must promote conditions for this.<sup>15</sup>

Play is an effective tool in reducing tension, anger, frustration, conflict and anxiety, which usually accompanies the loss of control and self-esteem. It is essential to evoke elements that contribute with their ability to cope with adverse



circumstances, which enhance the adaptation of hospitalized children to the situation in which they find themselves.<sup>12</sup>

### **About essential actions in the care of hospitalized children**

In the case of actions considered essential in the care of pediatric patients, the recreational environment, affection, psychological care, a welcoming environment, and calm were mentioned. Actions that influence both children and mothers.

A playroom with toys, books and a person to play with a little bit, because sometimes the mother is so tired, that during the playtime she just watches the child play, I think it is also important to have a more airy place, like a playground and a environment with music and television, I think these types of recreational places. P6

First is the calm to take care of the child, because the child can cry a lot, nervous and feeling a lot of pain, this happened a lot with my daughter, so I think the first action is to be calm. Another thing that I think has an impact is the comfort [...] P8

The strengthening in the search for humanized actions has as a starting point the construction of joint efforts by the professionals who assist the child, the hospital and the family itself. Therefore, this requires the preparation of a multiprofessional team, which, according to their specificities, will implement holistic assistance, adopting attitudes aimed at good communication and empathy.<sup>16</sup>

In view of these facts, the nurse has a duty to the patients to demonstrate vehemence, to assist and provide the care consistent with each situation, maintaining a relationship of trust and empathy between the health team and the child and the companions, being the feelings recognized. Understanding that a child's healing process involves several aspects is the basic principle for promoting their well-being, in addition to having a broader view and being concerned with the development of this different and so unique patient.<sup>17</sup>

### **On the influence of humanized assistance on the child's general condition**

As for the influence of humanized assistance under the child's general condition, all participants agreed that it has a very significant impact in this context, since from this act in the implementation of care, the change in the child is noticeable, which facilitates the therapeutic process.

Too much! My son seemed to be feeling that good energy, he laughed, even though he needed serum, being punctured, the professional played with him and he laughed, you know? It seems that he felt ... and I a pile, so tense. He was jumping with so much joy just with his diaper, even after the surgery. P1

Without a doubt, both family visits, as well as the medical and nursing staff, everything helps, so much so that there are some professionals who wear clown costumes and this helps a lot, because the child is happy, already improves, well-being, self-esteem and joy, it helps the body to improve in some disease, it is very important even.P6

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Like the child, her family is also a victim of trauma resulting from hospitalization, because in a dismal way, she is dealing with the unknown, with insecurity and fear. Thus, once hospitalization is necessary, men and machines come together with the purpose of facilitating the conditions of care for the child, seeking to reduce the length of hospital stay and promote agility in treatment. For this reason, the people involved in the treatment are intensely prepared, while the hospital environment must be safe for both parties.<sup>18</sup>

### **On the knowledge about the existence of hospital pedagogy**

Regarding the knowledge of the existence of hospital pedagogy, the answers were divided into 50% who knew about this teaching modality, and 50% who did not know. However, all responses were complemented with how fundamental continuing education in the hospital environment is.

I did know, it is very important that education continues right there. I am from the area of education and I know the impact and importance on the development of the child, so even if he is hospitalized there, it is necessary to continue education, that he is not lagging behind other students who are not in the same situation, let her feel good about it. It's even a distraction too. P1

No, I don't even know what hospital pedagogy does, I imagine it is something to continue the child's studies and this is very important, my daughter was interned during the literacy period and had no help at the hospital, but if she had it would be very important, I was teaching her, because of what the teacher sent to me. P8

In the current Brazilian context, the 1988 Federal Constitution is seen as the broadest and most complex law that governs the country. In it, the rights of children and adolescents are defended from different perspectives. It is in this context that, in 1994, the Ministry of Education, through the National Secretariat for Special Education, determined responsibilities regarding the fulfillment of the right of this group while hospitalized regarding education, through the formulation of the National Special Education Policy, which it legally instituted hospital class service.<sup>19</sup>

This teaching modality, regulated by specific legislation, aims to enable the continuity of schooling for children and adolescents who are inserted in the hospital environment, so that they are not harmed in the sense of the risk of school failure and possible developmental disorders. . Teachers have the responsibility to program content consistent with the current environment that the student is in, helping them later in school reintegration after hospital discharge.<sup>20</sup>

## Conclusion

The present study met the research objectives, because through the stories reported by the participating mothers, the impact of humanization in care under the child's condition and its importance was proved, as well as, despite having exceptions in some situations regarding care, even so, it was emphasized in these cases that humanization is necessary and must be put into practice.

It is expected that through reading this study together with the participants' testimonies, a cognoscentive subject will be conceived about the importance of humanization in the context of pediatric hospitalization, and how this reflects in undeniably positive effects on patients.

That it is evidenced as a humanized care creates consequences in addition to a good relationship between professionals and users of the health service - including in this case the pediatric patient and the companion - but also in how it helps in the healing process and provides the continuous development of child despite the situation experienced.

In view of the results found, it is necessary that nurses understand the importance of implementing a humanized character during the care provided, and that patients know the complexity of the concept of this term.

And finally, it becomes significant in stimulating new studies in the area, and for increasing humanization in health during the nursing care process.

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# The impacts of hospitalization for mothers of newborns

## Os impactos da hospitalização neonatal para mães de recém-nascidos

## Los impactos de la hospitalización neonatal para las madres de recién nacidos

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### RESUMO

**Objetivo:** Analisar os impactos da hospitalização neonatal em UTI para as mães de recém-nascidos. **Método:** Trata-se de um estudo de abordagem quanti-qualitativa. Para a coleta de dados utilizou-se perguntas feitas de maneira virtual através de um questionário com 13 perguntas, aplicado por meio da plataforma digital Google Forms. As participantes foram mães de recém-nascidos que estiveram ou que estão hospitalizados em UTIN. Para análise de dados utilizou-se a compilação dos dados que posteriormente foram agrupados por afinidade e apresentados no relatório final em gráficos e dados discursivos. **Resultados:** A discussão foi construída com 10 categorias, sendo algumas delas: o tratamento humanizado dos profissionais na UTIN, a visão que as mães têm da UTIN antes e depois da hospitalização, os impactos que a hospitalização geram na vida das mães, os sentimentos das mães ao vivenciarem essa experiência, compartilhamento de informações da UTIN para as mães. **Conclusão:** O presente estudo deixa evidências de que a hospitalização é um período doloroso para as mães, onde há um grande número de transtornos psicológicos como consequência, há também uma necessidade de humanização de forma integral, além do estímulo, compartilhamento de informações e principalmente empatia dos profissionais que atuam nessa área.

**Descritores:** UTIN; Hospitalização; Recém-nascido.

### ABSTRACT

**Objective:** To analyze the impacts of neonatal hospitalization in ICU for newborn mothers. **Method:** This is a quantitative-qualitative study. For data collection, questions were asked in a virtual way through a questionnaire with 10 questions, applied through the digital platform Google Forms. The participants were mothers of newborns who were or who are hospitalized in the NICU. For data analysis, we used the compilation of data that were later grouped by affinity and presented in the final report in graphs and discursive data. **Results:** The discussion was built with 10 categories, some of them being: the humanized treatment of professionals in the NICU, the view that mothers have of the NICU before and after hospitalization, the impacts that hospitalization generates on the lives of mothers, the feelings of mothers in experiencing this experience, sharing information from the NICU to mothers. **Conclusion:** This study leaves evidence that hospitalization is a painful period for mothers, where there is a large number of psychological disorders as a consequence, there is also a need for full humanization, in addition to the stimulus, information sharing and especially empathy of the professionals who work in this area.

**Descriptors:** NICU; Hospitalization; Newborn.

### RESUMEN

**Objetivo:** Analizar los impactos de la hospitalización neonatal en UTI para las madres de recién nacidos. **Método:** Se trata de un estudio de abordaje cuantitativo-qualitativo. Para la recolección de datos se utilizaron preguntas hechas de manera virtual a través de un cuestionario con 10 preguntas, aplicado por medio de la plataforma digital Google Forms. Las participantes fueron madres de recién nacidos que estuvieron o que están hospitalizados en UTIN. Para análisis de datos se utilizó la compilación de los datos que posteriormente fueron agrupados por afinidad y presentados en el informe final en gráficos y datos discursivos. **Resultados:** La discusión fue construída con 10 categorías, siendo algunas de ellas: el tratamiento humanizado de los profesionales en la UTIN, la visión que las madres tienen de la UTIN antes y después de la hospitalización, los impactos que la hospitalización generan en la vida de las madres, los sentimientos de las madres al experimentar esta experiencia, compartir información de la UTIN para las madres. **Conclusión:** El presente estudio deja evidencias de que la hospitalización es un período doloroso para las madres, donde hay un gran número de trastornos psicológicos como consecuencia, también hay una necesidad de humanización de forma integral, además del estímulo, intercambio de información y principalmente empatía de los profesionales que actúan en esa área.

**Descritores:** UCIN; Hospitalización; Recién nacido.

ORIGINAL

## Introduction

Hospitalization in a neonatal intensive care unit (NICU) is a period of vulnerability for the mother and family of the hospitalized newborn (NB), because with the news that the child will go to the NICU, frailty begins to emerge affecting the routine of life and even the personal relationships of the mother and family.<sup>1</sup> The emotional adaptation of the mother of a newborn who goes to a NICU is more difficult, because during pregnancy mothers create an expectation of the ideal child and a child that will bring joys as soon as it is born, but it is during birth that this drop in expectation occurs, where the mother has to deal with the reality of the child being born with some complication and have to be directed to the NICU, thus having to adapt to the real image of your child and not the one that was imagined.<sup>2</sup> Another factor that contributes to the emotional vulnerability of the mother in this period is the puerperium, because usually during this period the mother feels insecure and has changes in mood, the birth of a child generates anxiety and questions, which can lead to a postpartum depression, about 50 to 70% of women have changes in mood such as hyperemotivity, fragility and feelings of disability.<sup>3</sup>

The neonatal intensive care unit has the care directed to the care of the newborn in critical or life-threatening situations, being indicated for: newborns who require mechanical ventilation, regardless of gestational age, or in the acute phase of respiratory failure; newborns with gestational age less than 30 weeks or weighing less than 1000 grams; newborns requiring major surgeries and immediate postoperative surgeries of low and medium-sized surgeries; newborns in need of parenteral nutrition; and newborns requiring specific care such as use of central venous catheter, use of vasoactive drugs, treatment for serious infections.<sup>4</sup>

The mother of a premature baby is more susceptible to suffering from emotional disorders in the puerperium, the hospitalization of the baby can trigger several affective disorders such as an inconsistent bond between mother and child, which may have consequences for the child during childhood and adolescence, such as sensory impairments, neurological disorders, among others.<sup>5</sup>

Given these facts, the question arose that impacts hospitalization in a neonatal intensive care unit has on the life of the mother of a newborn?

The aim of this study was to describe the impacts caused in mothers of newborns who are or who were hospitalized in the neonatal intensive care unit.

## Method

The methodology for this study was a quantitative-qualitative approach following the assumptions of Gil, 2008.<sup>6</sup>

Data collection took place through the Google Forms platform, with 76 participants, from the Facebook virtual group called "ICU Mothers", whose is visible where anyone can find it, but it is a private group in which only members can see who is in the group and what is posted in it. It was created on June 20, 2019, with 7,800 members, and has two administrators. The inclusion criteria for participation in the research were women aged 18 years or older; women with good mental health, women who agreed to participate in the research and sign

the Free and Informed Consent Form, women who have at least 1 child who is or has been hospitalized in the neonatal intensive care unit, that the length of hospitalization is or has been at least one week. And as exclusion factors, the study ruled out: women under the age of 18 years, women who are not in good mental health; who do not agree to participate in the research, who do not sign the free and informed consent form, women who do not have any children hospitalized in the neonatal intensive care unit, and women who have been hospitalized for less than a week.

The participants of this study were the mothers inserted in the context of the experience by children who were in the hospital. These mothers named participants in this research are women who for different reasons made or are part of the routine experienced in the hospital, encompassing the integrality of care by health professionals and coping in this period, consequently, directly participating in the nursing care process. For this study, the collection instrument used was a questionnaire composed of 10 discursive and objective questions.

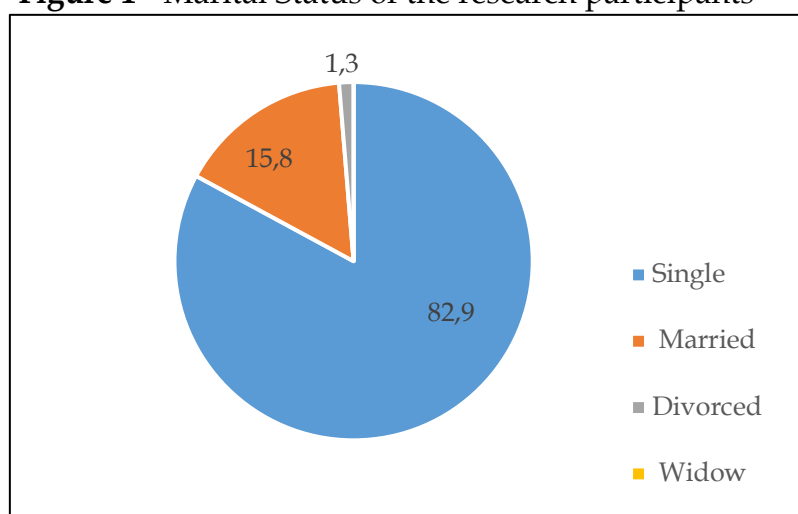
Resolution 510 of April 7, 2016 incorporates, from the perspective of the individual and the collectivities, references of bioethics, following the principles of recognition of the freedom and autonomy of those involved, respect for individual values and customs, without discrimination or prejudice, non-maleficence, justice and equity, the guarantee of the consent of the participants, in addition to the confidentiality of the information.

For data analysis, we used the compilation of data that were later grouped by affinity and presented in the final report in graphs and discursive data.

## Results

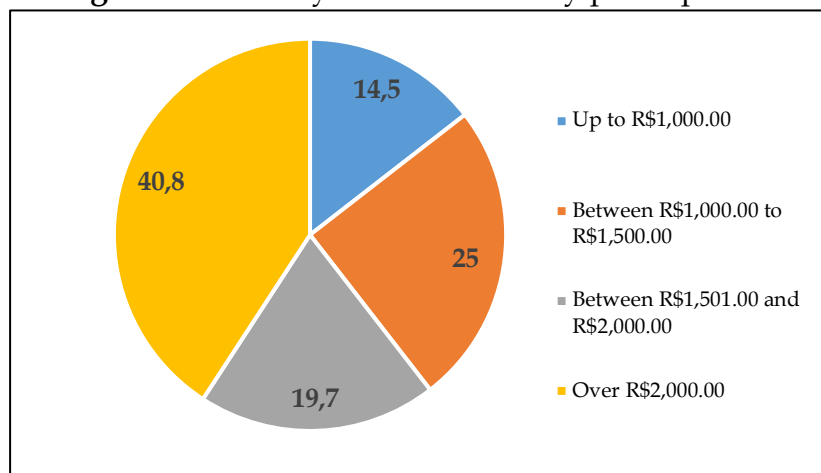
As a result of this study, the participants' profile is profiled, as follows: Most of the participants were of marital status; married, followed by single persons, divorced and widowed, as shown in Figure 1:

**Figure 1 - Marital Status of the research participants**



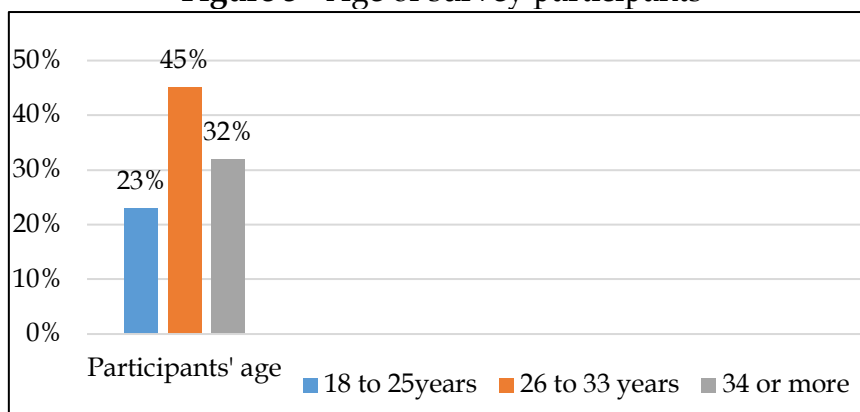
Among the results, it is found that the income of the participants of this research is above 2,000.00, ranging from 1,000.00 to above 2,000.00 (Figure 2).

**Figure 2 - Monthly income of survey participants.**



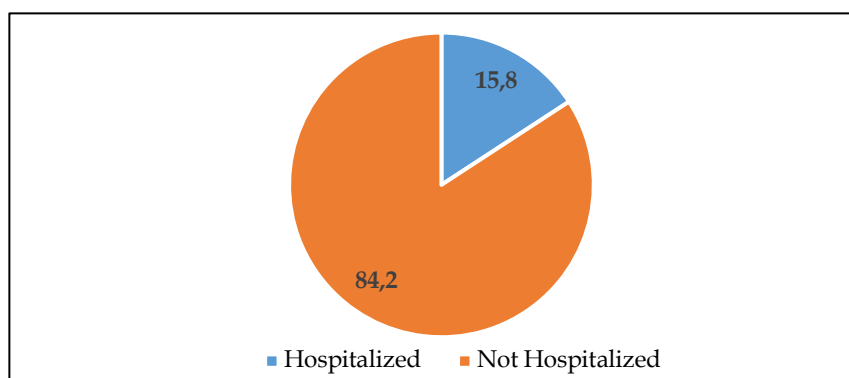
Among the results, it is verified that the predominance of participants aged between 36 and 33 years (45%)(Figure 3).

**Figure 3 - Age of survey participants**



The participants of this study reported that about 84.2% have already gone through the period of hospitalization in the NICU with their children, while 15.8% are hospitalized.

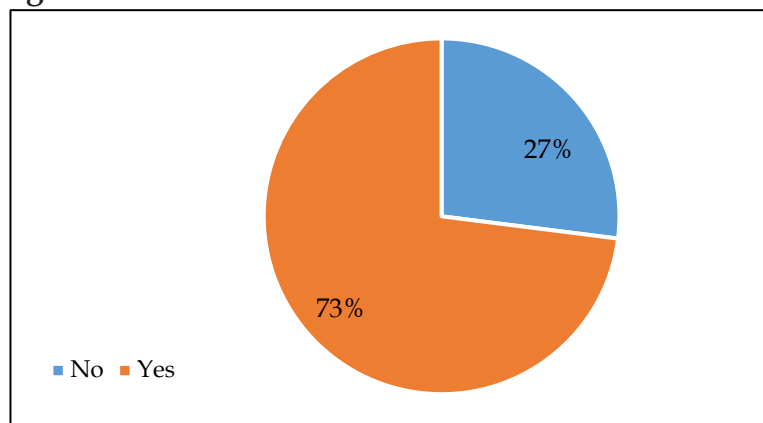
**Figure 4 - Child's hospitalization situation**



Among the participants in this study, 27% reported having other children, and 73% reported having no other children (Figure 5).



**Figure 5 - Mothers of more than one child alive or dead.**



## Discussion

For the discussion of the theme, the data found were organized in the form of categories. Thus, there were 8 categories, as follows:

### Nursing professionals in neonatal ICU and humanization

88.2% (67) Participants said that nursing professionals are humanized in their actions, and 11.8% (9) participants said that professionals are not humanized.

Humanized care is still a challenge in the NICU, because often the difficulties and obstacles that arise in the professional's work process hinder the realization of humanization, issues such as accommodation for mother, physical space, lack of employees are factors that contribute to prevent this realization.<sup>7</sup>

Humanization for parents has a different meaning, it is part of the idea that care should be based on human contact, in the form of treatment with newborns, parents define humanization basically in three categories that highlight as the main points of humanization, which are: Care for newborns that is defined the way of treating newborns present there, the care, the affection, the attention that the professionals have with each one, also affirm that the way of having a specific treatment for all children understanding the peculiarities of each one.<sup>8</sup>

Humanization in health care results in promoting a place to the user's speech regarding that of health professionals, in a way that integrates with a network of dialogue, that idealizes and promotes campaigns, programs, actions and care policies based on respect, solidarity, ethical dignity and mutual recognition. The process to practice humanization is extensive, complex and long, as it requires changes in behavior, which always cause resistance and insecurity. Humanizing health is not only to soften hospital life, it is the possibility of putting oneself in the place of the other, unfortunately in many places the lack of technical conditions, whether of materials and training make it impossible for care to be humanized, and dehumanization aggravates situations that were already precarious.<sup>7</sup>

## **The experience of having a child in the neonatal ICU**

The research participants reported that having a child in the neonatal ICU is a painful experience, with a mixture of feelings, anxiety and physical fatigue, as follows:

It was very painful, it was the moment That I but created strength in my life! And God helped me a lot! P. 3

It's a mixture of feelings, good days, others not so much. Anxiety, worry take over the days, in addition to physical and mental fatigue. Tiring and distressing. P.24

It was painful, because every premature, especially extreme that was the case of my baby, scares, every little problem already makes us leave there with a tight heart in hand. Our struggles, the morning and night come back were tiring, a weariness and feeling of enormous incapacity. P.32

It's very difficult, the fact that you leave and your child stay, it's an inexplicable feeling, I've been in the ICU for only 48 days, we feel a mixture of feeling and feelings is one day at a time, but the learning I took from those days I spent in the ICU with my son is priceless. P.7

Most mothers are not ready to have their newborn children hospitalized in a NICU, the news that the child will be hospitalized in the intensive care unit generates a strong impact on the whole family, especially in mothers, the various appliances and equipment present in this ward scare at first sight, even having the knowledge that all the resources present there are to monitor and treat the newborn fear does not diminish , and when you see the amount of wires and tubes connected in your children, feelings of sadness, anguish and anxiety are aroused and predominate in mothers. <sup>9</sup>

## **The feelings obtained upon receiving the news that the child is going to neonatal ICU**

The participants of the research reported that upon receiving the news that their children would go to the NICU, it is a mixture of sensations, and the feeling of guilt is one of the most present, fear, uncertainties, insecurity, as follows:

At the time I was in shock, not knowing what to think, but my husband calmed me down a lot telling me that it would be better for her. P.29

Fear, anguish, guilt and despair mixed with faith. P.30

It was like i was ripping off a piece of me mercilessly. The worst moment of my life so much uncertainty. A mixture of happiness with fear and sadness. I felt guilty that she was going through all this, even though it wasn't my fault. P.61

The ICU environment causes stress and causes contradictory feelings in mothers, happiness for having given birth to their child, and sadness at seeing him in the situation of hospitalization of vulnerability and frailty in an ICU. <sup>9</sup>

Being in a NICU for the mother, is painful and scary, because seeing the son long awaited in a serious situation generates these feelings, however, some nurses can notice the importance and positive results in the period in which the mother spends with her hospitalized child, because the mother being present in the NICU makes her acquire more confidence to take care of the NB and assume the maternal role , helps to mature motherhood and reduces the suffering of the

mother by having contact with the child, closely assessing the positive evolution of the situation also makes mothers feel more reassured.<sup>10</sup>

### **Factors that hinder hospitalization in the NICU**

The participants stated that among the main factors that hinder the hospitalization period, it is mainly the lack of physical contact, the limitation of taking the lap, the deprivation of breastfeeding, lack of information, seeing the situation that the child was also, as if he was in the incubator, or using devices, as follows:

The fact that I have to leave him every day. My other son is older so I needed to share my attention. P. 19

The hardest part was not being able to take my daughter in my lap, breastfeed her, see the other mothers with the children in the room and only I didn't, i suffered a lot, i did everything not to stay in the room, because if I stayed there I just cried, because I wanted my daughter with me. P.57

Seeing him connected to so many devices, lack of information, everything i was told was" due to prematurity ", is being difficult to still deal with this environment. P. 68

everything... Unemployed husband, pandemic, not being able to hold him in his lap or take him home. Not being able to breastfeed was what really did it. P.72

Some difficulties prevent the establishment of the bond between mother and child, such as a bad structure of nicu, the lack of education on the part of professionals in helping mothers to have the first touch, providing the lap for the first time, in addition to the mother's own insecurity, which, seeing the child in such a fragile situation, is afraid to get close or hold on the lap.<sup>10</sup>

There are cases where mothers cannot have a permanent presence to accompany, but it is necessary to have empathy and care with this mother, because it is not known why she cannot accompany the child, may have other factors influencing such as other obligations, sometimes work, or a difficulty in accepting the fact that the child is hospitalized in an ICU or is premature.<sup>11</sup>

### **The idealization of the neonatal ICU before the first contact**

The participants reported that the main association made with the NICU is related to death, suffering, extreme cases, as follows:

I've imagined a gloomy environment, rush, unknown cases, machines beeping. P.9

I think in every mother's mind, that's what happens. P.26

He had an image of series: incubator, intensive care. Nothing comfortable, but with a severe extreme premature baby, it's a lot worse than you could ever imagine. P.46

For most mothers the NICU is an environment very associated with death, there is a thought that babies who go to this ward are about to die or who are in a very critical situation, relate the NICU with a negative environment, scary is very common, but generates bad feelings.<sup>12</sup>

## **NICU vision after hospitalization in the unit and the effect on mothers' lives**

The participants reported that they changed their minds about the NICU, after having their children hospitalized, and how hospitalization affected their lives, currently the mothers evaluate the unit in a more positive way, as a place of support, where professionals are careful, a place of hope, and the appreciation of the unit's professionals, as follows:

Today I see the ICU with good eyes, and not just a place that goes when the patient no longer has hope. P.10  
I had my daughter for her, and I was afraid at first she didn't have everything I needed, but I was surprised, the ICU was very well equipped and many competent professionals took very good care of her and me too. P. 28  
I could see when the work of all professionals is valuable, we see miracles happen every day with our little ones, after all, their lives are forming outside our bodies now. P.39

Living together in the NICU slightly deconstructs this vision that mothers have, because with the permanence in the unit, they can closely monitor everything that happens to their child, procedures and care, demystifying the idea that an intensive care unit is a place of mystery and total isolation.<sup>10</sup>

Mothers observe the environment and especially the approach of professionals with patients, the relationship and care with their children pass a sense of security, the view that the child is being cared for by a good professional and that he has the necessary care reassures mothers, the need to have qualified, humanized and empathic professionals, who are helpful, calm mothers, because they feel safe to ask questions, to talk about their afflictions, ask for help when necessary, and reduces the fear of the NICU, because they observe that the professionals who work there are properly trained and the vast majority are dedicated and are very careful with the procedures.<sup>13</sup>

## **The instruction for mothers about the neonatal ICU and its peculiarities**

About 47% of the participants reported that they had no previous instruction when they were informed and directed to the NICU, those who were instructed, reported that it was abrupt, and that the nursing team explained in more detail, as follows:

Yes. Nursing staff explained to me in detail and lovingly. P. 18  
They only came with my son full of braces, in an incubator, and they said he will be forwarded and when the lady is well, you will be able to see your son, only! P. 7  
Not because I didn't have time after an emergency C-section my baby. P.74

In fact, when I got the news was still in the operating room, my husband who went after everything, I went to have news almost 4 hours later when I went up to the room. P. 37

There is a need for instruction to prepare them when having contact with the neonatal intensive care unit, so that they understand how is the functioning and routines of the sector, the physical environment, the importance of being present in this phase and how it is necessary for the recovery of the child, in addition to explaining the situation in which the newborn meets the needs and possibilities that he has , in order to provide that the first contact between mother and child is pleasurable and reduce the impact that hospitalization and the environment causes. <sup>9</sup>

### **Changes regarding the treatment and behavior of professionals working in the NICU**

Most of the participants reported that they would not change anything about the treatment and conduct of the professionals, however, there are participants who report that they would change the behavior of physicians, the way they gave bad news, have greater access to information, the opinion about the nursing team was mostly positive, as follows:

Where my daughter stayed, I just have good things to say. Big-hearted human professionals. They were angels in my baby's life and in my life. Gratitude comes down to these professionals!!! P.34

In nursing, we would not change we were very welcomed in the hospital that my son was hospitalized. By doctors, they need to be humanized and stop treating people like dumb people. P.28

By the doctors, a lot of information was left behind. For the nursing, they were excellent! They treated me very well, always attentive and doing what they could. P. 17

Space for us parents, space for rest, for our feedings, because we are a whole day sitting there in chairs, psychologist for the accompaniment of our pains, and truer human beings! P.12

The relationship of professionals with family members: for parents, the professional giving importance to the patient's family, is one of the meanings of humanization, the act of informing, treating with respectful and careful attitude, clarifying doubts, giving support at that difficult time, is highly valued by parents, empathy and communication is paramount; the behavior of the health professional is also cited as one of the pillars of humanization, it is linked to dedication, the vocation to activities, the attitudes of the professional, parents observe professionals and perceive those who are more careful, those who are busier, and consequently trust more in one than in others, this bond of trust is generated through the behavioral analysis of each employee. <sup>8</sup>

## Conclusion

The present study met the objectives of the research, since the aim of the study was to describe the impacts caused on the lives of mothers of newborns who are hospitalized in the neonatal intensive care unit, 76 participants were interviewed about the consequences generated in the mother's life, most of these impacts are negative, where mothers are left with psychological disorders, such as anxiety and depression, but also resilience is strengthened, feelings of strength, courage are also generated and consolidated in these mothers. There are still points to be improved in the NICU's, so that it can reduce the number of negative impacts generated, as the study presents, humanization is a very important factor in this environment, which transforms and motivates people who are going through the hospitalization period. There is a need for improvement in question of the infrastructure of these units, and an uninterrupted process of humanization, where there is a daily construction on this point.

By knowing the mothers' feelings and vision about this situation, it becomes more evident the conducts, improvements and even the actions of health professionals in the neonatal intensive care unit.

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# The knowledge of women with endometriosis about the disease and family planning

## O conhecimento de mulheres portadora de endometriose sobre a doença e o planejamento familiar

## El conocimiento de las mujeres con endometriosis sobre la enfermedad y la planificación familiar

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### RESUMO

**Objetivo:** analisar o conhecimento da mulher portadora de endometriose sobre a sua doença e o planejamento familiar. **Método:** trata-se de um estudo quantitativo, transversal e descritivo realizado em maio de 2021 junto a 20 mulheres com endometriose inscritas em grupo específico no Instagram. Aplicou-se, via google forms, um questionário sociodemográfico e clínicos e um instrumento para avaliação do conhecimento das mulheres. Utilizou-se a estatística descritiva para a análise dos dados que ocorreu no Statistical Package for Social Science, versão 25,0. **Resultados:** embora 70% das mulheres saibam o que é planejamento familiar, houve predomínio daquelas que possuem dúvida a respeito da doença (85%), que não sabem qual serviço de saúde do Sistema Único é responsável pelo planejamento familiar(65%) e que não conhecem o seu direito ao planejamento familiar ou a fertilização in vitro(80%). Ainda, predominaram mulheres que possuem “algum conhecimento” da doença (40%). **Conclusão:** O conhecimento das mulheres a respeito da endometriose e planejamento familiar é limitado, sendo desconhecidos aspectos relativos à doença, ao acesso aos serviços de saúde e aos direitos sociais envolvidos.

**Descritores:** Planejamento Familiar; Endometriose; Saúde da Mulher.

### ABSTRACT

**Objective:** to analyze the knowledge of women with endometriosis about the disease and family planning. **Method:** this is a quantitative, cross-sectional and descriptive study carried out in May 2021 with 20 women with endometriosis registered in a specific group on Instagram. A sociodemographic and clinical questionnaire and an instrument for assessing women's knowledge were applied via google forms. Descriptive statistics were used to analyze the data that occurred in the Statistical Package for Social Science, version 25.0. **Results:** although 70% of women know what family planning is, there was a predominance of those who have doubts about the disease (85%), who do not know which health service in the Unified System is responsible for family planning (65%) and who he does not know his right to family planning or in vitro fertilization (80%). Still, women with “some knowledge” of the disease predominated (40%). **Conclusion:** Women's knowledge about endometriosis and family planning is limited, being unknown related to the disease, access to health services and the social rights involved.

**Descriptors:** Family Planning; Endometriosis; Women's Health.

### RESUMEN

**Objetivo:** analizar el conocimiento de las mujeres con endometriosis sobre la enfermedad y la planificación familiar. **Método:** se trata de un estudio cuantitativo, transversal y descriptivo realizado en mayo de 2021 con 20 mujeres con endometriosis inscritas en un grupo específico en Instagram. Se aplicó un cuestionario sociodemográfico y clínico y un instrumento para evaluar el conocimiento de las mujeres a través de formularios de google. Se utilizó estadística descriptiva para analizar los datos que ocurrieron en el Paquete Estadístico para Ciencias Sociales, versión 25.0. **Resultados:** si bien el 70% de las mujeres sabe qué es la planificación familiar, hubo predominio de las que tienen dudas sobre la enfermedad (85%), que desconocen qué servicio de salud del Sistema Unificado se encarga de la planificación familiar (65%) y quien desconoce su derecho a la planificación familiar o la fecundación in vitro (80%). Aún así, predominaron las mujeres con “algún conocimiento” de la enfermedad (40%). **Conclusión:** El conocimiento de las mujeres sobre la endometriosis y la planificación familiar es limitado, se desconoce su relación con la enfermedad, el acceso a los servicios de salud y los derechos sociales involucrados.

**Descritores:** Planificación Familiar; Endometriosis; Salud de la Mujer.



## Introduction

Endometriosis is an inflammatory condition, defined by tissue lesions similar to the endometrium, but outside the uterine cavity with the presence of pelvic pain, infertility and pain during sexual practice. Studies show that endometriosis affects about 176 million women of their reproductive age worldwide, affecting about 5% to 15% of these women of reproductive age, 20% to 40% of women with endometriosis have difficulties getting pregnant and 30% to 50% are infertile.<sup>1</sup>

According to the Ministry of Health, complications from Endometriosis occur through the appearance of endometrioma, which are cysts installed in the ovaries, which can compromise the woman's fertility. Other organs that can also be affected are: Bladder, vagina, appendix and large intestine<sup>2</sup>. According to the Ministry of Health (2012) in Brazil, one in ten women have Endometriosis.<sup>2</sup> Between 2009 and 2013, they were about 71,818 hospitalizations were pointed out due to complications from endometriosis.<sup>3</sup>

There is a difficulty in finding nursing professionals who provide assistance to women with endometriosis in Brazil, considering that the role of the specialist nurse in women's health is more focused on pregnancy and childbirth.<sup>4</sup> In 2018, Law No. 8,438/ 2018 that instituted the Endometriosis and Infertility Prevention Week in Sergipe's official calendar. This week begins in the month of March, also known as "yellow March" for the worldwide awareness of Endometriosis, in which they promote an information campaign on the identification of disease and treatment, but it is noteworthy that, due to the recent innovations, there are women who do not have information about it.<sup>5</sup>

According to the Legislative Assembly of the State of Sergipe in a public hearing held at the Legislative School, in order to discuss prevention of Endometriosis and Infertility, it was reported that there are obstacles, such as the inaccuracy of relevant information about the disease, thus causing the lack knowledge that causes ineffective diagnosis and treatment. In addition, it was also observed that about 7 million women in Brazil are carriers of Endometriosis and Infertile.<sup>5</sup>

Thus, according to the Constitution of the Federative Republic of Brazil, women, men and couples have the right to family planning and are supported by article 226, paragraph 7, and by Law 9,263, of 1996, which regulates it. Thus women with Endometriosis have their rights guaranteed by law regarding drug or surgical treatments for family planning or fertilization.<sup>6</sup> Based on these data, the question is: Do women with endometriosis have knowledge about their disease and about the family planning?

In this sense, the aim of the study was to analyze the knowledge of women with endometriosis about their disease and family planning.

## Method

This is a quantitative, cross-sectional and descriptive study. Data collection took place digitally in May 2021 with 20 women belonging to a group dedicated to endometriosis and hosted on the Instagram digital platform. Women following a page dedicated to Endometriosis on Instagram were included; who accepted to participate in the survey between May 1st and May 30th, 2021; carrier

of ovarian, deep and/or intestinal endometriosis; and aged 18 years or over. Those who were in the group but had no medical diagnosis of endometriosis were excluded.

To approach the subjects, the study was initially disclosed to the aforementioned group, and the Informed Consent Form (FICF) and a research protocol were then sent through a link from the Google Forms platform to the participants. When opening the link, the consent form was first presented and, only after its signature, the research was started from the protocol prepared by the authors.

The research protocol consisted of demographic and clinical data and specific questions to assess women's knowledge. As sociodemographic data, the following were included: age, marital status and education level. In the clinical evaluation, questions were asked about previous pregnancy, access to health services, guidance received or not in the health service, the guarantee of rights to family planning by health professionals in the service.

The assessment of women's knowledge about endometriosis was carried out through 6 questions, 2 of which were open and 4 closed. The open questions were evaluated through thematic analysis, obtaining thematic categories from the similarities in the subjects' speeches. The closed questions had two answer options, yes and no, with a score of 1 being established for correct answers and 0 for incorrect answers or those that indicate lack of knowledge about the item in question. Thus, the final score of each subject ranged from 0 to 4, with 0 being no knowledge about the subject, 1 -Some knowledge, 2-Good knowledge, 3-Great knowledge; 4- Excellent knowledge.

To organize and analyze the data, a database was created in the Excel program (Office 2010) and the Statistical Package for Social Sciences (Version 25.0) was used. Qualitative variables were presented in absolute values (n) and percentages (n%). Quantitative variables were exposed in descriptive measures: minimum and maximum values, mean and standard deviation. The Wordle system was used to construct the word cloud for the questions: "What is Endometriosis for you?" and "What is your biggest complaint about the disease?". This technique consists of using different font sizes and fonts according to the frequency of words in the analyzed text 7.

In compliance with the Guidelines and Regulatory Norms for Research Involving Human Beings (CNS Resolution 466/12), this study was submitted to the Research Ethics Committee (CER) of the proposing institution, being approved on April 28, 2021 under opinion number 4.678 .003. In addition, along with the presentation of the study and its objectives, a Free and Informed Consent Form was made available for download with the instruments, which was signed, authorizing voluntary participation in the research.

## Results

The study population consisted of 20 patients with Endometriosis registered on an Instagram page focused on this topic. Table 1 shows the sociodemographic data of these women.

**Table 1-** Sociodemographic data of patients with Endometriosis registered on an Instagram page. (n=20). Brasilia, 2021.

Categorical Variables			
Variable	Category	n	%
Marital status	Single	8	40,0
	Married/Living with a partner	12	60,0
	Divorced / Separated	0	0
	Widow	0	0
Education Level	Basic Education	0	0
	High School	13	70,0
	University Education	7	30,0
Continuous variables			
Variable	Minimum maximum	Average	DP*
Age	21- 44	30,8	6,8

\*Standard deviation

According to Table 1, there is a predominance of women who are married/living with a partner (60%), who have completed high school (70%) and who have, on average, 30.8 years (SD 3.8) deity. Table 2 presents the clinical data of patients with Endometriosis.

**Table 2-** Clinical data of women with endometriosis registered on an Instagram page (n=20). Federal District, 2021.

Variable	Category	n	%
What led you to question whether you were a carrier of Endometriosis?	By chance/routine consultations	6	30,0
	Pain/Intense Cramps	14	70,0
Have you ever gotten pregnant? If so, did you have difficulties with this?	Yes with difficulty	3	15,0
	yes without difficulty	5	25,0
	No but wish and keep trying	4	20,0
	never got pregnant	8	40,0
If you went to a Family Planning Health Service, what was your experience like? Did you have guidelines on your right?	Sought and got directions	0	0
	Searched, but had no directions	5	25,0
	Never searched / is unaware of the subject	15	75,0
Did you ever feel bad about seeking your right to family planning and it was somehow denied? If yes, tell me about this situation.	It was felt that the right was neglected	0	0
	He didn't feel his right denied	6	30,0
	Didn't search / Never needed	14	70,0

Table 2 shows that the presence of severe pain and cramps (70%) was what most led women to question whether they had endometriosis. Still, women who never got pregnant predominated (40%), who never sought the health service (75%) and did not seek and/or did not need to use this service so far (70%). Table 3 presents the quantitative assessment of women's knowledge about endometriosis and family planning.

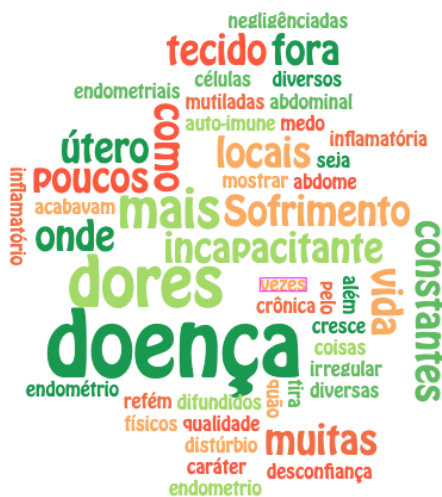
**Table 3-** Quantitative assessment of women's knowledge about endometriosis and family planning (n=20). Federal District, 2021

Analysis by Question	Reply	n	%
Do you have questions about Endometriosis?	Yes	17	85,0
	No	3	15,0
Do you know what family planning is?	Yes	14	70,0
	No	6	30,0

Do you know which health service provided by SUS is responsible for family planning?	Yes	7	35,0	
	No	13	65,0	
Do you know your legal right to Family Planning or In Vitro Fertilization?	Yes	4	20,0	
	No	16	80,0	
General Knowledge Classification		Escore Total	n	%
no knowledge		0	4	20,0
some knowledge		1	8	40,0
Good knowledge		2	5	25,0
great knowledge		3	3	15,0
Excellent knowledge		4	0	0,0

Table 3 shows that, although 70% of women know what family planning is, there is a predominance of those who have doubts about endometriosis (85%), who do not know which health service provided by SUS is responsible for planning family (65%) and who do not know their right to Family Planning or In Vitro Fertilization (80%). In addition, women who have some knowledge of the disease predominated (40%). In Figure 1, the word cloud for the question is presented: What is Endometriosis for you?

**Figure 1-** Word cloud for the question: What is Endometriosis for you? (n=20). Federal District, 2021.



In figure 1, on the question “What is endometriosis for you?”, the most frequent words in the women's answers are: disease, pain, suffering and disabling. In figure 2, the word cloud for the question is presented: What is your biggest complaint about the disease?

**Figure 2-** Word cloud for the question: What is your biggest complaint about the disease? (n=20). Federal District, 2021.



and experiences that enabled the reader to understand data and statistics from of that matter.

Although 70% of women know what family planning is, there is a predominance of those who have doubts about endometriosis (85%), who do not know which health service provided by the SUS is responsible for family planning (65%) and who do not know their right to Family Planning or In Vitro Fertilization (80%). In addition, women who have some knowledge of the disease, family planning and fertility predominated (40%). A survey of 24 women from a Basic Family Health Unit in Ceará reported that family planning for them meant contraception with the use of oral hormonal contraceptives and male condoms. It was also observed that 10 women reported total lack of knowledge about the subject.<sup>13</sup> A study with 237 women treated in two reference hospitals in Rio de Janeiro for endometriosis found that 49.5% were infertile.<sup>14</sup> Thus, it can be observed the need for information for women with endometriosis through health education actions by nursing professionals so that they know where and how to find the necessary support when symptoms appear.

Regarding the question "What is endometriosis for you?", the most frequent words in the women's answers in this study were: disease, pain, suffering and disabling, that is, they perceive endometriosis as a disabling disease that involves suffering and ache. About this, in a study with women with Endometriosis, they described pain as "overwhelming" and "overwhelming".<sup>15</sup> In an international research aiming to explore the perceptions of eighteen women about living with endometriosis, Pain was reported as intense and chronic as the main characteristics of the disease, which are capable of interfering with their social, professional and educational development.<sup>16</sup> According to these findings, it can be said that the symptomatology of the disease strongly affects women who have this comorbidity, since the reports on symptoms and how they affect lifestyles have stood out in this and other studies.

About the meaning of endometriosis, the words that most appear in the women's answers were: pain, disease, diagnosis and abdominal pain, that is, they know that it is an abdominal disease that requires diagnosis and involves a lot of pain as a symptom. In a study that aimed to understand the late diagnosis of the disease with 29 participants, it was described that, despite the pain they felt, when they sought help, they did not get it easily. The research also observed structural negligence linked to the gender issue and that, for diagnosis, women needed to seek, on average, 5.3 different physicians.<sup>17</sup> This information is essential for understanding how pain is the most reported characteristic in this study. pathology and that leads women more directly to the search for the diagnosis. However, for this to occur effectively and satisfactorily to them, health professionals with the capacity and knowledge that can help the patient to understand the disease and its symptoms are needed, thus producing good experiences and effective support for women with endometriosis.

## Conclusion

Women's knowledge about endometriosis and family planning is limited and important aspects related to the disease, access to health services and the social rights involved are not known by most women with endometriosis.

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# Pharmaceutical care in persons with diabetes mellitus using insulin

## Cuidado farmacêutico para pessoas com diabetes mellitus em uso de insulina

### Atención farmacéutica para personas con diabetes mellitus por uso de insulina

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# REVISA

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#### RESUMO

**Objetivo:** Identificar o perfil de saúde e farmacoterapêutico dos usuários de insulina cadastrados em uma unidade de saúde; e discutir o plano de cuidados adotado para estes pacientes, fundamentado em método de cuidados farmacêuticos. **Método:** Trata-se de estudo descritivo de abordagem qualitativa, realizado por meio de uma pesquisa de campo, tendo como cenário de intervenção propriamente dito uma Unidade de Saúde da Família, de um município baiano, envolvendo 20 usuários. A pesquisa se dividiu em duas etapas: identificação do perfil de saúde e farmacoterapêutico dos usuários de insulina e definição do plano de cuidados, com base numa adaptação dos métodos Dáder e Pharmacotherapy Workup. **Resultados:** No processo de cuidado farmacêutico, foram realizadas 46 intervenções envolvendo estratégias farmacológicas e de educação em saúde, sendo possível constatar melhoria nos resultados de saúde dos pacientes acompanhados. **Conclusão:** Os resultados apontam o cuidado farmacêutico como estratégia promotora de melhor qualidade de vida a esses pacientes, e também indícios de que, no processo de assistência aos pacientes com diabetes em uso de insulina, nas unidades de saúde, há carências de informações, dificultando a adesão ao tratamento e às práticas de autocuidado.

**Descritores:** Diabetes Mellitus; Insulina; Cuidados Farmacêuticos.

#### ABSTRACT

**Objective:** To identify the health and pharmacotherapeutic profile of insulin users registered in a health unit; and discuss the care plan adopted for these patients, based on a pharmaceutical care method. **Method:** This is a descriptive study with a qualitative approach, carried out through field research, with the intervention scenario itself being a Family Health Unit, in a municipality in Bahia, involving 20 users. The research was divided into two stages: identification of the health and pharmacotherapeutic profile of insulin users and definition of the care plan, based on an adaptation of the Dáder and Pharmacotherapy Workup methods. **Results:** In the pharmaceutical care process, 46 interventions were carried out involving pharmacological strategies and health education, and it was possible to observe an improvement in the health results of the patients monitored. **Conclusion:** The results point to pharmaceutical care as a strategy that promotes better quality of life for these patients, and also evidence that, in the process of assisting patients with diabetes using insulin, in health facilities, there is a lack of information, making it difficult adherence to treatment and self-care practices. **Descriptors:** Diabetes Mellitus; Insulin; Pharmaceutical Care.

#### RESUMEN

**Objetivo:** Identificar el perfil de salud y farmacoterapêutico de los usuarios de insulina registrados en una unidad de salud; y discutir el plan de atención adoptado para estos pacientes, basado en un método de atención farmacéutica. **Método:** Se trata de un estudio descriptivo con enfoque cualitativo, realizado a través de investigación de campo, siendo el escenario de intervención en sí una Unidad de Salud de la Familia, en un municipio de Bahía, involucrando a 20 usuarios. La investigación se dividió en dos etapas: identificación del perfil de salud y farmacoterapêutico de los usuarios de insulina y definición del plan de cuidados, a partir de una adaptación de los métodos de Dáder y Pharmacotherapy Workup. **Resultados:** En el proceso de atención farmacéutica se realizaron 46 intervenciones que involucraron estrategias farmacológicas y educación para la salud, y se pudo observar una mejora en los resultados de salud de los pacientes monitoreados. **Conclusión:** Los resultados apuntan a la atención farmacéutica como una estrategia que promueve una mejor calidad de vida para estos pacientes, y también evidencian que, en el proceso de atención a los pacientes con diabetes con insulina, en los establecimientos de salud, existe una falta de información, por difícil adherencia al tratamiento y prácticas de autocuidado.

**Descritores:** Diabetes Mellitus, Insulina, Atención Farmacéutica.

ORIGINAL

## Introduction

Diabetes mellitus is an important and growing public health problem in all countries, and Brazil ranks fourth among the 10 countries with the highest number of people with diabetes, aged between 20 and 79, according to data from the International Diabetes Federation.<sup>1</sup> This organization also warns that developing countries concentrate about 79% of cases, with a greater increase in the coming decades. Thus, he estimated that, if trends persist, there is a projection of over 628.6 million cases of diabetes in 2045. In this context, the Brazilian Society of Diabetes draws attention to the increase in mortality, complications and diseases associated with diabetes.<sup>2</sup>

The treatment of diabetes is complex and requires the intense participation of the patient who needs to be trained for self-care<sup>3</sup> and also the assistance of a team of collaborative and interdisciplinary professionals so that effective results are obtained.<sup>4</sup> In this process, the pharmacist's work in monitoring glycemic control is essential to meet the demands of care through care activities, which is evidence found in several countries.<sup>5-6</sup>

Among these activities, there is pharmaceutical care, which consists of a practice model that guides the provision of different pharmaceutical services directly aimed at the patient, family and community, aiming at the prevention and resolution of pharmacotherapy problems, the rational use of medicines, the promotion, protection and recovery of health, as well as the prevention of diseases and other health problems.<sup>7</sup>

The main purpose of the practice of pharmaceutical care for people with chronic diseases is to improve clinical outcomes, minimize unscheduled health care and contribute to the quality of life of patients. Particularly in relation to the care of people with diabetes, studies have shown the powerful contribution of the pharmacist in providing improvements in the health condition of these patients.<sup>8-9</sup>

Based on this premise, this article aims to identify the health and pharmacotherapeutic profile of insulin users registered in a health unit; and discuss the care plan adopted for these patients, based on a pharmaceutical care method.

## Method

This is a descriptive study with a qualitative approach, carried out through field research. The field of intervention itself was a Family Health Unit (USF), in a municipality in Bahia, which has a team of 23 health workers, not including the pharmacist. This intervention was carried out from January 2017 to April 2018, totaling fourteen months.

The participants involved were all users who used insulin in their antidiabetic therapy, making up a quantity of 25 people, who were identified through the Community Health Agents (CHA). Of this total, five people were not found, thus obtaining a total of 20 participants. The meetings with research participants were carried out through home visits accompanied by the ACS.

The research was approved by the Ethics Committee under protocol number 1.842.331 and was divided into two stages: identification of the health and pharmacotherapeutic profile of insulin users and definition of the care plan.

For the first stage, a form was used as a data collection instrument (objective and subjective questions) divided into three categories: socioeconomic data, history of health status and consumption, and attitude towards taking medication. For the second stage, the therapeutic evaluation was carried out and the pharmaceutical care plan was defined, based on an adaptation of the Dáder and Pharmacotherapy Workup (PW) methods.

In the care plan, the glycemic goal adopted by the Brazilian Society of Diabetes (2019) of postprandial blood glucose lower than 160mg/dL and glycated hemoglobin (HbA) lower than 7.0% was established. For the study of possible drug interactions and contraindications, the Drugdex System - Thomsom Micromedex®, Interactions, Drug Interaction Checker - Medscape® databases and the 2010 National Therapeutic Form were used.

The intervention process initially took place through the creation and availability of an individual dosage chart, a form for recording blood glucose measurements and an information booklet on diabetes (authors' elaboration), followed by an oral explanation about the importance of the rational use of medications, the practice of regular physical activity and adequate nutrition for glycemic control. The evaluation of pharmacotherapy was based on the identification of Drug-Related Problems.<sup>10</sup>

## Results

From the data collected in the home visits, the pharmacotherapeutic profile of the participants was traced, as can be seen in Table 1.

**Table 1** - Pharmacotherapeutic profile of people with diabetes using insulin, registered at a Family Health Unit in a municipality in Bahia (n=20). Bahia, 2018.

Variables	n	%
<b>Sex</b>		
Female	08	40,0
Male	12	60,0
<b>Age</b>	<b>n</b>	<b>%</b>
<60 years	11	55,0
≥ 60 years	09	45,0
<b>Family history of diabetes</b>	<b>n</b>	<b>%</b>
Yes	17	85,0
No	03	15,0
<b>Other associated pathologies</b>	<b>n</b>	<b>%</b>
No	02	10,0
Yes	18	90,0
Hypertension	12	66,7
Others	06	33,3
<b>Body Mass Index (BMI)</b>	<b>n</b>	<b>%</b>
Overweight ( $\geq 25$ kg/m <sup>2</sup> )*	07	35,0
Within normal limits ( $>18.5$ kg/m <sup>2</sup> $\leq 24.9$ kg/m <sup>2</sup> )*	07	35,0
Underweight ( $\leq 18.5$ kg/m <sup>2</sup> )*	04	20,0
Don't know the weight and height	02	10,0
<b>Regular practice of physical activity</b>	<b>n</b>	<b>%</b>
Yes	09	45,0
No	11	55,0

<b>Laboratory monitoring of glycemc levels</b>	<b>n</b>	<b>%</b>
Biweekly	01	5,0
Monthly	01	5,0
Quarterly	11	55,0
Biannual	04	20,0
Annual	02	10,0
Every two years or more	01	5,0
<b>Monitoring glycemc levels using the glucometer</b>	<b>n</b>	<b>%</b>
It does not perform	09	45,0
Performs daily	02	10,0
Performs between two and three times a week	05	25,0
Performs weekly	03	15,0
Performs monthly	01	5,0
<b>Result of the last glycemc measure</b>	<b>n</b>	<b>%</b>
Within normal ity parameters	03	15,0
Above normality parameters	13	65,0
No record/no remembers	04	20,0
<b>Watch your feet</b>	<b>n</b>	<b>%</b>
Performs daily	08	40,0
Performs between two and three times a week	06	30,0
Performs weekly	04	20,0
Does not apply (patient with amputated lower limbs)	02	10,0
<b>Diabetes-related complications</b>	<b>n</b>	<b>%</b>
Amputation of the lower limbs	02	10,0
Renal failure	01	5,0
Stroke	01	5,0
No complications	16	80,0
<b>Adverse reaction to medicines</b>	<b>n</b>	<b>%</b>
No	06	30,0
Yes	14	70,0
Hypoglycemia	05	35,7
Gastrointestinal discomfort	02	14,3
Other	07	50,0
<b>Application of insulin</b>	<b>n</b>	<b>%</b>
Apply alone	10	50,0
Assistance from a family member or health service	10	50,0
<b>Rotation at insulin application sites</b>	<b>n</b>	<b>%</b>
Yes	15	75,0
No	05	25,0
<b>Correct insulin storage</b>	<b>n</b>	<b>%</b>
Yes	08	40,0
No (refrigerator door)	12	60,0
<b>Lack of adtake in the last fifteen days</b>	<b>n</b>	<b>%</b>
No	10	50,0
Yes (reasons):	10	50,0
Hypoglycemia	02	20,0
Oblivion	02	20,0

Financial reasons	02	20,0
Guidance for stopping or pausing treatment	01	10,0
Caregiver was not at the time of the application	01	10,0
Made use of alcoholic beverage	01	10,0
He had a laboratory test	01	10,0

\* International classification of obesity according to the Body Mass Index (BMI) of the World Health Organization

After the elaboration of the pharmacotherapeutic profile, the pharmacotherapy was evaluated. In total, 28 Drug-Related Problems (MPR) were identified in the 20 patients followed (Table 2).

**Table 2** - Classification of Drug-Related Problems with their respective occurrences in the study (n= 28). Bahia, 2018.

TYPE OF DRP	n	%
<b>Necessity</b>		
1. Do not take the medicine you need	01	5,0
2. Take the medicine you do not need	01	5,0
<b>Effectiveness</b>		
3. Take a medicinal product that is not effective for non-quantitative reasons	07	35,0
4. Take a medicine that is not effective for quantitative reasons	01	5,0
<b>Security</b>		
5. Take a medicine that is not safe for non-quantitative reasons	07	35,0
6. Take a medicine that is not safe for quantitative reasons	01	5,0
<b>Adherence</b>		
7. Do not take the medicine you need	10	50,0

Having identified the profile of patients with diabetes in the research scenario, the next step of the research consisted of establishing the patient care plan, according to the consent of these patients to participate in this step. In this case, four of the 20 patients agreed to participate and were followed for six months. In order to preserve their identity, a code was established to name them.

### Patient I

J.C.D.S., male, 52 years old, married, literate, retired. Denied use of alcoholic beverages, smoking, practice of physical activity and adequate food for the pathological condition. In addition to diabetes, he has a diagnosis of arrhythmia. It makes continuous use of NPH insulin, 100mg acetylsalicylic acid, 50mg metoprolol succinate, 40mg furosemide, 5mg enalapril maleate, 10mg simvastatin and 25mg amitriptyline hydrochloride.

In the first contact, the patient reported non-adherence to 50mg metoprolol succinate in recent days due to its high cost, and that he does not administer insulin at night when blood glucose is below 100mg/dL (PRM 7). She reported

not needing help to apply the insulin, she practices the rotation and applies it in the proper places. However, when demonstrating how to apply insulin, it was noticed that the administration was being administered via the intramuscular route, a fact that changes its onset and duration of action (PRM 3).

To solve PRM 7, the patient was suggested to interchange the medicine metoprolol succinate 50mg of the reference brand with the generic equivalent, which is cheaper. At the next visit, the purchase of the generic drug was identified, thus favoring adherence to therapy.

Regarding the non-administration of NPH insulin at night for fear of presenting hypoglycemia, the patient was instructed about the time of onset and duration of action of this type of insulin. Regarding hypoglycemia, he was instructed to communicate with the prescriber about this adverse reaction. The prescriber adjusted the dose, reducing it by four units, thus solving the problem of adverse reactions that influenced adherence to therapy.

To solve PRM 3, the technique of subcutaneous insulin administration was taught, emphasizing the importance of “performing the fold” at the site. On subsequent visits, J.C.D.S. was asked about the technique adopted and demonstrated to perform correctly. Laboratory tests performed after this intervention indicated improvement in fasting, postprandial and HbA glucose levels.

From the identification of the drugs used, the study of possible drug interactions and contraindications was carried out. Possible interactions between acetylsalicylic acid and enalapril maleate have been identified, which may lead to decreased renal function, antihypertensive effect and changes in potassium levels; enalapril maleate and furosemide, with possible decreased renal function; acetylsalicylic acid and furosemide, enabling a reduction in the effect of furosemide. Thus, the patient was instructed to routinely monitor blood pressure. With the analysis of tests that assess renal function and potassium dosage, it was observed that they were within normal limits, according to the reference values, as well as blood pressure. Thus, these drugs are likely to be administered concomitantly in this case, despite the interactions reported in the literature, but they require continuous monitoring of renal function and potassium levels by the physician and pharmacist.

As for the contraindication of metoprolol succinate in patients with diabetes, due to the risk of masking the symptoms of hypoglycemia (PRM 5 - potential), the patient was instructed to perform glycemic monitoring using the fingertip test whenever administering the insulin.

Amitriptyline hydrochloride is contraindicated in case of arrhythmia (PRM 5) and the patient used this medication to treat insomnia and pain associated with Chikungunya, even though he no longer had symptoms (PRM2). The orientation was to report the situation to the doctor who decided to suspend use, a fact verified in subsequent visits.

## **Patient II**

E.S.F., female, 74 years old, single, literate, retired. Denied use of alcoholic beverages, smoking, practice of physical activity and adequate food for the pathological condition. In addition to diabetes, he has high blood pressure. Continuous use of NPH insulin, regular insulin, metformin hydrochloride 850mg and enalapril maleate 20mg. She reported that she did not need help to apply the

insulin, rotated it and applied it in the appropriate places, however, she stored it incorrectly, placing it on the refrigerator door.

She was unaware of the main symptoms of hypoglycemia, performed foot care only once a week, claimed to be allergic to the drug diclofenac potassium and did not perform daily blood glucose monitoring. Based on these observations, the intervention process was also carried out through the creation and availability of a folder on allergy to anti-inflammatory and analgesic drugs (authors' elaboration), in order to avoid adverse reactions.

When asked about the dosage of the medications she uses, it was noted that she used metformin hydrochloride 850mg only twice a day, and it was prescribed three times a day (PRM 7). Thus, the patient was instructed to use it correctly, according to the prescription, a fact confirmed in subsequent visits. In order to minimize the gastrointestinal discomfort reported by the use of metformin, administration during or after meals has been recommended. Upon checking the laboratory test performed after the intervention, a reduction in HbA and postprandial blood glucose was verified.

The patient also complained of sweating, tachycardia and blurred vision occasionally after administration of regular insulin. When questioning her, it was noticed that she did not eat after the application, leading to hypoglycemia (PRM 5). Thus, she was instructed to use this medication 15 to 30 minutes before the meal and in the following visits, the disappearance of these symptoms was evidenced.

From the analysis of pharmacotherapy, a possible drug interaction between enalapril maleate + metformin hydrochloride was identified, where there is a risk of developing lactic acidosis and hyperkalemia (PRM 5 - potential). Based on this identification, potassium levels and the possible presence of signs of lactic acidosis were evaluated at each visit, however, no significant clinical finding was identified.

### **Patient III**

L.S.F., female, 51 years old, married, literate, economically active. Denied use of alcoholic beverages, smoking, practice of physical activity and adequate food for the pathological condition. In addition to diabetes, he has high blood pressure. It makes continuous use of NPH insulin, regular insulin, metformin hydrochloride 850mg, enalapril maleate 20mg, simvastatin 10mg and acetylsalicylic acid 100mg. Claimed allergy to dipyrone.

The patient reported needing help to administer insulin for fear of self-administration. However, he refused to ask family and neighbors for help because he did not want to bother, evidencing non-adherence to insulin treatment (PRM 7). In addition, it stored insulin incorrectly, placing it on the refrigerator door. The patient admitted that not administering insulin and incorrect storage could be compromising the clinical results (PRM 3).

Based on these observations, the importance of using insulin for glycemic control was discussed with her and the intervention process was initially carried out through the availability of a folder, prepared by the authors, on allergy to anti-inflammatory and analgesic medications. From the visits, an improvement in adherence was noticed, however, the patient still reported fear of administering insulin. A consultation with the psychologist of the Expanded

Nucleus of Family Health and Primary Care - NASF-AB was suggested, however the patient did not agree, thus not accepting the proposed intervention.

From the analysis of the drugs used, possible drug interactions between acetylsalicylic acid and enalapril maleate were identified, which may lead to a decrease in renal function and antihypertensive effect and changes in potassium levels; enalapril maleate and metformin hydrochloride, favoring the risk of developing lactic acidosis and hyperkalemia (PRM 5 - potential). At each visit, potassium levels, renal function, blood pressure and the possible presence of signs of lactic acidosis were evaluated, however no significant clinical findings were identified.

#### **Patient IV**

E.J.G., female, 58 years old, married, literate, retired. Denied use of alcoholic beverages, smoking and adequate food for the pathological condition. He claimed to practice physical activity four times a week. Is overweight according to BMI. In addition to diabetes, he has high blood pressure. Continuous use of NPH insulin, regular insulin, fixed association of losartan potassium + hydrochlorothiazide 50/12.5mg, dapagliflozin 10mg, gliclazide 30mg, simvastatin 20mg and fluoxetine hydrochloride 20mg.

Incorrectly stored insulin by placing it in the refrigerator door. He stated that he had already had a severe adverse reaction from the use of metformin hydrochloride (gastrointestinal discomfort), which was suspended by the prescriber.

E.J.G. reported having replaced on his own the association of losartan potassium + hydrochlorothiazide 50/12.5mg prescribed by the physician (PRM 7) for amiloride hydrochloride + hydrochlorothiazide 5/50mg (PRM 2). His rationale for the switch was his perception that losartan potassium is not effective in controlling his blood pressure. He reported a one-year previous use of amiloride hydrochloride + hydrochlorothiazide 5/50mg and that, at the time, hypertension was under control, so he decided to use this drug again. When asked about how she acquired the drug, she said that she did not have the old prescription and that she only bought it because of the characteristics of the package (green box with red and yellow details).

In view of this situation, the risks of the attitude taken were explained and, on the next visit, the patient presented a box of amiloride hydrochloride + hydrochlorothiazide 5/50mg with the same amount of pills from the previous visit, proving the non-use of the same and adherence to the prescription current doctor.

Insulin preparation and administration technique was also demonstrated, as the patient incorrectly administered NPH and regular insulin at the same time and with a single syringe (PRM 3). The importance of paying attention to the sum of the doses and the time between preparation and application was explained. After the intervention and confirmation of the change in habits, a reduction in fasting and postprandial blood glucose levels was verified.



However, HbA increased, which can be explained by previous decompensation.

In one of the visits, the patient reported not using the prescribed simvastatin 20mg (PRM 7) because she believed that her cholesterol was within normal limits, as she lost weight as a result of the dietary reeducation process she was carrying out under the supervision of a qualified professional. Upon presenting their laboratory tests and the new medical prescription, there was a reduction in the levels of total cholesterol and fractions, but even so, they are above the reference values, with simvastatin 20mg being maintained in the medical prescription. The patient was instructed that the medication should only be suspended by the physician, and she resumed using the medication during the night.

## Discussion

As shown in Table 01, the pharmacotherapeutic profile of the monitored patients reveals, as central aspects, situations of adverse drug reactions, need for help in using insulin and difficulties in adherence to treatment. These aspects were found in other studies and that justify the need for pharmaceutical care, as a strategy to promote the quality of life of these patients.<sup>11-13</sup>

Despite accepting to participate in the preparation of the pharmacotherapeutic profile, resistance was noticed by some patients during home visits, from compliance with the recommendations to the presentation of laboratory tests and medical prescriptions. Thus, only four patients continued on to the next follow-up stage for possible interventions to resolve or minimize the identified MRPs.

care plan was drawn up for each individual, according to individual needs, including interventions on how to use medicines, referrals to other health professionals, health education on lifestyle changes related to food, practice of activities physical and rational use of medications. The plan was discussed with the patient, seeking to establish a mutually collaborative relationship.

Each intervention performed was duly registered and, in the following visits, acceptance was analyzed through the evolution/response presented. If the intervention did not reach the expected result, the patient was evaluated again and a new intervention proposal was carried out in consensus with him, thus characterizing the process of pharmaceutical care.

In this sense, Table 2 brings important data about the DRPs identified in this audience, the most frequent being related to adherence, effectiveness and safety. This situation can be explained by several reasons involving the way in which healthcare practices are carried out, in general configured by the medicalization process, without necessarily being stimulated and oriented towards self-care. Furthermore, even though pharmaceutical care is a worldwide practice, it is still not a priority in public or even private health

services in Brazil. It is worth noting that, in the studied scenario, the pharmacist is not part of the health team, even though, at that time, there was this professional in the NASF team.

In the pharmaceutical care process, 46 interventions were carried out involving pharmacological and health education strategies, such as those reported in the case descriptions. It is noteworthy that the interventions related to the health education process aimed to sensitize patients to the practice of self-care. It is known, however, that the acceptance and execution by the patient is something procedural, making it difficult to measure their adherence.

After the interventions, the pharmaceutical care plan was monitored and evaluated in order to verify the pharmacotherapeutic results. Given the data obtained, it can be stated that E.S.F showed 40% reduction in fasting glucose, 67.77% in postprandial and 22.73% in HbA. The patient L.S.F. reduced by 33.69% fasting blood glucose. Regarding HbA, patient J.C.D.S. reduced by 8.7%.

Due to non-adherence to pharmacological therapy (insulin administration), non-pharmacological (inadequate diet) and non-acceptance of follow-up with the psychologist, the patient L.S.F. remained with blood glucose levels above those recommended by the Brazilian Society of Diabetes.

Regarding the glycemic goal initially established, only E.S.F reached at the end of the intervention a postprandial glycemia lower than 160mg/dL. As for glycated hemoglobin, no patient had a value lower than 7%. A study by Nunes et al. (2012) revealed that after three months of pharmaceutical care, 28% of patients reached desirable glycated hemoglobin values (< 7%), while 72% had altered values (> 7%).

Finally, 50% of patients (n=2) showed improvement in blood glucose levels, patient L.S.F. and E.J.G, despite not reaching the glycemic goal established for postprandial glycemia, were sensitized to self-care through health education actions, and it is important to highlight that this is a slow process, where there must be continuity in the process of care to achieve the expected results.

## Conclusion

The results obtained in this research allow us to understand the pharmacotherapeutic profile of insulin users registered in a health unit; and the application of pharmaceutical care to establish a care plan. Moreover, it reveals that, in the process of care for patients with diabetes using insulin there are deficiencies of information, from the moment of prescription to dispensation, which hinder the adoption of treatment and self-care practices. The absence of pharmaceutical services in this process corroborates the understanding that the practice of care has been medicalizing.

Although the research was developed in a specific scenario, it brings elements to reflect on this aspect, from a broader

perspective, because it highlights the benefits of pharmaceutical care in health care, particularly for people with chronic diseases.

It should be considered that the intervention performed had influences of limitations of the service itself, such as: absence of a list of patients with diabetes using insulin, absence of updated information in the patients' medical records, lack of appropriate physical structure for care and material resources (glucometer, lancets and tapes) for the measurement of blood glucose during visits.

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# Adherence to antihypertensive drugs evaluated by the Morisky-Green scale

## Adesão ao uso dos anti-hipertensivos avaliada pela escala de Morisky-Green

### Adherencia a fármacos antihipertensivos evaluada por la escala Morisky-Green

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# REVISA

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#### RESUMO

**Objetivo:** Avaliar a adesão ao tratamento medicamentoso da hipertensão arterial sistêmica por meio da escala de Morisky-Green. **Método:** estudo descritivo com abordagem quantitativa envolvendo 103 pessoas com diagnóstico de hipertensão arterial acompanhados em um ambulatório de saúde. Os instrumentos de coleta de dados utilizados foram entrevistas semiestruturadas e questionário de Morisky e Green. A análise dos dados se deu pela estatística descritiva. **Resultados:** A amostra foi composta predominantemente de mulheres (85,4%), cor/raça preta (46,6%), faixa etária de 50-59 anos (68,9%), escolaridade com ensino médio incompleto e completo (45,6%), aposentados (35,9%), com renda de 1-2 salários mínimos (44,7%). Maior percentual tinha acesso à medicação de forma gratuita pelo Sistema Único de Saúde (70,9%). Os resultados encontrados, por meio do teste do Teste de Morisky e Green, evidenciam que a maioria respondeu afirmativamente para o uso adequado da medicação. Entretanto somente 38,8% dos entrevistados foram classificados com alta adesão. **Conclusão:** Mesmo que as respostas para as oito questões tenham sido positiva para o uso do anti-hipertensivo conforme prescrito, a taxa de adesão ainda é insatisfatória. **Descritores:** Hipertensão arterial; Adesão à medicação; Anti-hipertensivos; Tratamento farmacológico.

#### ABSTRACT

**Objective:** To evaluate adherence to drug treatment of systemic arterial hypertension using the Morisky-Green Scale. **Method:** Descriptive study with a quantitative approach involving 103 people diagnosed with arterial hypertension followed up in a health clinic. The data collection instruments used were semi-structured interviews and Morisky-Green Scale. Data analysis was performed using descriptive statistics. **Results:** The sample was composed predominantly of women (85.4%), color / black race (46.6%), age group 50-59 years (68.9%), education with incomplete and complete high school (45.6%), retired (35.9%), and people with an income between 1-2 Brazilian minimum wage (44.7%). A higher percentage had access to medication free of charge through the Public Health System (70.9%). The results found, through the test of the Morisky-Green Test show that the majority answered affirmatively for the proper use of the medication. However, only 38.8% of respondents were classified as having high adherence. **Conclusion:** Even if the answers to the eight questions were positive for the use of antihypertensive drugs as prescribed, the rate of adherence is still unsatisfactory.

**Descriptors:** Arterial Hypertension; Medication Adherence; Antihypertensive Agents; Drug Therapy.

#### RESUMEN

**Objetivo:** Evaluar la adhesión al tratamiento farmacológico de la hipertensión arterial sistémica mediante la escala de Morisky-Green. **Método:** estudio cuantitativo descriptivo con 103 personas con diagnóstico hipertensión arterial atendidas en una clínica de salud. Los instrumentos de recolección de datos utilizados fueron entrevistas semiestructuradas y un cuestionario de Morisky y Green. El análisis de los datos se realizó mediante estadística descriptiva. **Resultados:** La muestra consistió predominantemente por mujeres (85,4%), color/raza negra (46,6%), grupo de edad 50-59 años (68,9%), escolaridad secundaria básica incompleta y completa (45,6%), jubilados (35,9%), con un ingreso de 1 a 2 salarios mínimos (44,7%). Un mayor porcentaje de los participantes del estudio tiene acceso a medicamentos de forma gratuita a través del Sistema Único de Salud (70,9%). Los resultados encontrados, a través de la scale de Morisky y Green muestran que la mayoría respondió afirmativamente por el uso adecuado de la medicación. Sin embargo, solo el 38,8% de los participantes fueron clasificados como de alta adhesión. **Conclusión:** Aunque las respuestas a las ocho preguntas fueron positivas para el uso de fármacos antihipertensivos según lo prescrito, la tasa de adherencia sigue siendo insatisfactoria.

**Descritores:** Hipertensión Arterial; Cumplimiento de la Medicación; Antihipertensivos; Quimioterapia.

ORIGINAL

## Introduction

Systemic arterial hypertension (SAH) is the most prevalent circulatory disease and represents a global public health problem and the most common modifiable risk factor for other cardiovascular diseases.<sup>1</sup> It is responsible for a high number of disabilities, hospitalizations, premature deaths, reduced life expectancy and impact on the economy of family members, communities and society in general.<sup>2-3</sup>

SAH is usually associated with metabolic risk factors for diseases of the cardiocirculatory and renal systems, such as dyslipidemia, abdominal obesity, glucose intolerance, and diabetes mellitus, further increasing the risks of morbidity and mortality.<sup>2</sup> Integrates health problems that disproportionately affect populations in low- and middle-income countries, where health systems are precarious.<sup>1</sup>

SAH affects more than 30% of the adult population worldwide, i.e. more than one billion people and it is estimated that one in eight deaths are caused by the disease.<sup>1</sup> In Brazil, about a quarter of the adult population living in Brazilian capitals reported having hypertension<sup>4</sup>, and this frequency increases with age, causing a prevalence of 60 to 70% of the population over 70 years of age.<sup>5</sup>

The evidence that hypertension control substantially reduces the risk of cardiovascular outcomes is already consolidated.<sup>2</sup> This control fundamentally involves the correct use of drugs and changes in lifestyle, which is only done with the active participation of the person with the disease, adequate approach of health professionals, access to antihypertensive medication and correct performance of health programs.<sup>2,6</sup>

Although SAH represents the target of interventions in the health field, especially because of primary care and the existence of different effective drugs for its control, the lack of control of arterial hypertension stems mainly from non-treatment, undertreatment, difficulty in accessing the health system and the unavailability of medication in the primary health network.<sup>7</sup> Good adhering to the use of antihypertensive drugs has been related to improved blood pressure control, decreased complications caused by the disease and the overall efficiency of health systems.<sup>8</sup>

Adherence to the therapy of a disease consists in the conduct of a patient ahead of the recommendations of the multidisciplinary health team, not only regarding the use of drugs, but also regarding the acceptance of changes in their attitudes or changes in lifestyle to perform the treatment.<sup>8</sup> Regarding the pharmacological treatment, non-smoking consists of abandoning the use of medications, minor interruptions or irregular use of medicines.<sup>8</sup>

The analysis of drug support can be performed by methods classified as direct and indirect. Direct methods include direct observation of medication intake by the patient, detection of a biological marker included in the formulation of the drug, detection of a drug or its metabolite in the blood or urine, and, more recently, automatic electronic monitoring of drug intake.<sup>9</sup> Indirect methods, although less precise, have been more used in studies, and involve interviews with the patient, application of specific questionnaires, patient diary and pill count.<sup>9</sup>

One of the most used questionnaires that has been very beneficial to recognize individuals who adhere to drug treatment or not has been the Morisky-Green self-report scale, which was originally composed of four items for patients with hypertension and was expanded with four additional items that address the circumstances related to the behavior of the following.<sup>10</sup>

Due to this reality, it is considered relevant to conduct research that addresses the treatment of antihypertensive treatment in different scenarios in order to obtain specific information that can better clarify the factors that prevent the patient from adequately following the recommendations of health professionals. Based on the above, this study aims to evaluate the treatment of systemic arterial hypertension by means of the Morisky-Green scale.

## Method

This is a descriptive study with a quantitative approach carried out in a health outpatient clinic of a private higher education institution that has multiprofessional care in a particular way, through insurance and the Unified Health System (SUS), located in the city of Salvador, Bahia, Brazil.

The study population consists of people diagnosed with hypertension. The selection was made by convenience sample, and the eligible people were invited to participate in the research when they attend the health service on consultation days. People with a confirmed diagnosis of hypertension who were under follow-up at the locus health center of the study, using antihypertensive drugs and aged over eighteen years, were considered eligible. People who did not have cognitive conditions to answer the questionnaires due to psychiatric disorders and cognitive difficulties were excluded.

Data were collected through interviews and with the application of two specific questionnaires from December 2019 to March 2020. A questionnaire composed of questions about sociodemographic data (gender, age, marital status, education, income and skin color), clinical data and access to medication.

The second instrument was a scale of eight items with the objective of evaluating the factors of non-adherence to therapy. The first 7 questions require a dichotomic answer (Yes/No) and the last question uses a 5-point Likert scale<sup>11</sup>, translated into Portuguese and validated in Brazil.<sup>10</sup> The degree of adherence to MMAS-8 therapy is established according to the mean resulting from the sum of all correct answers. A score can range from zero to eight and be divided into three degrees of strength: high strength (= 8 points), average strength (6 to < 8 points) and low strength (< 6 points). Those who obtained a score equal to eight in the MMAS-8 are considered adherents.

Data analysis was performed through descriptive statistics with measures of central tendency and variability for quantitative variables and frequency measures for categorical variables. To store and process the data, the statistical program Statistical Package for Social Science (SPSS, version 18.0) was used.

The research complied with the principles of Resolution No. 466/12 that refers to aspects of research involving human beings. The project was submitted and approved by the Research Ethics Committee of the Bahian School of Medicine and Public Health with the opinion number: 3,612,116. Before the

beginning of data collection and all participants signed the Free and Informed Consent Form (TCLE).

## Results

The study included 103 people with hypertension who used at least one antihypertensive drug. In the sociodemographic characterization, there was a predominance of females 88 (85.4%), age group 50-59 years 71 (68.9%), schooling with incomplete and complete high school 47 (45.6%), self-declared black race/color 48 (46.6%), retired 37 (35.9%), with income of 1-2 minimum wages 46 (44.7%), without a partner 55 (53.4) and living with family members 86 (83.5%) (Table 1).

**Table 1-** Sociodemographic characteristics of people with hypertension (n=103). Bahia, 2020.

Characteristics	n	%
<b>Sex</b>		
Male	15	14,6
Female	88	85,4
<b>Age Range</b>		
30-49	13	12,6
50-69	71	68,9
≥70	19	18,4
<b>Education</b>		
Up to complete elementary school	46	44,7
Incomplete and complete high school	47	45,6
Incomplete and complete higher education	10	9,7
<b>Self-declared race/color</b>		
White	11	10,7
Black	48	46,6
Brown	40	38,8
Indigenous	4	3,9
<b>Work Status (n=100)</b>		
Worker with bond	13	12,6
Self-employed worker	25	24,3
Retired	37	35,9
Unemployed	5	4,9
From home	20	19,4
<b>Income (Minimum wage)</b>		
< 1 Minimum wage	14	13,6
1-2 Minimum wage	46	44,7
> 2 Minimum wage	17	16,5
<b>Marital Status</b>		
With partner	47	45,6
No partner	55	53,4
<b>With whom you live</b>		
Family	86	83,5
Another unfamiliar	3	2,9
Alone	14	13,6



Table 2 shows data on treatment and access to antihypertensive medication. It is observed that the highest percentage has been treated with a time greater than or equal for 10 years 56 (54.4%), with regular medical follow-up 92 (89.3%) and half use 2 to 3 antihypertensive drugs 52 (50.5%). Regarding access to medication 73 (70.9%) obtain free of charge by the SUS, and 89 (86.4%) respondents have full access.

**Table 2-** Distribution of people with hypertension according to variables related to treatment and access to antihypertensive drugs (n=103). Bahia, 2020.

Variables	n	%
<b>Hypertension treatment time</b>		
<10 years	47	45,6
≥10 years	56	54,4
<b>Regular medical follow-up</b>		
Yes	92	89,3
No	11	10,7
<b>Number of antihypertensives daily use</b>		
1	37	35,9
2-3	52	50,5
<b>Access to free medication</b>		
Yes	73	70,9
No	30	29,1
<b>Type of access to free medication</b>		
Full access	89	86,4
Partial access	14	13,6

Table 3 presents the answers of the interviewees obtained through the Morisky-Green Test regarding the use of some antihypertensive medication. There is a predominance of the "no" answer for the following questions: "sometimes you forget to take the medicine" (63.1%); "there was some day when he did not take his medicines" (70.9%); "has stopped taking or decreased the dose without warning the doctor" (77.7%); "when he travels or leaves, he forgets to take his medications" (86.4%); "when you feel bp controlled, sometimes you stop taking the medicine" (92,2); "has been bothered to properly follow his treatment" (77.7%). Regarding the question "took the drugs yesterday" the highest percentage was for the answer yes (90.3%). Regarding the question "how often do you have difficulty remembering to take all bp medications" presented higher frequency of the answer "never" (55.3%).

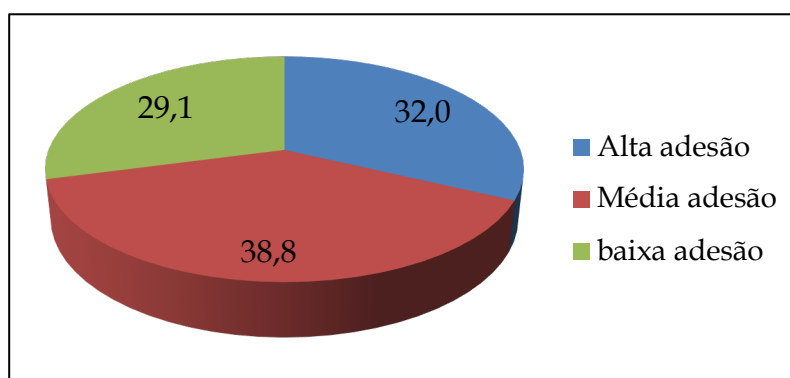
**Table 3-** Frequency of responses to the Morisky and Green Test regarding the use of some antihypertensive medication. Bahia, 2020.

Variables	n	%
<b>Sometimes you forget to take the medicine</b>		
Yes	38	36,9
No	65	63,1
<b>There was a day when you didn't take your meds</b>		
Yes	30	29,1
No	73	70,9
<b>You have stopped taking or decreased the dose without notifying your doctor</b>		
Yes	23	22,3
No	80	77,7

<b>When you travel or leave, you forget to take your medicines</b>		
Yes	14	13,6
No	89	86,4
<b>You took your meds yesterday</b>		
Yes	93	90,3
No	10	9,7
<b>When you feel bp controlled, sometimes you stop taking the medicine</b>		
Yes	8	7,8
No	95	92,2
<b>Have you ever felt uncomfortable following your treatment properly</b>		
Yes	23	22,3
No	80	77,7
<b>How often do you have difficulty remembering to take all the remedies for BP</b>		
Never	57	55,3
Almost never	17	16,5
Sometimes	25	24,3
Frequently	2	1,9
Always	2	1,9

Figure 1 represents the classification of the following the mmas-8 test score, the highest frequency (38.8%) is of people considered with medium-rated (score with score between 6 and 7).

**Figure 1-** Distribution of adherence of the research participants according to the morisky 8-item therapeutic adherence scale (MMAS-8)(n=103). Bahia, 2020.



## Discussion

In this study on the treatment of antihypertensive drugs, it was found that it was a sample of predominantly female people, aged between 50 and 59 years, low schooling, self-declared black race/color (black and brown) and with low purchasing power. Therefore, it is a sociodemographic profile that generally represents the population that attends an outpatient clinic that serves the Unified Health System. Regarding gender, Vigitel (2019) identified a higher prevalence of hypertension among women (27.3%) than among men (21.1%).<sup>12</sup> Women with both NCDs and without these diseases, compared to men, use health services more, either for medical consultation or performing habitual activities for health reasons.<sup>4</sup>

The higher frequency of participants aged 50 to 59 years can be explained by the fact that SAH increases with age, due to the progressive hardening of the arterial vasculature.<sup>3</sup> A similar profile is found in studies with people with hypertension under outpatient follow-up.<sup>13-14</sup>

Regarding schooling, the fact that the sample is composed more of people with low schooling, data from the Vigitel Telephone Survey of 2019, already indicate that hypertension is more frequent in the stratum of lower schooling, progressively decreasing in subsequent strata. Most participants have low income, corroborating literature that states that low-income people are more likely to develop hypertension.<sup>5</sup> The data related to the profile of the participants found in this study deserve to be highlighted, considering that the use of medication may be influenced by purchasing power and schooling. Research findings highlight the influence of socioeconomic characteristics on the treatment of SAH.<sup>15</sup> For these authors, low schooling and income, as well as difficulties in reading the packaging of medications can interfere negatively in the process of medication. Higher frequency of non-adhering distributed unequally among socioeconomic strata, being higher in people among individuals with worse socioeconomic status, is already a condition revealed by the literature.<sup>16</sup>

The condition of the majority of participants living with family members can be a positive data for medication adherence, considering that family members can be considered an important pillar in support in the process of illness and therapy, especially if family members are involved in care among them.

In the present study, a higher proportion of access to free medicines by participants is also found in a study conducted in 2016 that investigated the access and use of medicines for hypertension in the Brazilian population<sup>17</sup>, which indicates that 56.0% of antihypertensive drugs are obtained in SUS health units, 16.0% in the Popular Pharmacy Program (own network or accredited network) and only 2.3% in other places. It is important to highlight that although the vast majority of antihypertensive drugs are available free of charge by the SUS<sup>17</sup>, there are significant differences between regions, socioeconomic levels and health conditions, especially in the Northeast region, where this access is lower.<sup>18</sup> This issue may impact on the continuous use of antihypertensive drugs, especially among the most economically vulnerable layer, considering that non-access to medications may represent the first barrier to pharmacological treatment.

Regarding the use of antihypertensive drugs, the responses of the MMAS-8 scale, the findings in percentage terms of this study were similar to those found in a study conducted with 100 people with hypertension under follow-up in a cardiology outpatient clinic of a university hospital.<sup>19</sup> This study also verified the predominance of the "no" answer for the following questions: "sometimes you forget to take the medicine" (68%); "in the last two weeks, there was some day when he did not take his medicines" (80%); "has stopped taking or decreased the dose without notifying the doctor" (83%); "when he travels or leaves home, he sometimes forgets to take his medications" (86%); "when you feel bp controlled, sometimes you stop taking the medicine" (97%); "has been bothered to properly follow his treatment" (77%). About the question "took the drugs for high blood pressure yesterday" the highest percentage was for the

answer "yes" (97%). Regarding the question "how often do you have difficulties to remember to take all your bp remedies", a greater mastery of the answer "never" was observed (69%).<sup>19</sup>

Considering that the high frequency of people who reported not forgetting to take, as well as taking every day, deserves to be highlighted, because forgetfulness is one of the main barriers to membership, especially if the person makes use of several drugs or complex therapeutic regimens with several associated drugs.<sup>9</sup> Another point no less important is the large proportion of interviewees who reported not failing to take or decrease the dose without notifying the doctor. Despite these positive aspects related to the use of medication, it cannot be considered that there are still people who still have failures in the use of antihypertensive drugs, and there may be uncontrolled blood pressure and vulnerability complications.

Also, with regard to the use of medication, it is important to highlight the high frequency of interviewees who do not interrupt use when they feel that controlled blood pressure, because the absence of symptoms and the feeling of well-being, may represent a justification for the patient to use the medication.

Previous studies involving the Morisky Drug Adhering Scale with 8 items (MMAS-8) highlight the high-adherence preponderance (44%) and low number of products (45.5%)<sup>20-21</sup>, respectively. Therefore, a study that applied the 4-item version of the Morisky-Green Scale (MMAS-4) in a sample of patients admitted to the Emergency Service, with a personal history of SAH, found a prevalence of moderate treatment treatment of 56%<sup>22</sup>, being in agreement with the present study, which also found the predominance of people with medium-to-adhere to antihypertensive drug therapy.

Although there is no robust evidence of the effectiveness of interventions to improve the treatment, educational activities and advice on the risks and consequences of the correct non-use of medications and consequently uncontrolled blood pressure, using simple language and visual resources, they can be of value. Given the complexity that involves the theme of the following, it is recommended, preferably, that people with hypertension be accompanied by a multidisciplinary team and that their families actively participate in the entire therapeutic process, which can increase the rates of treatment and the chances of success with the treatment.

The results of this study should be interpreted, considering limitations such as, relatively small sample population and non-probabilistic selection, which may have created some bias in the results. Another limitation concerns the answers being self-reported by individuals, and inaccuracy in the information may occur.

## **Conclusion**

Data analysis allowed profiling people with hypertension who use antihypertensive patients at the locus outpatient clinic of the study, showing that they treat people with a predominance of females, aged between 50 and 59 years, low schooling and low purchasing power. Regarding access to medication, it was verified that the highest percentage had free access to the pharmacy network skin in the SUS units or network approved by the Popular Pharmacy Program of Brazil.

The results found, through the Morisky and Green Test, suggest that even though the frequency of answers to the eight questions was positive for the use of antihypertensive as prescribed, the rate of adherence is still unsatisfactory.

Improving medication support for people with hypertension is still a challenge for health professionals, so more studies on the subject may contribute to a better understanding of the problem and implementation of more assertive strategies.

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# Profile and perception of graduated professionals from a dentistry course

## Perfil e percepção dos profissionais egressos de um curso de Odontologia

## Perfil y percepción de profesionales graduados de un curso de Odontologia

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# REVISIA

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### RESUMO

**Objetivo:** Avaliar o perfil e a percepção dos Cirurgiões-Dentistas formados na UEFS no período de 2013.1 a 2018.1 **Método:** Estudo de corte transversal de caráter descritivo, realizado por meio de um questionário com informações sobre dados pessoais, perfil socioeconômico e demográfico, campo de atuação e formação acadêmica. **Resultados:** Observou-se que a maioria dos egressos é do sexo feminino, na faixa etária de 22 a 26 anos e trabalha no setor privado. A maior parte cursou ou está cursando a pós-graduação devido à necessidade de aprimorar conhecimento, exigência do mercado de trabalho, seguir carreira acadêmica ou metas financeiras. Notou-se que serviço privado foi o principal local de atuação, seguido de serviço público ou mais de um local. **Conclusão:** Os profissionais entrevistados se mostraram satisfeitos ou muito satisfeitos sobre a maioria das variáveis relacionadas às atividades ambulatoriais, processo ensino-aprendizagem, atividades de estágio e corpo docente.

**Descritores:** Educação em Odontologia; Currículo; Avaliação Educacional.

### ABSTRACT

**Objective:** To evaluate the profile and perception of Dental Surgeons trained at UEFS in the period 2013.1 to 2018.1 **Method:** Descriptive cross-sectional study, through a questionnaire containing information about personal data, socioeconomic and demographic profile, field of activity and academic background. **Results:** It was observed that the majority of graduates are female, aged between 22 and 26 years old and work in the private sector. Most have attended or are attending postgraduate courses due to the need to improve knowledge, demand in the labor market, pursue an academic career or financial goals. It was noted that private service was the main place of operation, followed by public service or more than one place. **Conclusions:** The professionals interviewed were satisfied / very satisfied about most variables related to outpatient activities, teaching-learning process, internship activity and teachers.

**Descriptors:** Dental School; Curriculum; Educational Assessment.

### RESUMEN

**Objetivo:** Evaluar el perfil y percepción de los Dentistas formados en UEFS en el periodo 2013.1 a 2018.1. **Método:** Estudio epidemiológico de corte transversal descriptivo, logrado a través de un cuestionario con informaciones sobre datos personales, perfil socioeconómico y demográfico, campo de actividad profesional y formación académica. **Resultados:** Se observó que la mayoría de los egresados son mujeres, tienen entre 22 y 26 años y trabajan en el sector privado. La mayoría ha cursado o está cursando estudios de posgrado por la necesidad de mejorar el conocimiento, la demanda en el mercado laboral, perseguir una carrera académica u objetivos económicos. Se señaló que el servicio privado era el principal lugar de operación, seguido del servicio público o más de un lugar. **Conclusión:** Los profesionales entrevistados se mostraron satisfechos o muy satisfechos con la mayoría de variables relacionadas con las actividades ambulatorias, el proceso de enseñanza-aprendizaje, las pasantía y el cuerpo docente.

**Descriptores:** Educación en Odontología; Currículo; Evaluación Educacional.



## Introduction

The teaching of Dentistry was made official in 1884, becoming autonomous in 1933, and only after the year 1970 did Brazilian Dentistry make great progress. The profession is governed by Law 5.081/66, which regulates the exercise of the profession in the country and Law 4.324/64, which established the Federal and Regional Councils of Dentists. The student completing the course in Brazil receives the degree of bachelor's degree in dentistry and every professional must enroll in the Regional Council of Dentistry of his State (CRO) so that the profession of Dentist (CD) can be exercised. The possibilities of cd insertion involve the performance in various spheres, which may be in the deprivation in private clinics and offices, in supplementary health by dental health plans, in teaching and research related to educational institutions, and in the public sector, directed to the Unified Health System.<sup>1</sup>

The Dentistry course at the State University of Feira de Santana (UEFS) was created in 1985 and implemented in 1986. It was, at the time, an innovative course with its pillars anchored in Integrated Dentistry turning to preventive and social actions, in the search for the formation of the generalist CD, working in curricular macro-components that interrelated. Over the years, teachers and students have observed a distancing from the profile of the professional being formed, from the proposed conceptual framework. As a consequence and in a procedural and collegiate manner, a new curricular matrix was proposed for this course, following the precepts of the National Curriculum Guidelines (NcD) and within the historical context of education in Brazil.<sup>2</sup>

The ordering of human resources in health, even being constitutionally guaranteed in the Unified Health System (SUS), still finds obstacles to transform it into an institutional practice. Higher education institutions find it difficult to train professionals with a humanistic, critical and reflexive view, and with preparation to deal with the community, although the public sector constitutes a wide area of activity for the Dentist.<sup>3</sup> Seeking a paradigm shift in academic training, the NcDs for the Dentistry Course were published in 2002<sup>3</sup> and brought in their writing guidelines that should, from then on, lead the elaboration of curricula in order to enable the graduate to have a "generalist, humanist, critical and reflective" formation, based on "ethical and legal principles, and on the understanding of social reality, and on the understanding of social reality, and on the understanding of social reality, and on the understanding of social reality, and on the understanding of social reality, and on the understanding of social reality, and on the understanding of social reality , cultural and economic of its environment, directing its work to the transformation of reality for the benefit of society".<sup>4-5</sup>

Several feelings are experienced at the time of insertion in the labor market, Luz and Levandowski (2006)<sup>6</sup> demonstrated in their study that, although the graduates show relief because they are completing another stage of their life, feelings such as hesitation, doubts, fears and disbelief about their own professional capacity are present at this time. It is essential that universities have strategies for evaluating graduates, as it is necessary to verify the effectiveness of academic activities performed throughout university education, since self-assessment may lead to the improvement of the pedagogical model of the course in agreement with the CND. In this way, the educational institution can provide the necessary changes to improve the quality of education, and train a trained

professional, with a critical-reflective profile and with adequate inclusion in the labor market.<sup>7</sup>

Efforts in this direction have been sent by the National Program for the Reorientation of Professional Training in Health (Pró-Saúde) and the Work Education Program (PET-Saúde) aimed at the reorientation of health training through integrated teaching to the public service, seeking to respond to the needs of the Brazilian population, when training human resources. In view of this, considering the period of new social demands, the role of education is fundamental to contribute to the transformation of reality, without leaving aside the questioning of the pedagogical practices employed in universities and the applicability of the content taught. From this point of view, the knowledge and perception of trained professionals about their difficulties and deficiencies in professional practice, whether related to their academic education or related to the demands of the labor market, are of great value for important reflections about the curricular reorientation of dentistry courses. This study aims to analyze the profile and perception about the academic background of professionals graduated from the undergraduate course in Dentistry of the State University of Feira de Santana, Bahia.

## Method

It is a descriptive cross-sectional study. This type of study, despite presenting some limitations, provides valuable contributions to the elaboration of programs and actions that will help in the knowledge and possible improvement of the current reality.

The State University of Feira de Santana (UEFS) is a Brazilian public institution of higher education based in the city of Feira de Santana. It is the second oldest public university in Bahia and the oldest among the state, considering the date of recognition as a university by the government, being the third largest public university in Bahia in total number of students and the only one located in Feira de Santana. The study group was composed of graduate professionals totaling an average of 206 graduates, which corresponds to the total number of professionals trained in the selected period.

Inclusion criteria were for the research subjects: to be formed in the period 2013 - 2018. Graduates who graduated outside the period established for the study were excluded. The research instrument used was a structured questionnaire, containing the following variables: gender, age, marital status, time of training, area of activity, post-graduation, income, difficulties in insertion in the labor market, evaluation of the teaching-learning process, evaluation of academic activities and teaching practice, in addition to the contribution of the course to professional practice.

Data collection occurred electronically, through a tool called google-docs which is a product of the Type SaaS (Software as a Service), which offers the user means not only to create and edit text documents, spreadsheets and presentations without the need to install any program (since the programs are installed on Google servers and the user's communication with them, or interface, is done through the browser program), as well as storing the files thus created on these same servers.

The research subjects were contacted by e-mail and telephone provided by the board of dentistry. Respecting the ethical aspects, this project was submitted to the Research Ethics Committee of the State School of Feira de Santana, CAAE 6639941740000053, opinion 2118633.

Once it is a study involving people, obtaining the free and informed consent of the study participants was the first step to conduct the research. Anonymity and confidentiality in the use of the information obtained in the data collection were ensured, excluding the names of the participants of the databases as well as the formator agents eventually mentioned in the data collection, as well as any subsequent publication of the results.

After data gathering, the data were entered in the Statistical Data Package SPSS version 20.0<sup>8</sup> and descriptive statistical analysis was made by calculating the absolute and relative frequencies of the percentages of the variables, and the results were expressed in the form of tables and graphs.

## Results

From the total of 206 graduates, 103 answered the questionnaire, 64.4% of which were female, and 54.8% were between 22 - 26 years old. Most graduates (78.9%) declared to be single, (82.4%) declared that they had no financial dependents and 78.4% (81 graduates) reported receiving up to five minimum wages.

Regarding the year of completion, 49.2% were graduates from 2013.1 to 2015.2 (old curriculum) and 50.8%, graduated from 2016.1 to 2018.1 (new curriculum). More than 90% of the participants have a degree only in Dentistry and a minimum portion reported having attended another degree. Less than half (47.1%) has completed graduate course and 53.8% reported attending graduate school. Among the most cited postgraduate courses are: endodontics, surgery, orthodontics, prosthesis, collective health, implantodontia and pediatric dentistry. On the reasons for attending graduate school, the professionals mentioned the need to improve knowledge, demand from the labor market, pursue an academic career and immediate financial option. Regarding the workplace, the majority (57.8%) reported acting in private practice.

Table 1 shows the variables associated with safety and satisfaction in the professional performance of graduates, observing the answers between professionals who integrated the old curriculum and professionals who integrated the new curriculum. In both, it was possible to observe similar percentages in all variables questioned.

**Table 1** - Numerical and percentage distribution of variables related to safety and satisfaction in professional performance, the population of graduates, dentistry course, UEFS. Bahia, 2018-2019.

Variable	Old Course		New Course	
	N	%	N	%
<b>Safety of performance</b>				
Safe to act alone	34	66,7	26	50,0
Supervised act insurance	09	17,6	16	30,8
unsure	08	15,7	10	19,2

<b>Degree of satisfaction</b>				
Very Satisfied / Satisfied	32	62,7	26	50,0
Average satisfaction / Dissatisfied	19	37,3	26	50,0
<b>Difficulty in the Labour Market</b>				
Yes	06	11,8	18	34,6
No	45	88,2	34	65,4
<b>Difficulty new techniques</b>				
Yes	10	19,6	12	23,1
No	41	80,4	40	76,9
<b>Training expectations</b>				
Good/Great	46	90,2	38	73,0
Regular/bad	05	9,8	14	27,0

Table 2 shows the variables related to the perception of graduates regarding the teaching-learning process. The graduates reported being satisfied/very satisfied about the organization of the curriculum (>78%), number of students per class in theoretical subjects (>86.0%), relationship between theoretical and practical classes (>69.0%), proportion of teacher/student (>63.0%), number of administrative professionals available to assist students (>61.0%), indicated bibliography (>82.0%) and research and extension activities (>82.0%). About the elective subjects and conditions of the materials of the practical classes, most reported being dissatisfied/not satisfied (>66.0%). On the other hand, on the bibliographic collection available at the university, the graduates of the old curriculum reported satisfaction (72.5%) and the graduates of the new curriculum were dissatisfied (51.9%). There was divergence in relation to the evaluation method, and the graduates of the old curriculum reported being satisfied/very satisfied (62.7%) and the graduates of the new curriculum, dissatisfied/unsatisfied (51.9%).

**Table 2** - Distribution of variables related to the perception of the teaching-learning process, of the population of graduates, dentistry course, UEFS. Bahia, 2018-2019.

Variable	Dissatisfied/ Little Satisfied		Satisfied/ Very Satisfied	
	N	%	N	%
<b>Curriculum organization</b>				
Old Course	09	17,6	42	82,4
New Course	11	21,2	41	78,8
<b>Optional discipline</b>				
Old Course	42	82,3	09	17,7
New Course	39	75,0	13	25,0
<b>Number of students per class</b>				
Old Course	03	5,9	48	94,1
New Course	07	13,5	45	86,5
<b>Practical theory</b>				
Old Course	08	15,7	43	84,3
New Course	16	30,7	36	69,3
<b>Teacher/student relationship</b>				
Old Course	13	25,5	38	74,5
New Course	19	36,5	33	63,5

<b>Student/administration relationship</b>				
	09	17,7	42	82,3
Old Course	20	38,4	32	61,6
New Course				
<b>Bibliography indicated</b>				
Old Course	05	9,8	46	90,2
New Course	09	17,3	43	82,7
<b>Bibliographic Collection Available</b>	14	27,5	37	72,5
Old Course	27	51,9	25	48,1
New Course				
<b>Evaluation Method</b>				
Old Course	19	37,3	32	62,7
New Course	27	51,9	25	48,1
<b>Conditions of the practices materials</b>	34	66,7	17	33,3
Old Course	45	86,6	07	13,4
New Course				
<b>Research Activity</b>				
Old Course	07	13,7	44	86,3
New Course	09	17,3	43	82,7
<b>Extension Activity</b>				
Old Course	04	7,9	47	92,1
New Course	09	17,3	43	82,7

Regarding outpatient activities, graduates of both curricula expressed mostly satisfaction about the proportion of teachers in practical classes (>67%), supervision strategy (>57%), proportionate learning (>80%), time and duration of activities (>73%) and evaluation method (> 51%). There was greater dissatisfaction regarding outpatient conditions for graduates of the new curriculum (78.9%), as presented in Table 3.

**Table 3** - Numerical distribution and percentage of variables related to the perception of outpatient activities, the population of graduates, dentistry course, UEFS. Bahia, 2018-2019.

Variable	Dissatisfied/ Little Satisfied		Satisfied/ Very Satisfied	
	N	%	N	%
<b>Teacher/student relationship</b>				
Old Course	13	25,5	38	74,5
New Course	17	32,7	35	67,3
<b>Ambulatory conditions</b>				
Old Course	23	45,1	28	54,9
New Course	41	78,9	11	21,1
<b>Supervisory strategy</b>				
Old Course	17	33,4	34	66,6
New Course	22	42,3	30	57,7
<b>Proportionate learning</b>				
Old Course	07	13,7	44	86,3
New Course	10	19,3	42	80,7
<b>Time and duration</b>				
Old Course	10	19,6	41	80,4

New Course	14	26,9	38	73,1
<b>Evaluation method</b>				
Old Course	17	33,3	34	66,7
New Course	25	48,1	27	51,9

Regarding internship activities, regarding outpatient conditions, there was a difference between the answers, the graduates of the old curriculum (54.9%) demonstrated satisfaction and graduates of the curriculum new dissatisfaction (65.4%). Regarding the other variables, the graduates expressed satisfaction (Table 4).

**Table 4** - Numerical distribution and percentage of variables related to the perception of internship activities, the population of graduates, dentistry course, UEFS. Bahia, 2018-2019.

Variable	Dissatisfied/ Little Satisfied		Satisfied/ Very Satisfied	
	N	%	N	%
<b>Teacher/student relationship</b>				
Old Course	09	17,7	42	82,3
New Course	15	28,9	37	71,1
<b>Ambulatory conditions</b>				
Old Course	23	45,1	28	54,9
New Course	34	65,4	18	34,6
<b>Supervisory strategy</b>				
Old Course	13	25,5	38	74,5
New Course	18	34,6	34	65,4
<b>Proportionate learning</b>				
Old Course	07	13,7	44	86,3
New Course	13	25,0	39	75,0
<b>Time and duration</b>				
Old Course	14	27,4	37	72,6
New Course	08	15,3	44	84,7
<b>Evaluation method</b>				
Old Course	12	23,5	39	76,5
New Course	19	36,5	33	63,5

For the questions related to the perception of the teaching staff, in relation to the domain of the contents of the disciplines, there was a level of satisfaction above 88% and the pedagogical didactic resource satisfaction greater than 67%. Regarding the attendance of the teaching staff, the graduates reported being satisfied/very satisfied (>76%) and greater than 59% related to punctuality. On the extraclass care and the stimulus to learning, the graduates were satisfied/very satisfied (>60%), and the adaptation of the work methods to the characteristics of the class was satisfaction greater than 50% (Table 5).

**Table 5** - Numerical distribution and percentage of variables related to the perception of the faculty, the population of graduates, dentistry course, UEFS. Bahia, 2018-2019.

Variable	Dissatisfied/ Little Satisfied		Satisfied/ Very Satisfied	
	N	%	N	%
<b>Content domain</b>				
Old Course	01	1,9	50	98,1
New Course	06	11,5	46	88,5
<b>Didactic resource</b>				
Old Course	09	17,6	42	82,4
New Course	17	32,7	35	67,3
<b>Attendance</b>				
New Course	07	13,7	44	86,3
Old Course	12	23,1	40	76,9
<b>Punctuality</b>				
Old Course	09	17,6	42	82,4
New Course	21	40,3	31	59,7
<b>Extra-class servisse</b>				
Old Course	20	39,2	31	60,8
New Course	20	38,5	32	61,5
<b>Stimulating learning</b>				
New Course	15	29,4	36	70,6
Old Course	15	28,9	37	71,1
<b>Adaptation of methods</b>				
Old Course	21	41,2	30	58,9
New Course	22	42,3	30	57,7

## Discussion

In the present study, the predominance of female professionals was observed. Until the mid-1990s, it was possible to verify a male dominance in dentistry, pointed out in older studies<sup>9</sup>, but recent studies prove the prevalence of women in relation to males.<sup>7,9,10,18</sup>

In the area of health, it is necessary that professionals continue to improve their knowledge. Dentistry is a profession that is always in the process of updating with the emergence of new techniques and evolution of some materials used in the course of procedures. Therefore, in this study it was possible to observe that 47.1% have completed graduate school and 53.8% reported being attending graduate school. When asked about the reasons for attending graduate school, the professionals mentioned the need to improve knowledge and the requirement of the labor market.

For a long time, dentistry adopted a technical, individualistic and specialized profile. Brazilians' access to oral health was difficult and limited, people only sought dental care when painful symptomatology arose, and thus, they made the main dental treatment offered by public health only tooth extraction. After the 2000s, the new public health policies led significant changes to the oral health scenario, and as one of the milestones we have the National Oral Health Policy (Smiling Brazil Program, launched in 2003 by the Ministry of Health) which expanded dental access through the Unified Health System (SUS)

with the implementation of oral health teams in the Family Health Strategy.<sup>11-12,19</sup> Consequently, there was greater participation of professionals working in the public health service. In this study, there was a predominance of professionals working in private practice (57.8%), diverging from the recent established conjuncture. Some authors point out that professionals choose to work in both sectors due to the stability and labor benefits offered by the public service and seek private service as a way to supplement income.<sup>5,8,10</sup> There were few adherents to the teaching area (only 2%), this fact may also be linked to the young age of professionals, who have not yet moved on to the teaching career or to the fact that there are few public competitions that discourage professionals from going to the area.

It is natural that recent graduates feel insecure to practice the profession, because they have become accustomed to the routine of academic clinic and assistance of teachers, and when they leave university they come across a different routine. The results showed that a minimal portion felt unsafe in acting alone or supervised acting, which can relate this security to the practice acquired with the outpatient activities of the integrated disciplines, to learning with internships and extension activities. Several studies show that the extension and internship activities provide an experience of real practice in the labor market, develops professional skills and skills, humanistic and reflective thinking about the social sphere.<sup>7,13</sup>

When analyzing the difficulty of insertion in the market, graduates of the old curriculum reported less difficulty, however, the degree of professional dissatisfaction was higher for graduates of the new curriculum, because they have less time to practice the profession and did not achieve the financial stability desired by many recent graduates. Although the graduates reported discontent regarding the labor market, when asked if the course met the expectations of training, they were satisfied/very satisfied, assuming that the professional field is still favorable.

When observing the perception of graduates about the variables related to the teaching-learning process, it was observed that more than 77% of the professionals from both curricula are dissatisfied/very satisfied with the elective disciplines offered. In the curriculum of the Dentistry course of UEFS are required 120 hours that students must meet through the elective disciplines, and in addition to being offered few vacancies, the available schedules of these disciplines end up clashing with the mandatory schedule. Often students need to go to the collegiates of the other courses in search of other options for the fulfillment of the workload. The dissatisfaction rate may be related to these facts. There was also great dissatisfaction regarding the conditions of the materials of the practical classes. The student residence policy has experienced some relapses in recent years, students went on strike at the end of 2014 to defend the measure and require an agreement with the rectory to have the proper transfer of materials and maintenance of the equipment of the clinics, which due to the time of use often require maintenance, and may have contributed to the higher rate of dissatisfaction of graduates of the new curriculum.

The graduates of the new curriculum were also dissatisfied/dissatisfied (54%) on the bibliographic collection available at the University, those of the old curriculum were satisfied/very satisfied (71%), and it can be justified by the collection not being updated with new editions constantly. A portion of the



graduates of the new curriculum were dissatisfied/not satisfied about the evaluation method. Young people born from the 1990s grew up amid rapid technological advances and are well connected to internet, applications and information technologies, are exposed to a range of information and are looking forward to getting quick answers about their questions. Schools have been using differentiated learning and evaluation processes, students are more demanding about the evaluation methodology and bring with them this more critical and demanding view.

On the other hand, there was great satisfaction of both curricula about the other teaching-learning variables involved, especially when asked about research and extension activities, reaching rates above 83% in both groups. The institution has several research and extension activities distributed among many courses, and dentistry has several, favoring experience to the student and providing services to the community, from educational activities, to clinical care, support to cancer patients in the head and neck region, in addition to the treatment of patients with temporomandibular dysfunctions.

When analyzing the perception regarding outpatient activities, it was observed that those formed by the new curriculum expressed dissatisfaction with the outpatient conditions. It is known that Brazilian public universities face problems related to the budget of costing and investment, and infrastructure, which is most often in precarious conditions. Some laboratories and outpatient clinics for the Dentistry course of UEFS are old, presenting problems in the equipment and hindering its use, and the most current users are the most affected, justifying the discontent. However, despite the adversities, the level of satisfaction was positive in relation to the learning provided for the students of both curricula. This data reflects the commitment and dedication of both undergraduates and professors in performing the activities and assisting the community that is a user of the dental services offered by the University.

Regarding the activities of internships, it was also noticed dissatisfaction of the graduates of the new curriculum regarding outpatient conditions since the activities are performed in the Basic Health Units and many have problems related to the structure, broken equipment or that do not work properly, which interferes in the execution of the activities. However, as for the other variables (proportional learning, time and duration, teacher/student relationship) there was satisfaction above 70% for both groups, a significant result due to the importance of internship activities for professional training, because they enable the student to experience the reality of public health, enables integration with professionals from other areas, develops the critical and conscious sense about the importance of health promotion, integrality and humanization.<sup>14-16</sup>

When observing the percentage distribution of variables related to the perception of the faculty, the high satisfaction index related to all the variables questioned was remarkable. UEFS stood out in the Folha University Ranking (RUF), published in 2017 by *Jornal Folha de São Paulo*. In the specific evaluations, which are part of the general concept of the RUF, the dentistry course was indicated by the ranking as the 9th best in the country, in the item "Teacher Evaluation" and the 14th in the general evaluation.<sup>17</sup> We noted that the evident commitment of teachers reflects not only in the professional curriculum, but also in the interaction in an educational environment.

## Conclusion

The dentistry course at UEFS has trained professionals with a predominant female profile, aged 22 to 26 years, single and without dependents. Most of them have attended or are attending graduate school due to the need to improve knowledge, job market requirements, pursue an academic career and immediate financial option. It was noticed that private service was the main place of operation, followed by public service or more than one place concomitantly. The perception of the graduates in relation to the variables of teaching-learning, outpatient activities, internship activities and teaching staff were largely satisfactory or very satisfactory.

As a benefit for the course, this research aims to improve the curriculum of the Dentistry course of UEFS, the application of the National Curriculum Guidelines and the integration of training for the Unified Health Service, promoting the discussion of the training of the graduate in the dentistry course.

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# Profile of users of a specialized service in alcohol and other drugs

## Perfil dos usuários de um serviço especializado em álcool e outras drogas

## Perfil de usuarios de un servicio especializado en alcohol y otras drogas

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# REVISIA

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### RESUMO

**Objetivo:** identificar o perfil dos usuários do CAPS ad III. **Método:** Pesquisa de abordagem quantitativa, realizada no CAPS ad III do município de Poços de Caldas-MG, no período de maio de 2015 a maio de 2016. No primeiro momento, realizou-se um levantamento dos prontuários presentes no serviço, posteriormente, através de contato telefônico realizou-se busca ativa e posteriormente foi agendada a entrevista. Utilizou-se questionário estruturado para a coleta das informações e o programa Excel para análise e apresentação dos resultados. **Resultados:** embora estivessem cadastrados 927 usuários na unidade, apenas 201 frequentam o serviço. 32 pessoas participaram deste estudo, onde a maioria é moradora em casas de passagem, do sexo masculino, com idade entre 31 a 36 anos, renda de até 2 salários mínimos e que fazem uso frequente de álcool. **Conclusão:** O estudo mostra a complexidade na abordagem, na adesão e manutenção dos usuários nos serviços especializados, identificou a necessidade de atualização dos registros no cadastro dos usuários a fim de realizar uma busca ativa mais frequente e a necessidade de parceria com outros serviços de saúde disponíveis na rede de atendimento em saúde.

**Descritores:** Serviços de Saúde Mental; Transtornos Relacionados ao Uso de Substâncias; Usuários de Drogas.

### ABSTRACT

**Objective:** to identify the profile of CAPS ad III users. **Method:** Quantitative approach research, carried out at CAPS ad III in the city of Poços de Caldas-MG, from May 2015 to May 2016. At first, there was a survey of the medical records present in the service, later, through telephone contact, an active search was carried out and the interview was later scheduled. A structured questionnaire was used to collect information and the Excel program was used to analyze and present the results. **Results:** although 927 users were registered at the unit, only 201 attend the service. 32 people participated in this study, where the majority live in transit houses, male, aged between 31 and 36 years, income of up to 2 minimum wages and who frequently use alcohol. **Conclusion:** The study shows the complexity of the approach, adherence and maintenance of users in specialized services, identified the need to update the records in the user registry in order to carry out a more frequent active search and the need for partnership with other health services available in the health care network.

**Descriptors:** Mental Health Services; Substance-Related Disorders; Drug Users.

### RESUMEN

**Objetivo:** identificar el perfil de los usuarios de CAPS ad III. **Método:** Investigación de abordaje cuantitativo, realizada en el CAPS ad III de la ciudad de Poços de Caldas-MG, de mayo de 2015 a mayo de 2016. En un primer momento, se realizó un relevamiento de las historias clínicas presentes en el servicio, luego, mediante contacto telefónico, se realizó una búsqueda activa y posteriormente se programó la entrevista. Se utilizó un cuestionario estructurado para recolectar información y se utilizó el programa Excel para analizar y presentar los resultados. **Resultados:** si bien se registraron 927 usuarios en la unidad, solo 201 asisten al servicio. En este estudio participaron 32 personas, donde la mayoría vive en casas de tránsito, hombres, con edades entre 31 y 36 años, ingresos de hasta 2 salarios mínimos y que consumen alcohol con frecuencia. **Conclusión:** El estudio muestra la complejidad del abordaje, adherencia y mantenimiento de los usuarios en los servicios especializados, identificó la necesidad de actualizar los registros en el registro de usuarios para realizar una búsqueda activa más frecuente y la necesidad de alianzas con otros servicios de salud disponible en la red de atención médica.

**Descritores:** Servicios de Salud Mental; Transtornos Relacionados con Substancias; Consumidores de Drogas

ORIGINAL

## Introduction

The III National Survey on the Use of Drugs by the Brazilian Population showed that approximately 11.7% of Brazilians aged 12 to 65 years old, consumed alcohol and tobacco in the last 12 months. About 2.6%, approximately 4 million individuals, consumed alcohol and at least one illicit substance in the last 12 months.<sup>1</sup> This complex situation, according to the World Health Organization (WHO), is considered a public health problem worldwide.<sup>2-3</sup>

Chemical dependency for legal or illegal drugs is considered a disease that exposes individuals to conduct and personality disorders, risky social and sexual behavior, accidents, violence and suicides.<sup>2-3</sup>

As a device for the prevention and treatment of diseases and injuries related to the use of alcohol and other drugs, the Psychosocial Care Centers for Alcohol and Drugs (CAPS ad) were created, regulated by Ordinance 336 of the year 2002, with the main proposals: approach multidisciplinary, harm reduction and humanized care for users and their families.<sup>4</sup>

Level III CAPS ad are services that can be installed in municipalities with 200 to 300 thousand inhabitants. They are locations that are open 24 hours a day and every day of the week, including weekends and holidays. It is responsible for promoting together with the user and their families, a Unique Therapeutic Project (PTS) promoting and expanding the possibilities of life and their social relationships.<sup>4</sup>

The Therapeutic Projects provide assistance that contemplates the uniqueness of the subject, in this sense, it does not aim at abstinence as the only form of treatment, but also at harm reduction. The harm reduction approach is a prevention mechanism based on the user's ability to make their own choices, based on a more humanistic view of individuals.<sup>5</sup>

Even in the face of the inclusive propositions of CAPS ad III, studies have shown a high rate of treatment abandonment by users.<sup>6-7</sup>

Studies that aim to identify the profile of users of health services are extremely important for providing knowledge of the factors that impact the expected results of the care provided. In addition to improving the quality of services, it is possible to reduce expenses, help raise awareness of professionals about the public served, help in planning the implementation of practices that include promotion, prevention and protection actions.<sup>8</sup>

The theme was chosen through the authors' interest in tracing the profile of CAPS ad III users, an internship field for undergraduate nursing and psychology courses at a private university located in Poços de Caldas, MG.

This study was based on the guiding question "What is the profile of CAPS ad III users in the city of Poços de Caldas" and aimed to identify the profile of CAPS ad III users.

## Method

This is a study with a quantitative approach, carried out at CAPS ad III in the city of Poços de Caldas, Minas Gerais. Data collection took place from May 2015 to May 2016.

The study took place in three stages: the first stage involved a survey of the medical records of service users who had enrollment from January 2012 to January 2015 in order to identify the frequency of users in the CAPS ad III. A script was elaborated, privileging information regarding identification data, address, telephone number, attendance or not in the service, days attended.

In the second stage, we sought to contact users through telephone contact and active search, including in shelters and transit houses. In the third stage, the days for the interview to take place were scheduled. For participation in this study, the following inclusion criteria were considered: patients who were active in the service, with clinical and psychological conditions to answer the questions of the questionnaire, which were related to sociodemographic data with the variables, gender, age, education, monthly income, home, family bond, use of psychoactive substances and attendance at CAPS ad. For those who agreed to participate in the study, a date and time were scheduled to attend CAPS.

Before applying the instrument, the participants were informed about the objectives of the study, assured of confidentiality and anonymity and signed the Informed Consent Form (FICF). The research was approved by the Ethics and Research Committee through Plataforma Brasil, with opinion 1,054,078 of April 7, 2015. The collected data were organized and tabulated using Microsoft Excel software. The results were presented in the form of tables for better understanding and discussion.

## Results

Based on the data obtained from medical records, 927 patients were registered in the CAPS ad III, from January 2012 to January 2015. Of these, 726 abandoned treatment, as shown in Table 1.

**Table 1** - Distribution of CAPS ad III users who abandoned treatment, according to telephone contact and active search performed. Poços de Caldas, 2016.

Variable	N	%
Did not answer the telephone contact	378	52,0
Changed city	49	6,8
Patients who died	11	1,5
Are Imprisoned	14	1,9
Are hospitalized	17	2,2
Unregistered phone number	194	27,0
Missing	63	8,6
<b>Total</b>	<b>726</b>	<b>100,0</b>

Of the 201 users who were attending the service, only 32 participated in the study. The reasons are shown in table 2.

**Table 2** – Distribution of CAPS ad III users who attend the service, according to telephone contact and active search. Poços de Caldas, 2016.

Variable	N	%
Patients without clinical conditions for the interview	09	4,5
Scheduled interview, however, did not attend	73	36,2
Did not accept to participate in the interview	87	43,3
Participated in the interview	32	16,0
<b>Total</b>	<b>201</b>	<b>100,0</b>

Sociodemographic data are shown in Table 3. There was a predominance of males (96.9%), aged between 31 and 36 years (34.4%) and with incomplete primary education (50.0%). Regarding income, there was a tie between less than one minimum wage per month (43.7%) and one to two minimum wages per month (43.7%).

About the place where users slept in the last 30 days, the majority (47%) reported in a shelter or passing house, and that before that they lived with their mother (31.2%). According to the users' daily routine, 40.7% attend the CAPS-ad or remain at the shelter and 37.0% work. Another 22.3% claimed to help the family in the house's routine.

About what they used to do while they were on the street, 27 (84.4%) responded that they used some type of drug and/or alcohol, 5 (16.6%) reported that they currently only go out to work, even if informally, working as a bricklayer, painter, husband for hire, among others.

**Table 3** – Sociodemographic data of CAPS ad III users. Poços de Caldas, 2016.

Variable	n	%
<b>Sex</b>		
Female	01	3,1
Male	31	96,9
<b>Total</b>	<b>32</b>	<b>100</b>
<b>Age</b>		
20-25 years	04	12,5
26-30 years	02	6,3
31-36 years	11	34,4
37-42 years	05	15,6
43-48 years	07	21,9
Over 49 years old	03	9,3
<b>Total</b>	<b>32</b>	<b>100,0</b>
<b>Education</b>		
Illiterate	-	-
Incomplete elementar school	16	50,0
Complete primary education	04	12,6
Incomplete high school	06	18,7
Complete high school	06	18,7
<b>Total</b>	<b>32</b>	<b>100,0</b>
<b>Monthly income</b>		
Less than 1 minimum wage	14	43,7

From 1 to 2 minimum wages	14	43,7
From 3 to 5 minimum wages	03	9,5
Greater than 6 minimum wages	01	3,1
<b>Total</b>	<b>32</b>	<b>100,0</b>
<b>Home</b>		
Own home	11	34,3
Rent	04	12,5
Shelter / Passageway	15	47,0
In the streets	02	6,2
<b>Total</b>	<b>32</b>	<b>100,0</b>

As for the use of legal or illegal drugs, of the 32 participants, all reported having used some type of drug, and in most cases, more than one drug in the same period. As identified, alcohol consumption prevailed, 96.9%, followed by tobacco use (93.75%) and marijuana (87.5%), as shown in table 4.

**Table 4** - Use of legal and illegal substances by users of CAPS ad III. Poços de Caldas, 2016.

Variable	n	%
Alcohol	31	96,9
Tobacco	30	93,7
Cocaine	18	56,3
Crack	16	50,0
Marihuana	28	87,5
Glue	08	25,0
Enamel	02	6,3
Thinner	07	21,9
Acid	05	15,6
Ecstasy	07	21,8
Medicines	10	31,2

Regarding the user's first contact with drugs, the majority (71.9%) reported that it was on the streets, with friends, especially during adolescence.

In terms of time of use, 50% of users use between 11 and 20 years and most have not been able to stop daily use (25%). The majority (37.6%) came to the service because it was a prerequisite for staying at the shelter or having access to other benefits, however, a significant number of users (34.3%) went to the CAPS ad taken by friends. Regarding the frequency of the user in the service, there was a predominance of 3 times a week (50%), but those who attend only once a month had an expressive result (37.6%), as shown in Table 5.

**Table 5** - User's first contact with the substance and time of use. Poços de Caldas, 2016.

Variable	n	%
<b>First Contact</b>		
Inside home	08	25,0
At school	01	3,1
On the street together with friends	23	71,9
<b>Total</b>	<b>32</b>	<b>100,0</b>



<b>Substance use time</b>		
Less than 5 years	03	9,4
From 5 to 10 years old	05	15,6
From 11 to 20 years old	16	50,0
More than 20 years old	08	25,0
Total	32	100,0
<b>Time without the use of any substance</b>		
Days	07	21,9
Weeks	96	18,7
Months	06	18,7
Years	05	15,6
Couldn't stop yet	08	25,0
Total	32	100,0
<b>How did you look for CAPS ad</b>		
Taken by Family members	06	18,7
Taken by friends	11	34,3
Prerequisite to stay in the shelter	12	37,6
Submitted by FHC	03	9,4
Total	32	100,0
<b>Service Frequency</b>		
Once a week	03	9,4
2 times per week	01	3,0
3 times or more a week	16	50,0
Once a month	12	37,6
Total	32	100,0

## Discussion

As it turned out, of the 927 records in the unit, 726 abandoned the treatment where 378 were not found. These results show that the Psychosocial Care Center for Alcohol and Drugs had difficulty in updating its users' records. Similar studies claim that this deficiency is common, making it difficult to update information and access users.<sup>6-7</sup>

Still on treatment dropout, other studies point out that dropout occurs due to the complexity involved in the treatment of chemical dependency, which is a daily challenge. It is difficult to recognize the problems arising from the adopted way of life, from coping with family relationship problems due to dependency, the lack of a support network, unemployment, social exclusion and the suffering caused by stigma and prejudice.<sup>9-10</sup>

The predominance of males in the study and the age of 31 to 36 years and educational level are similar results to studies on the profiles of users who attend services specialized in alcohol and other drugs, where they are usually adults, in the average age group of 30 to 40 years old, single and with low education.<sup>7,11-13</sup>

Income from 1 to 2 minimum wages and housing in hostels and transit houses show the social vulnerability of this population. In addition, the predominant age group of users corresponds to the productive force and dependence on substances and their harmful effects, which cause important cognitive changes, hinder the performance of work activities and commitment to work, manifesting itself in absenteeism and abandonment of the job.<sup>14</sup>

Among the most consumed drugs, alcohol prevailed, followed by tobacco and marijuana, a result consistent with studies related to the topic. Among adolescents, the ease of access and the need for acceptance among peers and social groups contribute to standard behavior and earlier use.<sup>15-16</sup>

As for the time they were without using the substances, most mentioned difficulty in stopping consumption, suggesting that due to the beginning and time of use, they have already suffered significant damage to their physical and mental health.<sup>17</sup>

About the reasons for having sought treatment, a large part claims to be a requirement to receive some benefit. Users who use several drugs at the same time are at greater risk of not adhering to treatment, in the face of relapses, there is a need to create a bond of trust with the team, and strategies that stimulate their motivation and awaken the understanding of the consequences that the abuse is causing in all segments of your life, aiming to improve adherence to treatment.<sup>6,9,18-19</sup>

In this sense, the team's attention requires not only looking at the clinic, but looking at the social and community space; ways of welcoming and intervening, aiming to reduce the suffering of the user, through the construction of therapeutic proposals in a network and knowledge of the resources and potential of the territory incorporated in the care processes, for the planning of activities and social inclusion.<sup>20</sup>

Home visits (HV) and frequent active search are strategies that expand the possibilities of bonding, effective therapeutic monitoring and relapse prevention. It expands the possibilities of knowing the users' social context and how this affects their way of acting. It should be performed whenever they are unable to attend the service due to mobility difficulties, clinical comorbidities and crisis situations, ensuring the continuity of humanized care.<sup>20</sup>

In the study, gaps were identified in the registration of information registered in the patients' medical records and the lack of updated studies on the resources adopted by the multidisciplinary teams of Caps ad III in planning strategies and prevention to improve adherence to treatment, considering the profile of users.

## **Conclusion**

The study showed the need to update the records of users' information in CAPS ad III. There was a high evasion of users and lack of integration of the CAPS ad III team with the Basic Units and the Family Health Program in the monitoring and active search for users who stopped attending the service. The treatment of chemical dependency requires networking and the development of shared actions and co-responsibility between the teams.

The identification of the profile of CAPS ad users is strategic information that can guide the provision of services and the conduct of professionals in the development of a unique therapeutic project, with a view to improving the user's adherence to treatment.

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# REVISA

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#### RESUMO

**Objetivo:** Analisar a violência financeira contra idosos no Brasil nos anos de 2011 a 2018. **Método:** Pesquisa exploratória, descritiva, comparativa e quantitativa. Os dados foram adquiridos junto ao “Disque Direitos Humanos - Disque 100 do Ministério da Mulher, da Família e dos Direitos Humanos” (MMFDH). Os dados adquiridos foram organizados no software Microsoft Excel 2016® for Windows®, sendo implementada análise estatística descritiva. **Resultados:** Foi identificado o universo de 119.440 registros com média e desvio-padrão (14.930±5.249,3). A região Nordeste (NE) registrou a maior preponderância com 39,1% (n=46.711) e o estado de Minas Gerais (MG) registrou a maior preponderância com 10,4% (n=12.458). Retenção de salário/bens foi o crime com a maior preponderância registrando 65,3% (n=77.955) e subtração/invalidação/ocultação e documentos a menor com 0,9% (n=1.055). **Considerações finais:** Foi verificado aumento na frequência de registros de denúncias de violência contra o idoso no recorte histórico e geográfico analisados.

**Descritores:** Idoso, Violência, Violações dos Direitos Humanos.

#### ABSTRACT

**Objective:** To analyze financial violence against the elderly in Brazil from 2011 to 2018. **Method:** Exploratory, descriptive, comparative and quantitative research. The data were acquired from the “Dial Human Rights - Dial 100 of the Ministry of Women, Family and Human Rights” (MMFDH). The acquired data were organized in Microsoft Excel 2016® for Windows® software, and descriptive statistical analysis was implemented. **Results:** The universe of 119,440 records with mean and standard deviation (14,930±5,249.3) was identified. The Northeast Region (NE) registered the greatest preponderance with 39.1% (n=46.711) and the state of Minas Gerais (MG) registered the greatest preponderance with 10.4% (n=12.458). Withholding of wages/goods was the crime with the highest preponderance registering 65.3% (n=77.955) and the smallest subtraction/invalidation/concealment and documents with 0.9% (n=1.055). **Final considerations:** There was an increase in the frequency of records of reports of violence against the elderly in the analyzed historical and geographic context.

**Descriptors:** Elderly, Violence, Human Rights Violations.

#### RESUMEN

**Objetivo:** Analizar la violencia financiera contra las personas mayores en Brasil de 2011 a 2018. **Método:** Investigación exploratoria, descriptiva, comparativa y cuantitativa. Los datos fueron adquiridos del “Dial de Derechos Humanos - Dial 100 del Ministerio de la Mujer, la Familia y los Derechos Humanos” (MMFDH). Los datos adquiridos se organizaron en el software Microsoft Excel 2016® para Windows® y se implementó un análisis estadístico descriptivo. **Resultados:** Se identificó el universo de 119,440 registros con media y desviación estándar (14,930 ± 5,249,3). La Región Nordeste (NE) registró la mayor preponderancia con 39,1% (n=46.711) y el estado de Minas Gerais (MG) registró la mayor preponderancia con 10,4% (n=12.458). La retención de salarios/bienes fue el delito con mayor preponderancia registrando 65,3% (n=77.955) y la menor resta/invalidación/ocultación y documentos con 0,9% (n=1.055). **Consideraciones finales:** Hubo un aumento en la frecuencia de registros de denuncias de violencia contra el adulto mayor en el contexto histórico y geográfico analizado.

**Descriptorios:** Ancianos, Violencia, Violaciones a los Derechos Humanos.

## Introduction

Among the various concepts related to the aging process, each takes into account different areas of knowledge and, despite this being a process that is part of every human being's life, this important phenomenon manifests itself differently in each person.<sup>1</sup> According to the Organization In the Pan American Health Program (PAHO), aging is a complex and intriguing sequential, individual, cumulative, irreversible, universal, non-pathological process of deterioration of a mature organism, unique to all members of a species, in a way that time makes you less able to cope with the stress of the environment and therefore increases the possibility of death.<sup>2-4</sup>

According to the Brazilian Institute of Geography and Statistics (IBGE), demographically between 1980 and 2005, an increase of approximately 126.3% of this population was identified and, in addition, there was also an increase in life expectancy at birth, which in 2000, it was 69.8 years, and in 2012 it was 74.5 years.<sup>5-6</sup> In this sense, and according to the World Health Organization (WHO), it is expected by the year 2050 that the population aged over 60 years should reach a rate of approximately 22%, and in Brazil, the elderly population over 60 years old was 25.4 million in 2012, increasing to 4.8 million in 2017, with a prevalence of elderly women, representing the universe of 56%.<sup>7-8</sup>

This phenomenon points to an accelerated advance, and population aging has been classified as an event of large proportions in the twenty-first century (XXI).<sup>7,9,10</sup> One of the main factors that contributed to this phenomenon having its expansion, was a process known as a demographic transition in Brazil, effectively resulting from the decrease in the mortality rate and the birth rate, which has been changing more and more rapidly the socioeconomic and sociodemographic profile of the Brazilian population and that, previously, prevailed the young population.<sup>9,10,11</sup>

Another important process to be considered for a better interpretation of this context is the epidemiological transition, related to the change identified with the mortality rate, as previously the causes of death prevailed to diseases classified as infectious and parasitic, mainly due to the reduced conditions economic and social.<sup>9,10</sup> Paradoxically to what is currently identified, as a result of the "typical" diseases of old age, such as chronic non-communicable diseases (NCDs) and chronic degenerative diseases (CDDs), which have become more common, are also directly related to the aforementioned phenomenon.<sup>7,8,9,10,11</sup>

Faced with such processes, public health faces several obstacles, as, in relation to all these diseases to comprehensive care for the elderly, it is necessary to better target social policies, in addition to the need to remodel others.<sup>2,8,10</sup> Along with these needs, the family restructuring process, in addition to the dynamics of today's routine, represent two (02) factors that provide great challenges to the elderly person's family, society and also the State.<sup>2,5,10,12</sup>

Therefore, the relationship formed by the elderly person with their family must involve understanding, affection and complicity, with family and relative support, contributing to the formation of a normally peaceful and harmonious coexistence.<sup>9,10,13</sup> However, very commonly these relationships are characterized by a troubled relationship, with the presence of fights and misunderstandings, caused by different factors, effectively due to the dependence on care that the elderly usually present.<sup>12,13,14,15</sup>

Due to the aging process and its derivations, several changes occur, both physiological and in lifestyle and, as a result, there is an increase in the dependence of people in this age group, requiring more and more physical care and assistance in activities of daily living – AVD.<sup>10,12,15</sup> This fact makes the elderly more vulnerable to the society that surrounds them and, consequently, exposing them to an increase in the occurrence of different types of violence.<sup>12,14,15</sup>

For WHO, the phenomenon of violence is defined as the use of physical force or power, in threat against itself, other people, groups or communities that may cause suffering, death, psychological damage, developmental deficit or deprivation, of physical origin, psychological, sexual, financial, negligence, abandonment or even self-neglect.<sup>9-12,15</sup> In the outcome of such an act, in addition to the physical damage, there is also a loss in the mental health of the elderly person, and often, in the increase in the consumption of ethyl alcohol and drugs and narcotics, which contributes to the strong development or worsening of several previously diagnosed diseases.<sup>10,12</sup>

In this sense, the phenomenon of violence against people aged 60 years or more has become a global problem, being identified in different cultures, social strata, ethnic groups and that, regardless of socioeconomic level, has its own characteristics.<sup>9,13-15</sup> In this sense, the objective of this research was to analyze the universe of reports of financial violence against the elderly in Brazil in the years 2011 to 2018.

## Method

This is an exploratory, descriptive, comparative research with a quantitative approach, which analyzed the frequency of records of financial violence against elderly people in the geographical area formed by "Brazil", in the historical series formed by the years "2011 to 2018 ", that is, eight (08) years. For the acquisition of the data necessary for the composition of this research, subsidies were formally requested from the "Dial Human Rights - Dial 100, managed by the Ministry of Women, Family and Human Rights" (MWFHR). The Human Rights Dial - Dial 100 is an important service responsible for disseminating information related to the rights of vulnerable social groups and also for reporting human rights violations.<sup>16</sup>

Through this important service, the MWFHR receives, analyzes and forwards to the protection and accountability bodies complaints of violations of the rights of children and adolescents, the elderly, people with any type of disability, LGBTQ+ population, homeless population, among many others.<sup>16</sup> Electronic bibliographic surveys were also carried out in computerized databases, making it possible to acquire articles from scientific journals and official documents from the Brazilian Institute of Geography and Statistics (BIGS), Ministry of Health (MH) and the Ministry of Social Development and Combat to Hunger (MSDCH).

The Health Sciences Descriptors (DeCS) of the Virtual Health Library - VHL accessible on the electronic address were used (<https://decs.bvsalud.org/>), being the same, "Crime" with the DeCS identifier "3433" and the descriptor ID "D003415", "Exposure to Violence" with the DeCS Identifier "56165" and the descriptor ID "D000069581", "Elderly" with the identifier DeCS "20174" and the descriptor ID "D000368", "Ill Treatment of the Elderly" with the DeCS Identifier



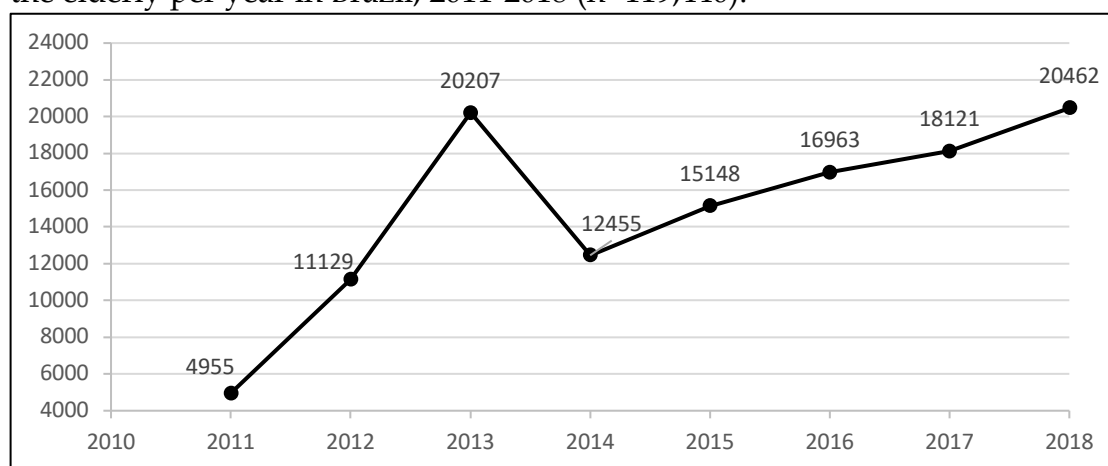
"4626" and the descriptor ID "D004552", "Abuse Notification" with the DeCS Identifier "33186" and the Descriptor ID "D019221", "Testaments" with DeCS Identifier "15318" and descriptor ID "D014918", "Human Rights Violations" with DeCS Identifier "38400" and descriptor ID "D045809", "Violence " with DeCS Identifier "15158" and descriptor ID "D014754", "Domestic Violence" with DeCS Identifier "31499" and "Descriptor ID "D017579", "Crime Victims" with DeCS Identifier "33199" and the descriptor ID "D019548".

After acquiring the data necessary to build this research, they were organized using the Microsoft Excel 2016® software, belonging to the Microsoft Office 2016® for Windows® package. Descriptive statistical analysis was implemented, making it possible to perform percentage (%), arithmetic mean ( $\bar{X}$ ) and standard deviation ( $\sigma$ ) calculations. The results were presented through two (02) figures and three (03) explanatory tables. The authors declare no conflicts of interest.

## Results

In the process of organizing and analyzing the data, a universe of 119,440 records of financial violence implemented against elderly people was identified in the geographic and historical area analyzed, in addition to the mean and standard deviation ( $14,930 \pm 5,249.3$ ), as shown in the figure 1. The year 2018 registered the highest preponderance among those analyzed with 17.1% ( $n=20,462$ ) and the year 2011 the lowest with 4.1% ( $n=4,955$ ).

**Figure 1** - Distribution of the frequency of reports of financial violence against the elderly per year in Brazil, 2011-2018 ( $n=119,440$ ):

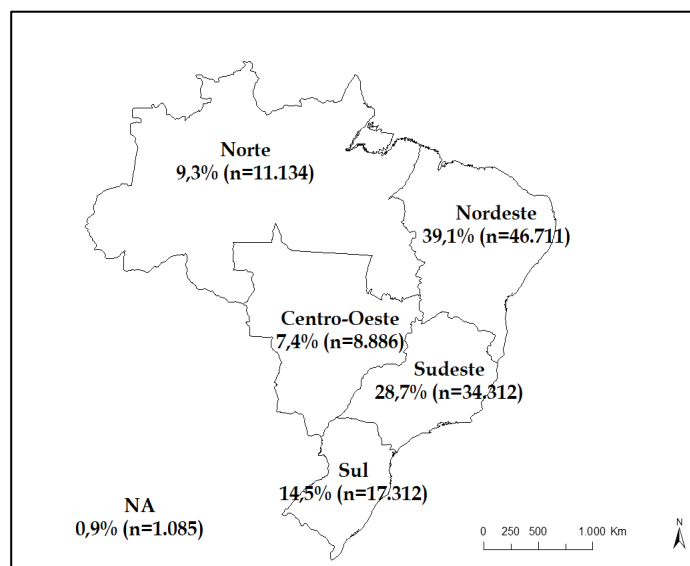


Source: Adapted from MMFDH, 2021.

When analyzing the frequency of records of reports of financial violence against elderly people by Brazilian regions, it was possible to identify that the Northeast (NE) recorded the highest preponderance with 39.1% ( $n=46,711$ ) and the Midwest (CO) a lower with 7.4% ( $n=8,886$ ), as identified in Figure 2.

**Figure 2** - Frequency distribution of records of reports of financial violence against the elderly by regions in Brazil, 2011-2018 ( $n=119,440$ ):





Fonte: Adapted from MMFDH, 2021.

When analyzing the frequency of records of reports of financial violence against the elderly by federative units (FU), it was found that the state of Minas Gerais (MG) recorded the highest preponderance with 10.4% (n=12,458) and Amapá (AP) a smaller with 0.2% (n=196), as shown in table 1.

**Table 1** - Frequency distribution of records of reports of financial violence against elderly people by FU, with percentage, in Brazil, 2011-2018 (n=119,440):

FU	f	%
Minas Gerais	12.458	10,4
Sergipe	11.540	9,7
São Paulo	9.719	8,1
Rio de Janeiro	9.652	8,1
Paraná	9.376	7,8
Bahia	7.719	6,5
Ceará	6.322	5,3
Rio Grande do Sul	5.617	4,7
Paraíba	4.687	3,9
Pernambuco	4.140	3,5
Maranhão	4.027	3,4
Piauí	3.799	3,2
Pará	3.526	3
Goiás	3.375	2,8
Amazonas	3.065	2,6
Roraima	2.934	2,5
Rio Grande do Norte	2.890	2,4
Distrito Federal	2.607	2,2
Espírito Santo	2.483	2,1
Santa Catarina	2.319	1,9
Mato Grosso do Sul	1.887	1,6
Alagoas	1.587	1,3
Mato Grosso	1.017	0,9

Acre	578	0,5
Rondônia	496	0,4
Tocantins	339	0,3
Amapá	196	0,2
NA	1.085	0,9
<b>Total</b>	<b>119.440</b>	<b>100</b>

Fonte: Adapted from MMFDH, 2021.

When analyzing the frequency of records of denunciation of financial violence against the elderly by type, it was possible to verify that withholding wages/goods was the crime with the highest prevalence, recording 65.3% (n=77,955) and subtraction/invalidation / concealment and lowest documents with 0.9% (n=1,055) the lowest preponderance, as shown in table 2.

**Table 2** - Distribution of the frequency of records of reports of financial violence against the elderly by type, in Brazil, 2011-2018 (n=119,440):

Year	Retention of Salary/Assets	Expropriation/ Appropriation of Goods	Extortion	Theft	Destruction of Goods	Theft	Others	Embezzlement	Subtraction/ Invalidation/ Concealment and Documents	Total
2011	3.392	514	145	218	186	111	85	52	252	4.955
2012	7.924	1.355	348	365	305	185	155	123	369	11.129
2013	14.072	2.771	817	739	548	352	299	198	411	20.207
2014	8.707	1.982	549	422	305	213	156	115	6	12.455
2015	10.330	2.308	822	505	385	363	267	165	3	15.148
2016	10.728	2.854	1.198	722	524	390	343	202	2	16.963
2017	10.754	3.519	1.301	908	728	392	166	346	7	18.121
2018	12.048	4.286	1.514	906	846	415	152	290	5	20.462
Total	77.955	19.589	6.694	4.785	3.827	2.421	1.623	14.91	1.055	119.440

Source: Adapted from MMFDH, 2021.

When analyzing the distribution of the frequency of records of reports of financial violence against the elderly by type, it was possible to identify that the crime of withholding wages and assets registered the highest prevalence with 65.3% (n=77,955) and the lowest was subtraction, invalidation, concealment of assets with 0.9% (n=1,055), as shown in table 3.

**Table 3** - Distribution of the frequency of records of reports of financial violence against the elderly by type, percentage, mean and standard deviation in Brazil, 2011-2018 (n=119,440):\*

Type of financial violence	f **	% ***	$\bar{X}$ ****	$\sigma$ *****
Withholding of salary/assets	77.955	65,3	9.744	3.187,2
Expropriation/ appropriation of assets	19.589	16,4	2.448,6	1.193,2
extortion	6.694	5,6	836,7	478,9
Theft	4.785	4	598,1	257,6
Destruction of Goods	3.827	3,2	478,3	226,4
Theft	2.421	2	302,6	115,2
Embezzlement	1.491	1,2	186,3	95,8
Subtraction/invalidation/hiding of documents	1.055	0,9	131,8	181,1
Others	1.623	1,4	202,8	88,9
<b>Total</b>	<b>119.440</b>	<b>100</b>	<b>14.930</b>	<b>5.249,3</b>

Source: Adapted from MMFDH, 2021.

\* Authors are faithful to the data acquired; \*\* f : Frequency; \*\*\* % : Percentage; \*\*\*\*  $\bar{X}$  : Arithmetic Average; \*\*\*\*\*  $\sigma$  : Standart Deviation.

## Discussion

Regarding what was identified, with regard to the increased frequency of reports of financial violence against the elderly in the geographic and historical context analyzed, support was found with what is found in the scientific literature, when it is argued that the cases of violence against the elderly occur more frequently in the family, mainly by children and grandchildren, accounting for approximately 52.9% of cases, according to data provided by the MWFHR.<sup>17</sup> In this context, according to some researchers, financial abuse is defined as the inappropriate or illicit use or even, without the consent of the elderly person, of their assets and also of monetary resources.<sup>17-19</sup>

Violence against elderly people was defined by the WHO as a single or repeated act or omission, which can be performed with intention or unconsciously, causing any physical or emotional suffering in a relationship of trust, as such an act can occur in different contexts, whether in the domestic environment or outside, and also by someone who has a power relationship with the aged person/family.<sup>9,15,18-19</sup> In addition, the WHO listed seven (07) types different types of violence, with financial abuse being one of the most frequent among the.<sup>9,14-15,20</sup>

For other researchers, this crime can usually be committed by a close person, in which the victim has a high degree of trust about the abuser, and in this sense, great difficulties are encountered in detecting this phenomenon, due to the resistance or fear of the elderly in carrying out the complaint, along with the reduced preparation of professionals to deal with the situation, thus, knowledge about this matter is essential.<sup>18,20</sup> In relation to what was identified regarding the retention of wages and assets, while As the main form of violence inflicted against the elderly, a relationship was identified with what is exposed in the scientific literature that, in general, this phenomenon occurs simultaneously with other types of violence, such as psychological, social and

physical, with great prevalence in people with greater dependence, such as those with some kind of mental disorder or emotional distress.<sup>14-15,18</sup>

Based on the conceptualization of the different types of violence presented in the National Policy for the Reduction of Accidents and Violence, it is defended that financial and economic abuse are constituted by inadequate or illegal exploitation of the elderly person or by the unauthorized use of their monetary resources. This crime usually happens mainly in the family environment.<sup>14,16,20,21</sup> Analyzing the phenomenon of financial violence against the elderly, it was possible to verify what was supported by the Secretariat of Human Rights, which typified the amount of six (06) characteristics and also of the circumstances strongly present in the constituted profile of the aggressor and its *modus operandi*.<sup>3,18,23,24</sup>

Among the main characteristics identified, we can mention the situation when the aggressor lives in the same residence as the elderly victim, when his/her child or close family member has some type of financial dependence on their parents, who are in older age groups/ or even when the abuser consumes some type of ethyl alcohol and/or psychoactive substances.<sup>3,9,16,23,24</sup> They can also be mentioned as their own attributes and aspects, referring to the type of offense or misdemeanor under analysis, when the person involved performs an action motivated by revenge against the person with whom, if he had a weak affective relationship, for having abandoned in the past, the family or even practiced some type of violence previously, and also, when people hired by the family, develop their own caregiver activities with the victim and she has some mental disability or complication related to social isolation.<sup>3,13,14,24</sup>

Disagreements with the person responsible for the elderly are also mentioned as important risk factors, and the existence of all the aspects listed above usually generate individually or together, which is known as changes in family processes.<sup>14,25,26</sup> In this sense, difficulties and complications in the implementation of self-care in activities of daily living (ADL) and in instrumental activities of daily living (IADL) are also more easily identified, thus contributing to the expansion of the degree of dependence, and consequently, the possibility of suffering abuse and violence of all kinds.<sup>14,18,25,26</sup>

On the other hand, due to the accelerated demographic increase of the elderly population both internationally and nationally, as defended by several scientific literatures, the issue of violence has been gaining increasing visibility in various fields of knowledge, as age has become an important risk factor for the development of this noisy phenomenon, since the older the person is due to their level of dependence, the greater the probability of becoming the target of abuse.<sup>5,7,14,23,24,26</sup> According to some important projections carried out recently, the number of inhabitants aged 65 years or over may reach a frequency above 30% in the year 2050, and in Brazil, the population has been aging at a strongly accelerated pace in recent decades, due to the decrease in the mortality rate identified in the beginning of the last decade of the 60s, in addition to the decline in fertility rates, belonging to the beginning of the 80's.<sup>14,22,27,28</sup>

Thus, the WHO released the "Violence Map", which highlights some aspects closely related to this complex crime, such as the strain on family relationships, financial problems and weaknesses, elderly dependence, the issue of social isolation, dispersion of young people, the division of inheritance among family members and other heirs, in addition to the numerous related cultural and

socioeconomic aspects.<sup>18,02,23,26</sup> The existence of some risk factors for the elderly is also described in the scientific literature as risk factors for the elderly type of dementia and neurological illnesses, depression, the phenomenon of deprivation of family and social support, physical disability, isolation, the consumption of narcotics in its various types and/or fizzy drinks, which will strongly potentiate the lowering of cognitive and functional capacity and potential.<sup>14,20,25-26</sup>

The factors mentioned above may also be related to physical and mental fatigue, resulting from the decrease, or even the lack of specialized care available to the elderly, especially when they have diagnosed chronic diseases, mental exhaustion, stress or even some type of definitive debilitating disability.<sup>14,23,24,26,29</sup> In this context, the elderly person who has some type of dependency or physical or mental weakness will be much more likely to suffer some type of financial or other violence, as well as those who have some type of cognitive deficit, irregular sleep, urinary or fecal incontinence, difficulty in moving, and those who need intensive care, which as a result of these criminal acts, may trigger the onset of depressive pictures, denial, in addition to feelings of guilt and discouragement.<sup>14,28,29,30</sup>

Given all the types of violence against the elderly mentioned, it is important to emphasize that financial violence is one that has shown a strong evolution in recent years, being practiced in numerous cases, along with physical and psychological violence.<sup>27,28,29,30</sup> This finding is supported by the numerous problems caused as a result of the elderly person's poor health, as well as their reduced quality of life (QL), with the presence of some degree of psychological stress being verified, traumas, injuries of various orders and the reduced availability of security, which may culminate in their death, especially when these factors and phenomena occur in the family environment, due to the relationship of "trust" and "complicity" on the part of the victim.<sup>29,30,31</sup>

As defended by the Action Plan to Combat Violence Against the Elderly, economic abuses can be committed within the family, in which disputes exist for the appropriation of assets and future inheritances, in addition to attempts to oblige the victim to provide documents and powers of attorney, which allow the family member to have access to property(ies) of the same, for example, in the practice of sales of properties and non-consented annuity(s).<sup>32</sup> Through the removal of the elderly person from their home and/or social space, or even, due to their isolation at home on their property(ies), the aforementioned illicit act has as its objective substantially the development of the crime of extortion of their belongings, savings and possessions, without its prior consent.<sup>28,30,31,32</sup>

As for other researchers on this important topic, in addition to the family environment, the crime of financial violence can occur involving third-party people living with the victimized elderly, such as close neighbors and also professional caregivers, who usually tend to observe them, who live alone or who are widowed, through obituaries and death notes.<sup>33</sup> On the other hand, there is also the practice implemented by a group that is little studied, being developed through the market and commercial operations, in which they seek gain the trust of the elderly victim, with the deceptive use of what is known as "marketing inducing" the same, to the development of exaggerated purchases of goods and services of different natures.<sup>31,32,33</sup>

For the Brazilian Institute of Geography and Statistics (IBGE), with the extension of the longevity of Brazilians, the number of families that take care of

people over 60 years old was also increased, and in 2019, 5.1 million families were part of this group.<sup>5,7</sup> With regard to the compound identified as a family, it encompasses different concepts, including the representation with an interpersonal bond, composed directly by people who relate for different and numerous reasons and, who have affective and also reproductive ties, and may reside together or not, and it has a fundamental and preponderant role in the life of the elderly, since it is in it that they normally find security and welcoming.<sup>5,8,14,18</sup>

The complexity of the phenomenon of financial violence against the elderly is such that some scholars point out that there are some reasons why this crime against this population occurs, for example, because this specific public dominates a large part of global wealth, in addition to they constitute themselves as liable to be controlled by the aggressor(s) in case they present in their morphological constitution, some type of deficiency.<sup>14,23,24,33</sup> In the same way, elderly people are more vulnerable to violence financial because there is a forecast of when they will or will not have some financial value with them, or even, often, they do not report their aggressors to the competent authorities, for fear, shame or illness, or also, because there is not, at the time of the misdemeanor the presence of sufficient witness(s).<sup>12,14,23,24,33</sup>

In this context, the issue of the crime of financial violence against the elderly can present other circumstances for its occurrence, such as the possibility of it culminating in mortality before this misdemeanor is investigated, in addition to the victim not having knowledge(s) about financial matters , or technology that controls finances, rights, legislation, among others.<sup>23,24,25,31,33</sup> Currently, the crime of violence against the elderly, identified during the Covid-19 pandemic, has also been registered, together with other people who are in a vulnerable situation, such as children, adolescents, women, among others, enhanced by social isolation, as a preventive measure for the acquisition of this pandemic disease.<sup>34</sup>

## Conclusion

Through this research, it was possible to identify an increase in the frequency of records of reports of financial violence against the elderly in the historical and geographic scope investigated. Although the present production has limitations in its integrative body, the proposed objectives were achieved in their entirety, making it possible to better understand the phenomenon analyzed, offering a genuine contribution to its understanding in greater depth.

The issue of financial violence directed at the elderly is a complex public health problem, due to its various representations and direct and indirect derivations. In the last two years, due to the advent of Covid-19 and its identified national and international impacts, more strongly through the scientific literature and through the various media communications, it was also possible to establish its relationship with the financial violence inflicted against the elderly.

This phenomenon is related, as a result of established security measures, such as social isolation in homes, and in the case of the elderly in long-term care institutions (ILP), the victim's difficulty in manipulating their income and retirement, in addition to greater mediation by family members, acquaintances and close associates, along with cash movements, transfers and similar

operations. In this way, it is up to the family, the various existing associations for the defense of the elderly, society and the State, to strive more robustly, in the development of strategies that effectively favor the mitigation of the quantity of allegations of crimes of financial violence in all its modalities.

Despite the existence of the Statute for the Elderly, the National Policy for the Elderly, among other established provisions, other mechanisms for empowerment and legislative support to combat monetary violence against the elderly, must be articulated in all Brazilian political spheres, as an effective way and efficient in combating and controlling this lamentable and noisy crime. The financial violence implemented against the elderly is also a serious crime against human rights, against society and the aging being, needing to be potentiated measures for its mitigation, in addition to criminal accountability of people who practice this criminal act.

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# Epidemiologic and morbimortality profile of the intensive care unit of a public hospital

## Perfil epidemiológico e de morbimortalidade da unidade de terapia intensiva de um hospital público

## Perfil epidemiológico y de morbimortalidad de la unidad de cuidados intensivos de un hospital público

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# REVIS

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### RESUMO

**Objetivo:** caracterizar o perfil epidemiológico e de morbimortalidade da UTI de um hospital regional do Distrito Federal. **Método:** trata-se de uma pesquisa transversal, quantitativa, retrospectiva e observacional. A amostra foi constituída por 182 pacientes e a coleta de dados foi realizada no ano 2016 e usou um instrumento semiestruturado próprio da pesquisa para avaliação de dados sociodemográficos, de admissão e de desfecho na unidade. **Resultados:** prevaleceram os pacientes do sexo masculino, idosos, idade média de 56,42 anos, procedentes do próprio hospital analisado, com principal diagnóstico de internação e de óbito a sepse e/ou choque séptico. A taxa de mortalidade foi de 33%, sendo associada ( $p \leq 0,05$ ) ao uso de drogas vasoativas na admissão, a um menor tempo de internação, e escores de APACHE acima de 20 pontos, enquanto a alta foi associada a um menor tempo de ventilação mecânica e a não necessidade de hemodiálise. **Conclusão:** homens, com sepse, em uso de drogas vasoativas e APACHE  $\geq 20$  pontos estão relacionadas a mortalidade.

**Descritores:** Unidades de Terapia Intensiva; Estudos epidemiológicos; Mortalidade; Enfermagem.

### ABSTRACT

**Objective:** to characterize the epidemiologic and morbimortality profile of the ICU of a regional hospital in the Federal District. **Method:** this is a cross-sectional, quantitative, retrospective and observational study. The sample consisted of 182 patients and data collection was carried out in 2016, using a semi-structured research instrument to assess sociodemographic, admission and outcome data of the unit. **Results:** male patients, elderly, mean age of 56.42 years old, coming from the analyzed hospital, with main diagnosis of admission and death from sepsis and/or septic shock prevailed. The mortality rate was 33%, being associated ( $p \leq 0.05$ ) with the use of vasoactive drugs at admission, a shorter hospital stay and APACHE scores above 20 points, while discharge was associated with a shorter duration of mechanical ventilation and no need for hemodialysis. **Conclusion:** men, with sepsis, using vasoactive drugs and APACHE  $\geq 20$  points are related to mortality.

**Descriptors:** Intensive Care Units; Epidemiologic Studies; Mortality; Nursing.

### RESUMEN

**Objetivo:** caracterizar el perfil epidemiológico y de morbimortalidad de la UCI de un hospital regional del Distrito Federal. **Método:** estudio transversal, cuantitativo, retrospectivo y observacional. La muestra estuvo conformada por 182 pacientes y la recolección de datos se realizó en 2016, utilizando un instrumento de investigación semiestructurado para evaluar los datos sociodemográficos, de ingreso y de resultados en la unidad. **Resultados:** hubo un predominio de pacientes del género masculino, ancianos, con una edad promedio de 56,42 años, procedentes del mismo hospital analizado, con sepsis y/o shock séptico como diagnóstico principal de ingreso y muerte. La tasa de mortalidad fue del 33%, asociándose ( $p \leq 0,05$ ) al uso de fármacos vasoactivos al ingreso, menor estancia hospitalaria y puntajes APACHE superiores a 20 puntos, mientras que el alta se asoció a una menor duración de la ventilación mecánica y sin necesidad de hemodiálisis. **Conclusión:** hombres, con sepsis, utilizando fármacos vasoactivos y APACHE  $\geq 20$  puntos se relacionan con la mortalidad.

**Descritores:** Unidades de Cuidados Intensivos; Estudios Epidemiológicos; Mortalidad; Enfermería.

ORIGINAL

## Introduction

The current demographic transition in Brazil also affects the profile and the demand and supply of beds for critically ill patients in the Intensive Care Unit (ICU) setting. The increase in life expectancy and the evolution of technological and scientific resources are factors that have changed, in recent decades, the profile and clinical conditions that lead to the need for admission of individuals to ICUs, such as, for example, acute chronic diseases that require high-cost technologies.<sup>1-4</sup> The length of stay of patients in the ICU is a matter that generates high financial costs for the hospital, the municipality and the country, which are related to both material resources and specialized human resources.<sup>2</sup>

In a survey conducted with ICU patients using non-prolonged mechanical ventilation (MV), the cost of the ICU for the hospital was approximately 36.4%; while, for those using prolonged MV, the cost of the ICU rose to 51.3% of the hospital costs.<sup>2</sup> Another factor is the presence of sepsis, which can be responsible for up to 60% of the mortality rate in the ICU setting, one of the problems that greatly increases the costs of ICU treatment.<sup>5</sup> The number of beds in the ICU setting in Brazil in 2020 was 45,848 units, 49.82% of which belong to the Brazilian Unified Health System (SUS, as per its Portuguese acronym) and 50.18% are in the private system.<sup>1</sup> Maintaining bed availability is essential for turnover flow, which can help patients eligible for critical care in the ICU setting, in order to improve turnover and/or bed availability.

In the Midwest region, there are 4,570 ICU beds, of which 60% are in private institutions and 40% in the SUS, showing a smaller number of beds in the public environment.<sup>1</sup> Patients served by the SUS can wait for ICU beds to become available. Thus, patients with more severe clinical picture are prioritized for admission, thus increasing the mortality risk rates of the unit.<sup>2-5</sup>

To quantify mortality rates, mortality risks, among other epidemiologic data from the ICU setting, helps to know the bed turnover profile, quality indicators and can help the health team to define future goals and know the results of care. In addition, prognostic scores available for ICU are also important to plan actions and direct the assistance of the team.<sup>3,5</sup> According to the National Registry of Intensive Care, the rate of stay in Brazilian ICUs varied from 5.6 in 2016 to 6.01 days in 2020, while the mortality rate was 1.35 in the SUS and 1.04 in the private network in 2016; and 2020, it was 1.58 in the SUS and 0.99 in the private network.<sup>1</sup>

Thus, morbimortality profile studies have been identified in ICU inpatients nationally<sup>1,6</sup>, internationally<sup>7,8</sup> and in studies of theorists.<sup>7-8,9</sup> In Brazil, the mortality rate varied from 15% to 89%<sup>1,6-7,11-13</sup>; and, in international studies, it is higher than 57%.<sup>7-8,14</sup>

Mortality can be associated with several factors, both internal and external to the individual, such as age, length of stay, use and length of invasive mechanical ventilation, prognostic score, admission diagnosis, use of vasoactive drugs, among others, as also shown in several other studies.<sup>5,8-14</sup>

Given the high demand for ICU beds in the Brazilian hospital environment and the experience of professional practice, where it is observed that quality care is an essential tool for reducing the length of stay in these

units, it is believed that knowing and understanding the mortality profile of the sector is essential to obtain knowledge and plan actions in the ICU environment. This research had the objective of characterizing the epidemiologic and morbimortality profile of the ICU of a regional hospital in the Federal District.

## Method

This is a cross-sectional study with a quantitative and retrospective approach. The research was conducted in the Adult Intensive Care Unit of a regional public hospital in the western region of the Federal District.

The study population consisted of patients admitted to the unit during the year 2016, totaling 192 patients. The sample was composed of patients who met the inclusion criteria: patients of both genders and over 18 years of age; treated in the ICU of the regional hospital between January and December 2016; inpatients with an ICU stay of more than 24 hours. A total of 10 patients who did not meet these criteria were excluded from the research, being 5 under 18 years of age and 5 with a hospital stay of less than 24 hours. Accordingly, the final research sample consisted of 182 individuals. Data collection took place from April to August 2017.

In the first moment of data collection, all patients admitted in 2016 were identified through the use of the unit's admission and discharge book, and analyzed according to the research inclusion criteria. Then, a semi-structured data collection instrument was adopted, filled according to the data contained in the patient's electronic medical record, where demographic data variables were collected (age, gender and marital status), clinical status at admission, and the patient's outcome in the intensive care unit. In order to preserve participants' privacy, patients' names were replaced with numbers. This research is in accordance with the ethical standards of CNS resolution 466/2012 and was approved by CEP/FEPECS opinion n° 2.027.942.

Subsequently, a database was created using the Statistical Package for the Social Sciences (SPSS®) software, version 20.0, and descriptive analysis was performed by absolute and relative frequencies, means, standard deviation, as well as minimum and maximum values obtained. In the analytical stage, the associations between the independent variables and the dependent variable were tested using the chi-square test. The significance level considered was  $p < 0.05$ .

## Results

The 182 ICU patients participating in this study were 53.8% male, with a mean age  $56.42 \pm 18.11$  years (Min.=18, Max.=96 years), most belonging to the 60-69 age group (22.5%), followed by those between 70-79 years (18.1%) (Table 1).

**Table 1** - Sociodemographic data of individuals admitted to the ICU (n=182) in a regional hospital in an administrative region of the Federal District, 2016. Federal District, 2016.

Variable	N	%
<b>Gender</b>		
Female	84	46.2
Male	98	53.8
<b>Age</b>		
18 - 29 years	15	8.2
30 - 39 years	28	15.4
40 - 49 years	23	12.6
50 - 59 years	28	15.4
60 - 69 years	41	22.5
70 - 79 years	33	18.1
80 - 89 years	11	6
90 - 99 years	3	1.6
<b>Marital Status</b>		
Single	31	17
Married	54	29.7
Divorced	14	7.7
Widowed	8	4.4
Unknown	75	41.2

Most patients admitted in 2016, 50.56%, came from other sectors of the regional hospital itself, being the red room and yellow room of the Emergency Room and the surgical center (Table 2). The patients admitted were mostly sedated, 73.6%, without pressure ulcer (PU), 67.0%. Moreover, from a total of 182 admissions, 6 were patients admitted to the unit for the second time in the same year (Table 2). The mean number of days between the first and second admission for these 6 patients was  $47 \pm 93.71$  days (Min.=1, Max. =237 days).

**Table 2** - Clinical status at admission of individuals admitted to the ICU (n=182) in a regional hospital in an administrative region of the Federal District. Federal District, 2016.

Variable	N	%
<b>Origin</b>		
Other hospital sectors	92	50.5
All other hospitals	68	37.4
Emergency Care Units (ECUs)	22	12.1
<b>Level of Consciousness</b>		
Sedated	134	73.6
Coma	10	5.5
<b>Pressure Ulcer</b>		
Yes	60	33.0
No	122	67.0
<b>Mechanical Ventilation</b>		
Yes	146	80.2
No	36	19.8
<b>Vasoactive Drugs</b>		
Yes	96	52.7
No	86	47.3

Readmission		
Yes	6	3.3
No	176	96.7

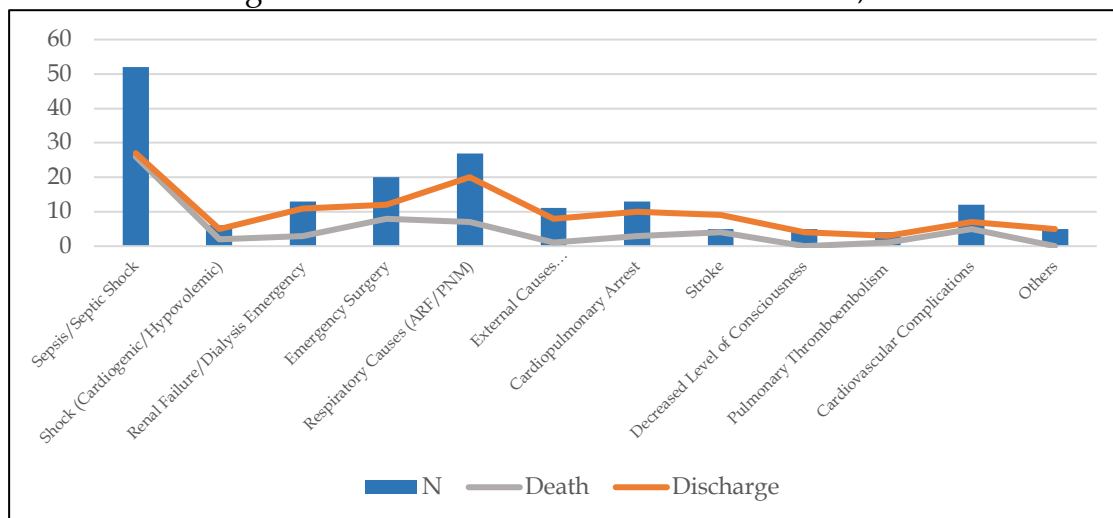
Patients admitted under invasive mechanical ventilation were prevalent, 80.2%, followed by patients who were using vasoactive drugs, 52.7%. Those patients who were using vasoactive amines were associated with a higher death rate, i.e., from the individuals who died, 70% used vasoactive drugs at admission ( $p=0.003$ ). In the case of mechanical ventilation, among those who died, 90% were admitted on mechanical ventilation; while among those discharged, 75.2% used this therapy ( $p=0.056$ ) (Table 3).

**Table 3** - Analysis of admission with the outcome of individuals admitted to the ICU (n=182) of the regional hospital in an administrative region of the Federal District, Federal District, 2016.

	Total		Discharge		Death		p
	N	%	N	%	N	%	
<b>Mechanical Ventilation</b>							0.056
Yes	146	80.2	91	75.2	54	90.0	
No	36	19.8	30	24.8	6	10.0	
<b>Vasoactive Drugs</b>							0.003
Yes	96	52.7	53	43.8	42	70.0	
No	86	47.3	68	56.2	18	30.0	

Figure 1 shows the main diagnoses and causes of ICU admissions in 2016, with sepsis and/or septic shock standing out, accounting for 29.1% (n=53) of admissions. This was followed by 14.8% with respiratory causes, including acute respiratory failure and pneumonia, and 11.0% post-operative emergency surgery, as the main admission diagnoses. Regarding the number of discharges or deaths for each diagnosis, for all causes of admission, discharge was more prevalent than the number of deaths, a non-significant result in this sample. In the case of sepsis and/or septic shock, the difference between the number of discharges or deaths of these patients was the smallest among the diagnoses, being 50.9% with discharge outcome and 49.1% with death outcome.

**Figure 1** - Admission diagnoses related to the number of discharges and deaths of individuals admitted to the ICU (n=182) of the regional hospital in an administrative region of the Federal District. Federal District, 2016.



In 2016, 66.5% of patients admitted had discharge from the unit as an outcome, with a mortality rate totaling 33%. Only 1 patient admitted in 2016 remained hospitalized in the ICU throughout the data collection period. In its outcome (discharge or death), 54.4% of patients had no pressure ulcer (PU), with 23 new cases of PU during 2016, according to the collected data. Among the patients who were discharged from the unit, 23.1% died after discharge in the first year (mean of 56.75 days; SD±88.37, Min.=3, Max.=349 days) (Table 4).

**Table 4** - Evolution of individuals admitted to the ICU (n=182) of the regional hospital in an administrative region of the Federal District. Federal District, 2016.

Variable	N	%
<b>Outcome</b>		
Discharge	121	66.5
Death	60	33.0
Stay	1	0.5
<b>Pressure Ulcer</b>		
Yes	83	45.6
No	99	54.4
<b>Death After Discharge</b>		
Yes	28	23.1
No	93	76.9

Most patients were admitted to the ICU between 1-3 weeks (52.7%), followed by patients admitted for less than 1 week (29.7%). The mean length of stay was 17.46±26.29 days (Min. =1, Max. =259 days). Among the patients who evolved to death, 48.3% stayed in the ICU for less than 1 week, and a longer hospital stay was associated with the discharge outcome of these patients (p=0.002) (Table 5).

Regarding the length of stay on mechanical ventilation, those with less than 1 week prevailed (53.3%), followed by 1-2 weeks (34.6%). The mean duration of mechanical ventilation was 10.61±22.28 days (Min=0, Max=219



days). In this case, a longer duration of mechanical ventilation was associated with a higher number of deaths in the unit ( $p=0.032$ ) (Table 5).

**Table 5** - Analysis of evolution with the outcome of individuals admitted to the ICU (n=182) of the regional hospital in an administrative region of the Federal District. Federal District, 2016.

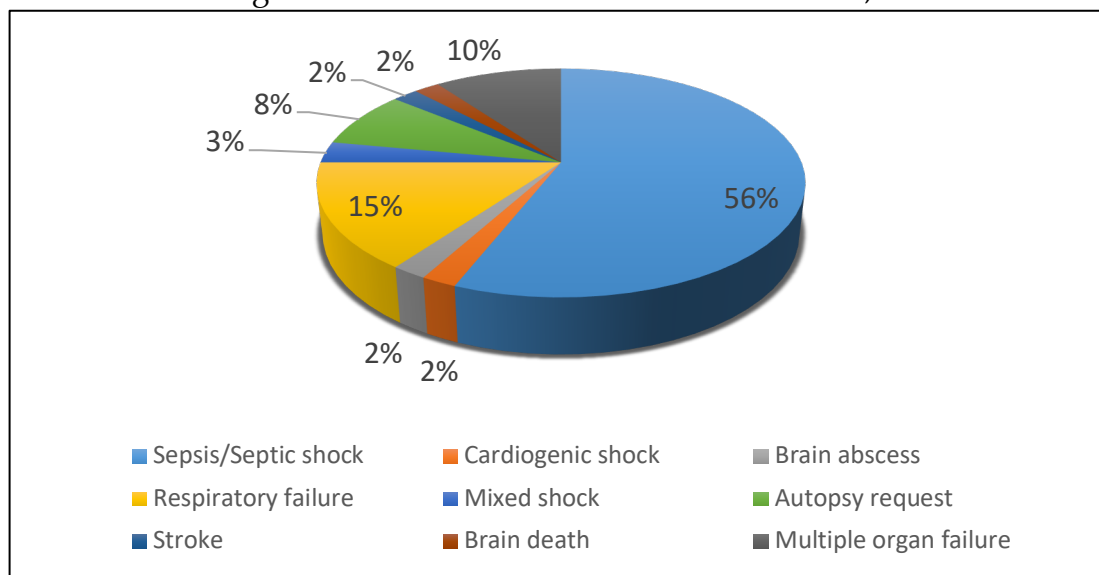
	Total		Discharge		Death		p
	N	%	N	%	N	%	
<b>Hospital stay</b>							<b>0.002</b>
< 1 week	54	29.7	25	20.7	29	48.3	
1 - 3 weeks	96	52.7	74	61.2	22	36.7	
4 - 6 weeks	22	12.1	16	13.2	6	10.0	
> 6 weeks	10	5.5	6	5.0	3	5.0	
<b>Duration of mechanical ventilation</b>							<b>0.032</b>
< 1 week	97	53.3	67	55.4	30	50.0	
1 - 2 weeks	63	34.6	45	37.2	18	30.0	
3 - 4 weeks	10	5.5	6	5.0	4	6.7	
> 4 weeks	12	6.6	3	2.5	8	13.3	
<b>Hemodialysis</b>							<b>0.001</b>
Yes	51	28.0	25	20.7	26	43.3	
No	131	72.0	96	79.3	34	56.7	
<b>Apache II</b>							<b>0.001</b>
0-4	3	1.6	3	2.5	0	0.0	
5-9	15	8.2	15	12.4	0	0.0	
10-14	24	13.2	18	14.9	6	10.0	
15-19	44	24.2	36	29.8	8	13.3	
20-24	39	21.4	23	19.0	16	26.7	
25-29	34	18.7	15	12.4	18	30.0	
30-34	19	10.4	11	9.1	8	13.3	
35-100	4	2.2	0	0.0	4	6.7	

Moreover, patients who did not undergo hemodialysis were prevalent (72.0%) (Table 4). Among those who performed hemodialysis, the mean time of dialysis therapy was  $21.54 \pm 47.64$  days (Min.=1, Max.=255 days), and 12 patients were discharged still dependent on this therapy. Those patients in the unit who did not undergo hemodialysis had the discharge outcome more prevalent than those who required renal replacement therapy ( $p=0.001$ ) (Table 5).

Regarding the APACHE II index, in this sample, individuals with a value between 15-19 prevailed, followed by those with values between 20-24. The mean of the APACHE II value was  $20.33 \pm 7.67$  (Min.=1, Max.=41). In this research, values above 20 for APACHE II were associated with death, as well as values below 20 were associated with discharge ( $p=0.001$ ) (Table 5).

Figure 2 illustrates the causes of death of individuals in 2016. Just as sepsis and/or septic shock was the main admission diagnosis, it was also the main cause of death in the unit, representing 56% of the total. Acute respiratory failure comes second (15%), followed by multiple organ failure (10%). It is noteworthy that the autopsy was requested in 8% of deaths either due to trauma and/or violence or to elucidate the cause of death.

**Figure 2** - Causes of death in the ICU (n=182) in a regional hospital in an administrative region of the Federal District, Federal District, 2016.



## Discussion

The prevalence of the male gender found in this survey is a recurrent fact in other studies, with this percentage varying from 43.4% to 67.2%.<sup>6,15-19</sup> This result can be justified by the fact that men are not the majority in health promotion and disease prevention services; not to mention that, when they are affected by a disease, they only seek such services when it is already in a more advanced and/or critical stage, requiring some kind of admission. On the other hand, some surveys in intensive care units already show the female gender as the most prevalent.<sup>3,14</sup>

The mean age found was 56.42 years, which is among the range found in other studies from 19 to 77.4 years of mean age.<sup>2,15,6,8,11,15,17</sup> The most prevalent age group was the elderly, especially between 60-69 years old, as described in other surveys.<sup>2,3,20</sup> This higher mean age and the prevalence of the elderly population is explained by the demographic transition that Brazil and the world in general have been undergoing in recent years. In addition, due to advanced age, the elderly individuals undergo physiological changes that make them more susceptible to diseases and complications.<sup>7-8,14</sup>

The origin of 50.5% of admissions came from sectors of the regional hospital of the research; and of these patients, 75% were from the Emergency Room and 25% from the Surgical Center. Another survey identified that most came from the surgical center, followed by those from the emergency room.<sup>15</sup>

At the admission of the research patients, sedated patients without pressure ulcers, using invasive mechanical ventilation and vasoactive drugs also prevailed. A retrospective study conducted in a regional hospital in the Federal District showed a 12.2% prevalence of pressure ulcer in patients at the time of admission, which was correlated with the degree of dependence for mobility of these individuals. In addition, during the period of stay in the unit, 50.8% of the patients used vasoactive drugs and 56.6% invasive mechanical ventilation.<sup>1</sup> A prevalence of mechanical ventilation use was also noticed in

another study, but the use of vasoactive drugs was not prevalent in its sample, and both variables were correlated with a higher risk of death.<sup>17</sup>

In this study, the ICU readmission rate was 3.3% in 2016, a value below the 7.5% in another survey.<sup>17</sup> The mean time between discharge and return to the unit was 47 days, with no association with increased mortality in these patients, unlike in another ICU where the mortality among readmissions was 69.7%.<sup>19</sup>

The main cause of admission was sepsis and/or septic shock, followed by respiratory causes and post-operative complications of emergency surgery. Other surveys in Intensive Care Units also brings these three situations as the most prevalent, especially respiratory causes, including Acute Respiratory Failure and Pneumonia.<sup>2,16,19-20</sup> In another survey, 51% of the sample was admitted to the hospital due to clinical causes and 14% after emergency surgery.<sup>17</sup>

Currently, sepsis is the main diagnosis and cause of death in ICUs, and remains a major challenge for all involved. In Brazil, data on this disease are quite old, despite its growing prevalence. An epidemiologic and multicenter study developed with sepsis patients in 75 Brazilian ICUs found a prevalence of 19.6%, 29.6% and 50.8% for sepsis, severe sepsis and septic shock, respectively.<sup>21</sup> Overall mortality was 46.6%, with 16.7%, 34.4%, 65.3% for sepsis, severe sepsis and septic shock, respectively, with higher rates in patients on mechanical ventilation, vasopressors and associated with number of comorbidities of each individual.<sup>21</sup> In a study conducted in 230 Brazilian ICUs, the Latin American Institute of Sepsis estimates that 30% of intensive care beds are occupied by septic patients and that 20 to 40% of the costs of an ICU are allocated to the care of these patients.<sup>22</sup> In other realities, sepsis has been found in values above 50%.<sup>3,9-10,14</sup>

The main outcome of the study subjects was discharge from the unit, with a mortality rate of 33%. Other studies have found mortality rates varying from 26.3% to 43.9%.<sup>15-18,20</sup> In another retrospective study in a regional hospital in the Federal District, it was found a mortality rate of 38.6%, where an APACHE II prognostic index, length of stay longer than two weeks, need for vasoactive drugs and use of MV were the main factors associated with non-survivor patients. In addition, there was also a relationship between the cause of admission and the patient's evolution. In this research, there was an association between mortality and length of stay, duration of mechanical ventilation and use of hemodialysis.<sup>2</sup>

Pressure ulcer (PU) at discharge and/or death was found in 45.6% of individuals. PU was found in an 18% prevalence in the ICU in another study, being associated with dependence for mobility and length of stay.<sup>2</sup>

Among those patients who were discharged, 23.1% died in the first year after discharge, with a mean of 56.75 days. A rate of 11% for deaths after discharge was found in another ICU in its assessed research.<sup>15</sup>

The mean length of stay in the sample was 17.46 days, with mortality associated with a time of less than 1 week in the unit. Literature addresses admission means varying from 6 to 23.2 days.<sup>2,18-19-20</sup> Moreover, patients with length of stay between 1 and 3 weeks were prevalent, as well as in another ICU where it was shown that 2/3 of the patients in the sample stayed in the hospital for 7 days or more.<sup>16</sup> Other studies have shown higher values.<sup>3,9,14</sup>

The association between mortality and shorter length of stay was not the result found in another reality, where mortality was associated with a length of stay longer than 2 weeks.<sup>2</sup> The result of this study may have as possible justification the admission of more severe patients with greater chance of death and who evolve to death within the intensive care unit. Currently, the high demand for ICU beds influences the classification of patients referred to these units, where the most seriously ill have a priority to occupy the ICU bed, thus increasing the risk of death in the unit and raising mortality rates. On the other hand, a longer ICU stay also increases the risk of death, since it makes the individual more susceptible to worsening of the clinical condition, due to the decrease in the immune system associated with the increase in the number of invasive procedures that boost the risk of infection.

Regarding the duration of mechanical ventilation, most used this therapy for less than 1 week, with a mean time of 10.61 days, and a longer time on MV was found in patients who died. A similar finding was highlighted in another reality in the ICU, where most of the study sample used mechanical ventilation, with a mean time of 15.4 days, mortality being higher in this group of individuals, and where a longer duration of MV was associated with mortality and a longer length of stay.<sup>20</sup> Another research found a mean time of 8.5 days, with 21.7% of the sample using MV for less than 1 week and 20.6% from 2 to 3 weeks, and mortality was also associated with the use of ventilation, where those who did not need this therapy had 23 times more chances of improvement.<sup>2</sup> This risk and association with mortality may be justified as it is another invasive procedure that increases the risk of infection, especially pulmonary, and also increases the length of stay in the intensive care unit. In another location, it was also found that most of the sample submitted to mechanical ventilation evolved to death, the *odds ratio* being 2.85 in this case.<sup>17</sup>

In this study, the prevalence of patients requiring renal replacement therapy (28%) was higher than in other studies.<sup>3,9,23</sup> Nevertheless, in this study, mortality among these dialysis patients was 51%, a value close to that found in two other realities.<sup>23</sup> The association found in this study between discharge and non-use of hemodialysis was not found in other studies.<sup>7-8</sup>

The results found for the APACHE index corroborate data from other studies in intensive care units, where the APACHE means vary from 18 to 31.6.<sup>1,18</sup> In addition, higher APACHE means were associated with death in this study, as well as values  $\geq 20$  points on the scale are more commonly found in patients with death outcomes among the analyzed surveys.<sup>2,16-18</sup>

APACHE is used and validated in several countries. It assesses physiological variables in order to predict the prognosis of critically ill patients, and is easy to operate.<sup>16-17</sup> It assesses the quality of care offered, the length of time this patient will require, and is able to identify the profile of the patient and of the unit.<sup>20</sup> By performing this death prediction and contrasting it with the actual ICU mortality rate, the clinical profile of care can be analyzed and compared according to previous values in order to identify care-related problems earlier.<sup>24</sup> In this sense, this study analyzed the clinical and epidemiologic profile of the ICU in question, with the purpose of producing data that allow knowing the reality and quality of care offered by the unit to the internal patients.

Regarding the causes of deaths, sepsis and/or septic shock, respiratory failure and multiple organ failure were the clinical conditions that prevailed as causes. Another study with sepsis in the ICU setting found mortality for SIRS, sepsis, severe sepsis and septic shock of 6.1%, 10.1%, 22.6% and 64.8% respectively.<sup>18</sup> In an Urgent and Emergency sector, 49.2% of deaths were for patients with severe sepsis and 74.4% for patients with septic shock, the latter being associated with a higher occurrence of deaths.<sup>25</sup>

Several results found in this research are corroborated by the literature and highlight that the analyzed variables are extremely important for the intensive care service.<sup>3,7-9,12-16,18-21</sup> Knowing them in each unit and perceiving the influence of each one on the individual's outcome in the ICU setting makes it possible to plan a more appropriate care for each of those patients.

The lack of data available in medical records was an obstacle to be overcome during data collection in this research, and this fact demonstrates the lack of knowledge and/or importance that professionals give to these data, because, besides safeguarding the professional practice, these are the data that will support not only investigations, but also statistics that will improve the services. Accordingly, a prospective research can minimize this lack of data and necessary information. A more in-depth analysis of each of these variables and greater associations between them can also increasingly help in the knowledge and planning of actions, services and assistance.

## Conclusion

From the profile of patients admitted in 2016 in the ICU studied, we identified the predominance of male individuals, over 60 years old, coming from the hospital itself, and sepsis and/or septic shock was the main cause of admission and death in the unit. The actual mortality rate was 33%, and was associated with the use of vasoactive drugs at admission, shorter hospital stays and APACHE scores greater than 20, while discharge was associated with shorter duration of mechanical ventilation and no need for hemodialysis treatment.

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