Environmental sustainability as a management strategy in the hospital environment

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ABSTRACT
Hospitals perform several daily functions without interruption throughout the year, and are responsible for a large consumption of energy, water, materials, as well as large generators of solid waste and liquid effluents, thus causing great potential for negative impact on the environment. In this context, the question of this research is to discuss how environmental sustainability can be integrated as a management strategy in the hospital environment? To answer this question, this study aimed to understand the main environmental sustainability practices adopted by Brazilian hospitals, aiming to minimize the environmental impacts caused by their activities. The research is of an exploratory descriptive nature with a qualitative approach, the study was carried out from a bibliographic and documentary research that served as a theoretical conceptual reference of the theme, complementing with secondary sources that addressed the practices focused on the health area from the perspective of environmental sustainability. The results showed that the sustainable practices adopted in the hospitals resulted in better economic performance with cost reduction, healthier and more adequate environments, in addition to reaffirming the commitment and concern for the environment and society

Keywords: Sustainability, Hospitals, Environmental, Strategy.

1 INTRODUCTION

The health sector's mission is to prevent and cure diseases, however, it contributes to the increase in pollution, environmental degradation, and unsustainable use of resources, which, consequently, end up threatening public health and affecting the environment through the waste they generate, the technologies and innovations they employ to promote changes in their structures (GUENTHER; KARLINER, 2011).

Hospitals perform various functions 24 hours a day and without interruption throughout the year, and are responsible for large consumption of energy, water, materials, as well as large generators of solid waste and liquid effluents; thus, they offer a great potential for negative impact on the environment, strongly contributing to the depletion of natural resources and climate change (LIMA; JUNIOR; LUNA, 2018).

Health units are being invited to discuss issues, mainly related to climate change and resource scarcity. In light of this, Guenther and Karliner (2011) noted that the health sector has begun to

understand the impact that environmental problems will have on health services and adapting to a new economic model is a necessity that is increasing every day in hospitals and health systems.

In this context, the question of this research is to discuss how environmental sustainability can be integrated as a management strategy in the hospital environment? To answer this question, this study aimed to understand the main environmental sustainability practices adopted by Brazilian hospitals, aiming to minimize the environmental impacts caused by their activities. Based on the premise that sustainability can be adopted in various sectors of products and services, and that the health field has the potential to act and promote sustainability and environmental health through the implementation of sustainable operations. Because it is a perspective that can contribute to economic gain, environmental conservation and social well-being.

With this in mind, this study is justified with the purpose of analyzing environmental issues and the connection of their effects with human health, in this sense the challenge of the hospital sector presents a double responsibility in the context of sustainable development, to protect and promote health while acting to minimize the potential impact on the environment and public health as a result of its operations.

2 THEORETICAL FRAMEWORK

2.1 STRATEGY

The strategy is characterized by change, in this sense Pereira et all (2014) complement that the strategy is a dynamic and adjustable process, as the implementation happens, the points that need to be rethought are detected and the actions that should be carried out are established.

According to Tureta and Lima (2011), strategizing is a consequence of relationships that change all the time, of the interpretation of strategic practices by each practitioner, as well as the different external demands. Therefore, they affirm that strategies need to be recreated continuously to adjust their own interests with collectives.

Therefore, there are several definitions of strategy addressed by different authors. In 1960, the concept of strategy spread in the business environment with the idea associated with the concept of planning. According to Chandler (1962, p.13 Apud Oliveira et all, 2010) "strategy is the determination of basic and long-term goals and objectives of a company; and the adoption of actions and allocation of resources necessary to achieve these objectives", this concept refers to the idea of what the organization intends to be.

For Porter (1991), strategy is to create an exclusive and valuable position, involving a different set of activities. The strategy is concerned with long-term goals and the means to achieve them, which affect the system as a whole. This characteristic defines strategy as the element that connects long-term objectives to goals and actions, within a systemic process that involves the entire organization,

establishing in turn a link with the resources necessary for its implementation, whether monetary, human or capital.

From this perspective, Oliveira (2004) understands strategy as a path, or way, or action formulated and adequate to achieve, preferably, in a differentiated way, the challenges and objectives established, in the best positioning of the company in its environment. Therefore, for the author, strategy is related to the connection of the company and its environment. And, in this situation, the company seeks to define and operationalize strategies that maximize the results of the established interaction.

At the end of the 1980s, organizations were concerned about how to articulate resources in order to achieve the proposed objectives in a sustainable way. Thus, the conception of strategy was seen as the set of coherent, unifying, and integrative decisions that determine and reveal the will of the organization in terms of long-term objectives, action programs, and priorities in resource management (HAX; MAJLUF, 1988, APUD GUEDES ET AL, 2016).

The understanding of strategies and how they are formed is of paramount importance within an organizational environment, as well as understanding the relationships between the plans and practices that constitute the day-to-day, whether it is a large organization or a micro-enterprise, both need this knowledge to obtain benefits, including achieving and sustaining a competitive advantage. The strategic positioning of each company results from the choice of objectives and the means by which they intend to achieve them (RIBEIRO, 2011).

Over the years, many authors have presented various definitions of strategy and its use in various contexts of society. Thus, new ideas constantly arise in this regard, as strategy is not about something finished or fixed, but broad and that can have several definitions Strategy evolves and changes over time, as managers make significant decisions for their future, shedding new light on the strategic horizon of the organization. In this study, the strategy approach consists not only of a position chosen by organizations, but of a particular way of perceiving and understanding the world in a sustainable way.

2.2 SUSTAINABILITY

In the face of the technological and structural transformation that the planet has undergone in its last decades, it is impossible not to focus our attention on one of the biggest problems that all this progress has resulted in: the environmental issue. Reconciling development with the preservation of the environment has become one of the most important and challenging goals of humanity.

Analyzing this conjuncture, Almeida (2002) comments that the care for the environment stands out in such a way that the study, deepening and applicability of the so-called sustainability become

essential for the reduction and, if possible, reversal of all the destruction caused by the action of humanity on Earth, with emphasis on climate change.

The term "sustainability" used today appeared in 1972, in Stockholm, at the first major global step in the field of sustainable development, the United Nations Conference on the Human Environment, and consists of finding ways to produce, distribute and consume with greater efficiency and ecological viability

In 1987, the Bruntland Report was published, which contained a document called "Our Common Future" that defined sustainable development as "that which meets the needs of the present generation without compromising the possibility of meeting the needs of future generations" (BARBIERI and SILVA 2011).

Sachs (2008) reinforces this concept, advocating that conciliation between economic growth, preservation of the environment and social justice always seeks balance, requiring an intergenerational responsibility. Corroborating Lobo (2009) states that sustainability is based on three pillars: social, environmental and economic. As for the social aspect, it has as its reference the development of the human being, that is, offering a better quality of life to the population, guaranteeing the enjoyment of human rights for all. From an environmental point of view, it refers to the rationalization of natural resources, preservation of natural ecosystems, and minimization of the volume of waste generated. Regarding the economic aspect, it is defined by economic growth in a constant and sustained way.

According to Malhadas (2001), a sustainable economy can continue to develop, but with some adaptations arising from advances in technical and scientific knowledge of organizational systems and the efficiency of their processes.

Sustainability has been occupying more and more space in the management of organizations and is characterized as an essential element for decision-making by managers and stakeholders regarding the future and success of their businesses. Over the last three decades, debates on Sustainable Development (SD) and corporate sustainability have intensified in various segments of organized civil society (BARBIERI, 2017; BRAZILIAN BUSINESS COUNCIL FOR SUSTAINABLE DEVELOPMENT, 2020)

The challenge of sustainable development is complex and the commitment to corporate sustainability requires a strategic approach and organizational involvement to be effectively integrated into management processes. Different approaches and proposals for models of integrating sustainability into business strategy have been developed; In general, the different models highlight the relevance of adopting a process of cultural change, considering that sustainability is transversal. Thus, sustainability can contribute to new opportunities for the organization, innovative environment

and offer a competitive advantage in the respective markets in which it operates; (PORTER; KRAMER, 2011).

3 METHODOLOGY

In order to understand how sustainability can permeate as a management strategy of a hospital unit, the research procedure adopted involves a qualitative approach through an exploratory and descriptive study.

Thus, this research is characterized as bibliographic research, since a survey of sources that deal with a subject published in the literature was carried out, having as materials analyzed books and scientific articles, dissertations and theses that served as a conceptual reference in order to generate a theoretical foundation that enabled the structuring of the study on sustainable development, sustainability and strategy.

The stage that covered the collection and analysis of secondary data was used from various sources such as articles published in journals and events, reports and information from governmental and non-governmental websites that address the theme focused on the health area from the perspective of hospital environmental sustainability in the adoption of policies, practices and experiences of environmental management that can be used in hospital units such as Hospital architecture creating spaces with sustainable environments, energy and water efficiency, solid waste management, liquid effluents and reverse logistics, aiming at cost reduction, operational efficiency and minimization of environmental impacts, promoting a better quality in the hospital environment.

4 RESULTS AND DISCUSSION

4.1 THE BRAZILIAN HOSPITAL CONTEXT

Brazil ended 2022 with a total number of 6,384 hospitals, of which 2,651 correspond to public institutions (41.5%), 1,961 to private for-profit institutions (30.8%) and 1,772 to private non-profit institutions (27.7%) that offer 497,557 beds (CNES, 2023 APUD ANAHP, 2023).

Hospitals are organizations that are structured and equipped to care for patients at different levels of complexity. According to Calvo (2002), there are classifications established according to size, specificity, complexity of actions and administrative nature.

Regarding size, hospitals are classified according to the number of existing beds, as follows: a) small – up to 50 beds; b) medium – 51 to 150 beds; c) large – 151 to 500 beds; d) Extra Large – over 500 beds.

Regarding specificity, the hospital can be general or specialized. A specialized hospital is one that is intended for the care of one or more specialties or a specific group of pathologies, such as maternity hospitals, psychiatric hospitals, and orthopedic hospitals. The general hospital treats patients

in all pathologies, including, necessarily, the basic specialties of gynecology and obstetrics, pediatrics, internal medicine and surgery, and may have one or more of the other specialties. The general hospital can serve specific age groups, such as children's hospitals, or only a certain community or category, such as the military hospital. The author also comments that it is desirable for the general hospital to have clinical support services, such as clinical analyses, pathological anatomy, radiology, anesthesia, blood bank, electrocardiogram, electroencephalogram and radiotherapy.

The classification of health actions as low, medium and high complexity is related to the procedures, technologies and specialization of the hospital's human resources. As for the administrative nature, hospitals are classified as public or private. The public ones are maintained exclusively by the State, at any level of Government (federal, state or municipal) and the private ones are maintained by resources from the payments made by their clients directly or through other provider sources, such as insurance companies, cooperatives or philanthropic institutions. Generally, private hospitals make contracts to make part of their beds available to the National Health System (CALVO, 2002).

Thus, hospitals are establishments with intense routines and demands, operating 24 hours a day, 365 days a year, with high water and energy consumption and with activities of great potential for waste generation. It is for this reason that actions aimed at hospital sustainability have become more common and present in hospitals in Brazil, recognizing the connection between human health and the environment and promoting strategic actions to meet hospital, environmental and economic needs.

4.2 SUSTAINABLE PRACTICES IN THE HOSPITAL ENVIRONMENT

Most of the diseases and health vulnerabilities that exist globally result from the conditions in which people are born, live, work and age, and the factors that influence, affect and/or determine the health of the population are internationally known as "social determinants of health", an expression that consolidates the various social, economic, political, cultural and environmental determinants of health (CARVALHO, 2013).

Faced with the challenges of responding to the health impacts due to climate change and also contributing to the reduction of greenhouse gas emissions, hospitals must seek sustainable alternatives that can minimize environmental aggressions. Therefore, the need for strategies to reduce the impact of the health sector on the environment is imperative.

Managers cannot ignore the environmental issue, as the issue is currently of substantial importance, either because of the stricter laws that contribute to a more effective Environmental Management, or because of the popular awareness in the sense of preserving the environment. This new and growing culture, enhanced by globalization, reinforces the fact that environmental management is an important factor for the success of management in the organization, aiming not only at the environmental issue, but also at sustainability (MAGRINI, 2001).

Hospital sustainability is the implementation of a culture and a policy aimed at sustainable development, especially environmental sustainability, within hospitals. In this context, this study will address some examples of sustainability practices most commonly used in hospitals.

Guenther and Karliner (2011) stated that hospitals have great potential to promote sustainability and environmental health through healthier investments in their buildings, as well as the implementation of sustainable operations. The hospital architectural space has been gaining a new approach in the context of more sustainable hospitals, which seek a more efficient interaction between the building and the hospital environment.

For Ribeiro (2010), architecture plays an important role in order to minimize the environmental impact of a hospital unit, when designing it sustainably, the architecture of a hospital building means creating spaces that are environmentally healthy, economically viable and sensitive to social needs.

Thus, according to Bittencourt (2006), a sustainable project in the health environment must contain some components such as: -functional exclusivity; b - lighting and natural conditions; c - functional simplicity of the project; and - provision for replacement of parts; d - maximum durability; e - healthy or environmentally friendly building materials; f - quality of construction; g - optimization of the life and end of life of products; h - access to renewable energy sources.

The design of a hospital environment, as stated by Sampaio (2006), because it is directly linked to men's health, more than that of any other environment, requires a series of concerns with the satisfaction, comfort, quality and well-being of the medical team, the patient, the employees, and the efficiency and maintenance of a healthy environment. Have flexible spaces so that they can meet the technological needs of medicine, accommodating sophisticated equipment that is constantly redesigned and modernized; have adequate lighting, tolerable noise, functionalities of the spaces, thus allowing a prompt recovery, tranquility and safety of the patient and their companion.

An architectural design for a sustainable hospital should mobilize resources for a lower environmental impact. In addition to considering environmental comfort, it is important to plan well the best conditions for the use of energy and water, avoiding waste and saving natural resources as much as possible (RIBEIRO, 2010; SAMPAIO, 2006).

Thus, hospital buildings built to promote health and life and designed to support and treat human beings should be the first to commit to efficiency, sustainability, humanization and the well-being of users (ABDH, 2016). Therefore, a sustainable hospital must be planned to be a construction with a focus on social, environmental, and economic sustainability. Therefore, it is necessary to reduce the impacts generated by the works and, consequently, reduce operating costs. Space should be built to use less energy, water, and resources. In addition, you should only use products with low pollution emissions and small environmental impact.

As a business unit, a hospital has a very specific dynamic: uninterrupted operation; intense circulation of patients, family members and employees, therefore, it is necessary to demand facilities capable of maintaining such a physical structure. This also allows us to emphasize that hospital operations also involve the acquisition of materials that meet safety standards, which prioritize quality. In addition, for the operation of the hospital function, it is of fundamental importance to consider as a priority the acquisition of equipment and materials that have the identification of recyclability, energy economy and reusability (BITENCOURT, 2006).

Hospitals, because they have this continuous characteristic of operation, are responsible for a large consumption of energy, water, materials and are large generators of solid waste and liquid effluents and, therefore, have a great potential for negative impact on the environment, strongly contributing to the depletion of natural resources and climate change (LIMA; JUNIOR; LUNA, 2018)

Thus, they are major consumers of energy, according to Bittencourt (2006) because they operate intensively 24 hours a day; high number of people in circulation; different work centers with different energy demands; magnitude of installations; Due to the need to have strategic systems for the reserve of equipment for energy supply, as it has several sectors that cannot do without energy supply at any time, the most complex health units are required, as a rule, to have generators, batteries and safe supply conditions.

Therefore, adopting sustainable actions with the adoption of alternative generation systems, such as solar and wind, with a focus on making consumption more efficient at different scales and units to reduce costs associated with the promotion of sustainability, is becoming increasingly important and necessary in environmental management strategies.

Regarding energy savings, the use of natural means of heating and ventilation should also be sought. Due to the importance of the energy expenditure of temperature, ventilation and humidity control equipment, any change in these variables represents great savings. Architectural solutions, such as good orientation of the building, brises, special glazing, green roof, ventilated facades, thermal insulation in walls and ceilings, can be decisive in relation to maintenance costs and the social contribution to efforts to reduce CO2 emissions. (CARVALHO, 2017)

Therefore, in order for a hospital to achieve sustainability within its structure, it is necessary to implement actions and technologies that assist in the effectiveness and energy efficiency of the processes to be generated (WOOD *et al.*, 2016, APUD MARTINS 2021). In view of this, the practices that can be employed to reduce and efficient energy consumption in addition to the use of natural lighting and ventilation. The use of special glazing and thermal insulation, for example, contribute to thermal comfort and reduce the need to use air conditioning.

Programs for the implementation of renewable clean energy sources, more and more hospitals and clinics are adhering to their own energy generation through photovoltaic systems, aiming to reduce

costs and be less susceptible to increases in the electricity tariff, other actions such as 100% LED lighting; the use of presence sensors for automatic lighting of lamps is also a good practice, which helps to reduce costs, in addition to the implementation of these measures, the constant measurement and monitoring of hospital loads is an important practice to ensure that the gains achieved are maintained and that new potentials for reducing consumption are identified (CARVALHO, 2017).

These practices must be accompanied by employee awareness campaigns on conscious consumption, avoiding waste and promoting sustainability through energy efficiency, to achieve increasing levels of energy performance, in order to reduce the environmental and economic impact associated with excessive energy use.

The high consumption of water in health facilities, as observed by Carvalho (2017), imposes that its treatment for reuse, the various forms of savings, and the use of rainwater be considered essential. The treatment of liquid effluents, especially those from laboratories, laundries and patient care, is a necessary measure to reduce the environmental impact.

Some health units, such as hemodialysis and laboratories, require additional water treatment before consumption, which can be extended to the entire building, depending on the source of supply. Your reservoirs must have frequent quality control, guaranteed by laboratory tests. The quantity and volume of drinking water reserve chambers should allow for continuous supply, even at times when maintenance, cleaning, disinfection and quality control are carried out. (CARVALHO, 2017)

Thus, the efficient and sustainable management of their water resources makes hospitals use water in a way that generates the least waste and expense possible. There are some efficient ways to reduce water bill costs and waste, increasing water sustainability and security in hospitals. They range fromleak detection systems to different forms of water resource capture, water and effluent treatment, in integrated and self-sufficient systems (NEOWATER, 2023).

Have rainwater harvesting and harvesting systems as an alternative for non-potable purposes for processes without portability requirement in hospitals, such as sanitary flushing, cleaning of external areas, water fountains and mirrors, irrigation of plants and gardens, heating and cooling systems, fleet washing, firefighting and much more. *Rainwater reuse is a sustainable practice that avoids waste and can lead to great savings on water bills.* There is also the use of **technological devices to avoid waste**, such as pressure reducers and timers that reduce water consumption in taps and showers (NEOWATER, 2022).

Therefore, developing water sustainability projects are practices aimed at ensuring access to water in adequate quantity and quality for the maintenance of hospitals, and it is also possible to reduce waste and generate awareness of responsible consumption.

Hospitals are major generators of solid waste and liquid effluents and the potential impact is not limited to the amount generated, but also to the type of waste produced, requiring special attention to the process of collecting and disposing of them (LIMA; JUNIOR; LUNA, 2018).

A hospital, despite not developing its work through industrial operational processes, has activities of high environmental impact through the generation of Health Services Waste (HCW), there is an evident concern about the treatment given to surplus waste from hospital activities, as these are substances that can bring contamination and harm the quality of the environment. (PIZZORNO, ET ALL, 2013)

According to Ferreira (1995), hospital waste is composed of common waste (paper, food scraps from cafeterias and kitchens, etc.), infectious or biohazard waste (blood, gauze, bandages, needles, etc.) and special waste (chemical, pharmaceutical and radioactive). Poor management of medical waste can pose a health risk, as well as environmental impacts depending on the destination of this waste. Many different actions can be taken to improve waste management, such as recycling or reusing waste materials with economic value, effluent treatment, and proper disposal of non-recyclable medical waste.

Therefore, according to West, Woolridge and Ibarrola (2020) Apud Azevedo (2020), the main reasons to optimize health waste management are:

> Legal compliance: which provides guidance on the correct segregation, storage, transportation and disposal; here in Brazil, it is guided by Law No. 12,305 of 08/02/10, which deals with the National Solid Waste Policy (PNRS) and several other regulations, with emphasis on RDC 222 of 03/28/18 of ANVISA, which provides for responsibilities for health waste management; Environmental impact: medical waste can be harmful to the environment and its treatment may involve intensive use of energy (such as autoclaving) or promote air, soil or water pollution, through GHG emissions, such as carbon dioxide and methane from the incineration process; Financial cost: the costs associated with medical waste can be five times higher than that of other non-hazardous waste; thus, good practices in waste management can contribute to the reduction of expenses; Health and safety: Correct waste handling reduces the risk of exposure and injury and the spread of contaminating microorganisms into the environment. (WEST, WOOLRIDGE AND IBARROLA, 2020, APUD AZEVEDO 2020, p.104-105)

Among the various waste management initiatives aimed at hospital environmental sustainability are: the proper management and disposal of hospital waste, which needs extra care, the risk of possible contamination with mercury, lead or copper must be excluded, so Correct disposal of materialssuch as medicines Defeated perfurocutting material, fluorescent lamps; batteries; Radiological examinations on film, which have a series of chemical components that are harmful to health and the environment, such as methanol, plastic, ammonia, silver and bromine. As an alternative, hospitals can acquire a system for digitizing imaging exams, which will reduce the repetition of exams and reduce the consumption of film developers and fixatives, products that contain chemical substances in their composition, such as silver. Digital radiology can reduce costs, increase productivity, and even reduce medical errors (ENVIRONMENTAL ETHICS, 2023).

Infectious waste must also be disposed of correctly, as it is the one that has the possibility of being contaminated with biological agents, such as blood-stained materials, sharp objects, surgical waste, human or body parts, blood and body fluids, among others. When not segregated and properly disposed of, such waste leads to a greater risk of infection or injury to health professionals involved in care and to patients in general, in addition to higher costs. Proper segregation at the generation site is essential so that small amounts of hazardous waste do not contaminate common waste (AZEVEDO, 2020).

Another initiative is the sorting of waste in the post-selective collection stage, which allows to improve the separation of recyclables and reduce the waste sent to the landfill; with this initiative, the recycling of various materials, such as paper, plastic, glass, metal, textile waste, etc., improves and improves the recycling rate in the non-hazardous waste group. badges, banners, printed materials, furniture, and other materials and equipment (AZEVEDO, 2020)

Another opportunity for the hospital sector, according to Azevedo (2020), is reverse logistics, in order to return products manufactured from their waste to the institution, seeking the development of partnerships, such as, for example, papers, which are collected in the administrative areas, transformed can be transformed into toilet paper that is used in the hospital's own administrative areas; On the other hand, plastic materials (polypropylene and PET) are transformed into brooms and plastic bags; food scraps for composting that are transformed into fertilizer used in the hospital's own vegetable garden.

In addition, Lima (2022) states that the management of solid health waste will only be appropriate if hazardous waste is properly treated, preferably using alternative methods to incineration, and segregated non-hazardous waste is sent primarily for recycling, with the establishment of practices related to reverse logistics.

In this context, the establishment of a reverse supply chain with partners in the value chain is also an opportunity to identify solutions that collaborate with better operational efficiency and that bring benefits to the whole society from the perspective of the circular economy. It is worth mentioning that Law No. 12,305 of 08/02/2010, which provides for the National Solid Waste Policy (PNRS), provides, among other aspects, for the shared responsibility for the life cycle of products, aiming to provide the best use of solid waste, redirecting it to its production chain or to other production chains, instead of directing it and overloading landfills (PLANALTO, 2010).

There are also hospital effluents, which are characterized as possible vehicles for the dissemination of pathogenic microorganisms, in addition to presenting large concentrations of antibiotics and drugs excreted through the urinary and fecal routes of patients. Thus, when left untreated, they are important contaminants of drinking water sources, both surface and groundwater, and may pose risks to public health if they reach the supply system (VECCHIA et al, 2009).

Therefore, the construction and use of an effluent treatment plant in a hospital unit, so that they are previously treated before being discharged into the public sewage system, preventing possible contamination of the environment, is an option that is necessary in a project that aims at sustainability. (KRAEMER, 2004)

Thus, as a strategy to prevent unnecessary consumption and, consequently, more effective environmental disposal, ANAHP (2022) highlights the recyclable and non-recyclable waste management model that adopts as a premise the methodology of the 5 R's (rethink, refuse, reduce, reuse and recycle). In this context, in addition to better control of the entry of products, and more efficient segregation in the generating units, based on prior knowledge of the volume and characteristics of the waste to be disposed of per unit, helps to ensure conscious consumption and correct disposal. Therefore, it was found that one of the most relevant environmental aspects for the health sector is waste management, which contributes to better operational efficiency and resource management.

4.3 BENEFITS OF ENVIRONMENTAL SUSTAINABILITY IN HOSPITALS

By incorporating sustainability principles into the management strategy, according to Azevedo (2020), hospitals also increase their resilience to the effects of climate change. In addition to numerous benefits such as the reduction of waste and liquid effluents, reduction of energy, paper, water and air conditioning consumption, reduction, reuse and recycling of materials; production of clean and renewable energy; avoids food waste; improved efficiency and quality; promotes the well-being of patients;the preservation of natural resources, the use of more environmentally correct materials and inputs, the reduction of costs and the preservation of human health and the environment (KRAEMER, 2004).

However, for the implementation of sustainable environmental management in hospitals to be successful, the commitment of all employees of the organization is essential, especially its employees, suppliers, doctors, patients, companions, starting at the highest management levels, where the top management establishes the environmental policy and ensures that this system is implemented. Structuring mechanisms of information, awareness and changes in habits for good practices, which reach all audiences belonging to the hospital, with languages aligned with everyone's understanding.

For the consolidation of hospital environmental management as a sustainability strategy, it is important to obtain an agreement with environmental performance evaluation and certifying organizations that establish guidelines and parameters for environmentally sustainable management, executing and evaluating the environmental management system within the institution, defining standards for environmental audits and standards for environmental performance evaluation. It is essential, just as the concept, environmental sustainability, must be worked on in day-to-day actions.

All this results in better economic performance with cost reduction, healthier environments that are more suitable for technological advances as well as in human relations and well-being of patients, in addition to reaffirming its commitment and concern for the environment and society.

5 FINAL THOUGHTS

With this study, it was possible to understand that hospitals are institutions with polluting potential, but with the possibility of reducing their negative impacts through a positive change of culture with actions and practices that aim to make hospitals more sustainable and healthy, connected with the global precepts of sustainable development.

The integration of sustainability issues into management decisions is still a recent topic in the hospital sector. The results showed the strategic importance of creating an Environmental Management System in hospitals, which should be defined in the institution's policy, in its strategic planning, and have the direct involvement of senior management.

Change is necessary, but for it to occur, the sustainability programs implemented must be permanent and constantly evolving, always seeking a balance between usual practices and innovations. The results showed that the adoption of sustainable processes, in addition to stimulating innovation, allows a better quality of services and significant cost reduction, in addition to meeting society's desires.

In the literature review, it was noticed the importance of expanding the precepts of sustainability for the health area and its application in hospital architecture, energy and water efficiency and waste and effluent management, stimulating recycling, reuse, reverse logistics and conscious consumption, which results in better economic performance with cost reduction. healthier environments that are more suitable for technological advances, as well as in human relations and the well-being of patients, in addition to reaffirming its commitment and concern for the environment and society.

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