

The influence of interior architecture in the health space intended for pediatric treatment



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ABSTRACT

This article aims to demonstrate the importance and influence of interior architecture in pediatric hospital treatment, considering that these spaces are usually cold and frightening, being even more impactful for children. Thus, the study seeks to identify the interference of the insertion of the concept of humanization in health spaces intended for children (children aged 0 to 12 years), which contributes to the reduction of traumatic episodes. In this sense, the discussion of humanization becomes essential, mainly due to the search to reduce the anxiety, restlessness and stress caused in the small patients and in all those involved in the process. The objective of this article is to establish a direct relationship between the humanization of

space, through interior architecture, and the health environment, and to present strategies for the inclusion of the concept in pediatric institutions. To achieve the purpose, the research brings together case studies in the following hospitals: Nelson Mandela Children's Hospital (Johannesburg, South Africa), EKH/IF Children's Hospital - Integrated Field (Samut Sakhon, Thailand) and Nemours/Stanley Beaman & Sears Children's Hospital (Orlando, United States), pointing out solutions that prove the insertion of strategic approaches that aim at a humanized space and care. Thus, this work highlights the effect of interior architecture on the psychological and treatment process of the little patient, which directly impacts companions and employees, who form a multidisciplinary team in care. The interior architecture, combined with the humanized health space, provides a welcoming, quiet, and pleasant environment, facilitating and speeding up the care of health professionals, as well as making the experience lighter and more fun for the infant.

Keywords: Hospital architecture, Humanization, Paediatrics.

1 INTRODUCTION

The insertion of the concept of humanization in environments intended for the health treatment of pediatric patients has been highlighted as an essential characteristic in this type of enterprise. It is a niche of interior architecture that plays a fundamental role in contributing to treatment and healing processes, with the inclusion of strategies that seek to promote tranquility and welcoming to patients, companions, and the entire medical team. The relationship between the most diverse alternatives used to achieve "humanizing" is complex, but extremely effective, aimed at re-signifying hospital spaces, usually with cold and frightening characteristics, making welcoming and happy environments emerge, always in search of the state of psychic and emotional well-being of each user of the space.

The role of the architect in the development of a hospital project is to understand functional and methodological constraints, making spaces compatible with a living reality. The hard work is a



consequence of the collective contribution of health professionals with engineers and architects, responsible for the overall planning of the building, bringing together physical, psychological, and social aspects, to promote well-being for the sick and their companions (DE CARVALHO, 2014).

Therefore, hospital environments require architectural projects that promote flexibility, constructive strategies, and alternatives to meet the growing demand of patients and the advancement of technologies. Over the years, it has become evident that the need to develop a more humane architecture, thus creating the concept of humanization inserted in hospital architecture, respecting not only the form and function, but also the target audience, companions, visitors and the health professionals themselves (BITCURTO; COSTA, 2003).

The humanization of hospital care is a comprehensive term used to define a movement in search of valuing the person who uses health services, considering the patient and the professional as an essential part of the process, the former being the main focus of attention (DE MEDEIROS, 2004, p. 28).

Designing environments focused on the area of pediatrics demands the observance of even more particularities. The spaces should be playful, aiming at comfort, and should facilitate the work process developed by health professionals, respecting the individual characteristics and values of each place, as well as effectively contributing to the demystification that the hospital environment is cold and threatening. In addition, the creation of environments promotes well-being, especially in the case of children, who already feel uncomfortable and intimidated because they are outside their family environment and away from people in daily life (RIBEIRO; GOMES; THOFEHRN, 2014).

Analyzing the influence of architecture on the psychological state of the human being, it is inevitable to relate the importance and influence of humanization in the promotion of well-being to users of the child health environment, having as a research direction the parameter of children from 0 to 12 years old, in hospitals that are reference: Nelson Mandela Children's Hospital (Johannesburg, South Africa), EKH/IF Children's Hospital - Integrated Field (Samut Sakhon, Thailand) and Nemours/Stanley Beaman & Sears Children's Hospital (Orlando, United States).

In this way, the way the little patient behaves in the environment will be discussed, and it will also be addressed how the architectural project aimed at humanization seeks to assist and minimize the stress and impacts caused by treatments and hospitalization of children, which are often invasive and traumatic to the patient. In addition, the study brings together approaches and strategies within interior architecture that help the environment become more cheerful, fun, playful and comfortable, transforming into a less frightening, effective, and optimized workspace and treatment.

In summary, the general objective of this work is to prove the importance of interior architecture to achieve the concept of humanization in pediatric hospital spaces. About achieve the general objective, it was sought, based on the specific objectives, to produce a study that seeks to present the



connection between the human being and the environment, identifying the psychological and behavioral influence, based on the interpretation of architectural solutions and guidelines, which help in the ambience and humanization of the child health space.

2 THEORETICAL FRAMEWORK

2.1 CHILD HOSPITALIZATION

According to the definition of De Góes (2006), Pediatrics is the branch of medicine responsible for the treatment of diseases in children, of any aspect.

The hospital environment adapted and designed to serve children is extremely important for the quality of pediatric treatment, which should be focused not only on the disease, but also on the patient's needs (LIMA; ROCK; SCHOCHI, 1999).

In this context, the space intended for the care of this specific public should, in its conception, reduce the emotional impact on children in hospitalization. Thus, a well-prepared medical team is needed, which knows how to deal with the children's universe and is concerned with the emotional and psychological aspects of the child and the family (COLLET et al., 2005).

In small patients, the way of expressing illnesses and feelings is different. Specific care is needed to decipher and understand what the child feels, demonstrates and says. It is relevant to develop strategies to adequately inform them about diseases, treatments, consequences and even about the process of becoming ill. The care should be clear, both for the patient and for the doctor or nurse. Hospitalization is also a relevant point for the child's understanding, because the patient's participation in the treatment is extremely important, and the interactive communication processes (individual process) should be considered to facilitate the treatment, reduce stress on the part of the child and optimize recovery (PEROSA; GABARRA, 2004)

Also according to De Góes (2006), the space with the purpose of treating and curing children, such as a pediatric clinic, should be designed for this specific patient, in order to make him more calm. Although each case is unique, as the proposed pediatric care encompasses children up to twelve years of age, it is advisable to create playful, interactive spaces, with the appropriate furniture on the children's scale, with corners slightly rounded, use of bright colors (avoiding white, which causes irritability), toys and environments that stimulate the imagination, in a way that draws the child's attention.

Another point of extreme importance in the treatment of small patients is the follow-up of the family or guardians. Considered essential for the evolution of the treatment, the presence of family members or people they trust makes the patient calmer and more confident, facilitating and helping in the hospitalization process and in the procedures to be performed. It is important that this health



environment has spaces designed to serve the companions, so that they also feel good in the place (LIMA; ROCK; SCHOCHI, 1999).

In this context, children's hospitalization, combined with interior architecture, has been transforming and creating a new vision on the part of children, family members and health workers throughout the treatment process, prioritizing well-being through humanization and abandoning the common feeling of coldness and insensitivity.

2.2 THE HUMANIZATION OF HOSPITAL ARCHITECTURE

The search for quality in the treatment of physical aspects has become increasingly necessary in health spaces. For this reason, the humanization of environments has become a comprehensive and indispensable theme, as the concept of humanizing is not only related to the reduction of emotional and physiological wear, but also to the promotion of well-being for patients, family members, companions, visitors and employees, thus creating a safe and welcoming space (CAVALCANTI; DUARTE; AZEVEDO, 2007).

Thus, the concept of humanization is extremely important, especially when it comes to the study of child treatment, with the adoption of strategies and architectural solutions developed to help reduce the impact caused during the hospitalization period or procedures in general.

According to Sebben (2020), humanization can be acquired through environmental factors, emphasizing that they are the main elements for a satisfactory and positive result. In this context, it brings as examples environmental comfort (thermal, acoustic, and visual), natural lighting and ventilation, reduction of undesirable olfactory experiences, in addition to the treatment of the shape, texture and nature of the elements, also contemplating the use of alternative therapies.

In the case of pediatric patients, they are in the process of development, and, therefore, the search to promote physical and psychological comfort, with the concept of humanization, is essential for the preparation and emotional support in the treatment process. In this way, "humanizing" can be inserted in the environment in several ways, including in the sensory aspect, through lights, colors, sounds and aromas. Another alternative is "playing", which, in addition to reducing stress, helps the child to express his feelings and discomforts, facilitating the understanding of the adult (doctor, nurse or companion) who is dealing with the situation, as well as of the patient himself, who feels more comfortable (DE OLIVEIRA; MATTIOLI, 2005).

Taking these aspects into account, the importance of humanizing internal spaces is evident, since it has a direct influence on the behavior of individuals, even more so when it comes to children, where this impact becomes even more detailed and significant. Therefore, interior architecture in the health sector is co-responsible for providing a more effective and smooth treatment process.



2.3 ARCHITECTURE IN HEALTHCARE

The concern and care with the hospital environment arose from the need to create the idea of shelter and care for people who seek medical services. In this way, architecture is intrinsic in health spaces long before medicine (LEITE; SOETHE, 2015).

The architect has the fundamental role of bringing together, in a single project, the broad program of needs, desires and shortcomings of a large medical team, in addition to following the current regulations, studying the target audience and creating spaces that assist in the hospital process. Considering that hospitals and clinics are enterprises in constant evolution and continuous work, professionals need to make the daily lives of all users functional and effective (HOREVICZ; DE CUNTO, 2007).

Therefore, architecture, associated with the concept of humanization, has as its premise the elaboration of projects that contemplate not only beauty, form and function, but that combine constructive aspects to the healing process of patients and promotion of well-being to users. In this way, it is the responsibility of the architecture professional to promote the humanization of spaces through environments that favor the work of interdisciplinary teams. It is also up to the architect to adapt the site for the implementation of the health complex, avoiding construction in spaces that make future ones impossible expansions, in addition to gathering and elaborating a unique program of needs, having knowledge of each area of activity, as well as its furniture, equipment and necessary infrastructure, thus adapting flows, organizational charts and functional physical program. Also, the architect must be aware of the constant evolution of technology that directly impacts the already built environments, and it is up to the project to contemplate solutions and guidelines that allow possible and necessary expansions (TOLEDO, 2005).

In the case of the pediatric public, this project should cover, in addition to the basic and necessary requirements of a health enterprise, the search for strategies that assist in the treatment process of patients, making the experience lighter and with better results (HOREVICZ; DE CUNTO, 2007).

By virtue of what has been mentioned, it is concluded that hospital interior architecture results in the design of more efficient spaces, with better physical use, facilitating the daily life of health professionals, as well as ensuring ergonomics of environments, furniture and equipment, in order to create places that provide healing and flexibility. In this way, the inclusion of architectural strategies to the space results in a more humane, calm and welcoming service and treatment process.

2.4 HUMANIZED HEALTH ARCHITECTURE

The integration of the interior environment with the exterior is one of the strategies that help in the humanization of the space, as it promotes benefits to users, ensuring sensory stimuli that make the



"being" more peaceful and pleasant, because nature provides calm, encouragement to imagination and creativity, regulates serotonin levels, promotes a feeling of happiness and well-being, among other benefits. In addition, this integration adopted in the elaboration of the projects leaves the environments with greater ventilation and natural lighting, making this strategy effective, contributing to the healing process of the little patients and comfort to the companions and health professionals (VASCONCELOS, 2004).

Playfulness is also part of humanization strategies. At this point, the toy library has essential relevance in making the space more pleasurable, being a support for games, fun and relaxation moments, involving the patient and also all those who are present in the treatment process. In addition, to achieve this strategy in the entire age group, it is necessary to provide activities and stimuli for all ages, with workshops, educational games, interactive spaces, technology, painting spaces, drawing, reading, among other activities responsible for setting the mood and making the patient's stay more joyful, in addition to promoting welcoming and balance in their physical, psychological, and emotional states (SILVA et al., 2020).

Psychoneuroimmunology is also an important factor for the excellence of the concept of humanization, as it is the science and art of idealizing environments that help in the containment of diseases, promotion of healing and well-being. This approach is based on the sensory stimuli already indicated above, optimizing the relationship between the human being and the environment, which should be inserted in the architectural proposal of hospital environments (HOREVICZ; DE CUNTO, 2007).

Colors and lights are essential elements and closely linked to the concept in question, since they are responsible for promoting sensations and significant results in the treatment processes. Thus, it is necessary to study the colors and lights in the most varied environments that constitute a health unit, together with the proposal of furniture and equipment, in order to create scenes, facilitating and assisting the most diverse types of treatments, at different times and situations. Sound, aroma, shape and texture are also present in humanization, ensuring the concern with external and internal noises, the sense of smell that reaches the fastest connection with the brain, the shape of the physical space with the adhesion of more intimate and functional elements, and the textures, present in all the materials used to compose the environments (HOREVICZ; DE CUNTO, 2007).

These are some examples and strategies responsible for making the environment more humanized, and can be adopted from the construction of a new hospital or pediatric clinic, or in renovations, expansions and readjustments. It is extremely important that the architecture professional always seeks knowledge and appreciation of the human being, in order to contribute to the promotion of the well-being of a society and, especially, of patients.



In the case of an environment intended for pediatric treatment, the study and development of the project, both architectural and interior design, is even more detailed, as it is a developing public, often without understanding of the situation, as well as all the companions and those involved in the process.

2.5 CASE STUDIES AND DESIGN REFERENCES

For a better understanding of the strategies included in the concept of humanization, it is necessary to carry out a case study, using hospitals that have adopted the aforementioned approach in its formal and functional conception, making the analysis with the research of the theoretical framework. Thus, based on the research carried out, three hospitals were defined as reference (chart 01), which contemplate varied and effective solutions to achieve the ideal of a humanized health project for the pediatric public: Nelson Mandela Children's Hospital, EKH/IF Children's Hospital - Integrated Field and Nemours/Stanley Beaman & Sears Children's Hospital.

Table 01: Technical Data Sheet

Data	Nelson Mandela Children's Hospital	EKH/IF Children's Hospital	Nemours Children's Hospital
Local	Johannesburg, South Africa	Samut Sakhon, Thailand	Orlando, United States
Architecture Firm	GAPP, John Cooper Architecture, Ruben Reddy Architects, Sheppard Robson	IF (Integrated Field)	Stanley Beaman & Sears; Interior Architects: Perkins + Will
Area	30,000.00m ²	6.000,00m ²	1,920.00m ²
Ability	200 beds	95 beds	127 beds
Year	2016	2019	2012

Source: prepared by the author, 2021.

2.5.1 Nelson Mandela Children's Hospital (Johannesburg, South Africa)

Resulting from a competition where the architects Sheppard Robson, John Cooper Architecture, GAPP and Ruben were the winners, the project sought to associate, from the first strokes, health treatment, children and the external (natural) environment in a single complex, thus creating solutions with state-of-the-art technology and healing quality. Thus, the search for safety, comfort and identification with the space are characterized in the concept of humanization, in addition to being directly linked to the physical environment. Thus, "humanizing" is inserted in the project through playful environments, leisure, connection with nature, concern with the scale and appearance of the furniture and the enterprise with the use of regional materials, different shapes, colors, textures and sizes (figure 1) (PEDROSA, 2018).

In addition, the hospital also includes spaces for academic research, being considered a teaching hospital, as it has a partnership with the University of the Faculty of Medicine of the Witwatersrand, providing a complete and state-of-the-art structure to assist in the education and training of new health professionals in the country (PEDROSA, 2018).



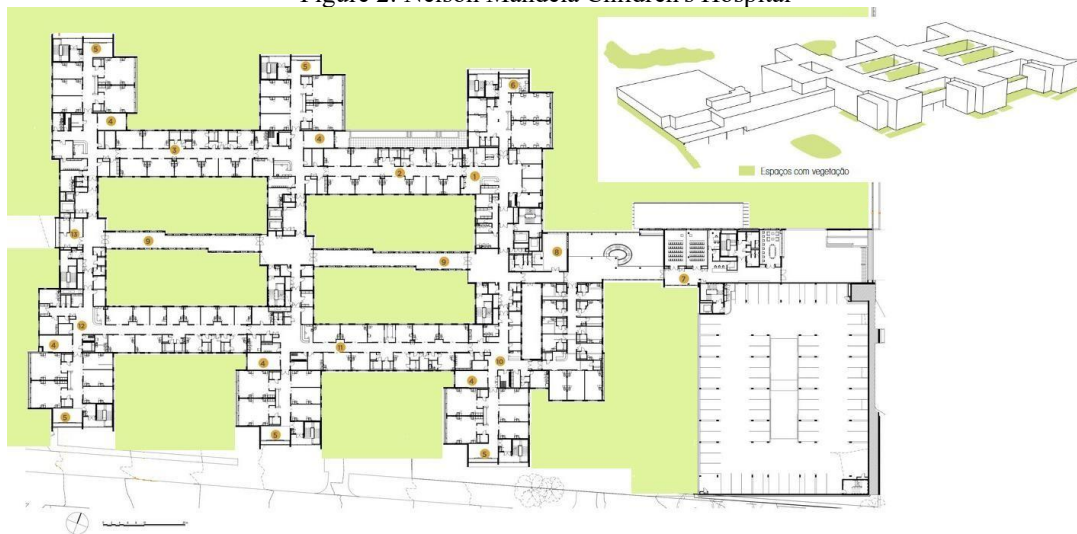
Figure 1: Nelson Mandela Children's Hospital



Font: ARCHDAILY, 2017.

Built in 2018 in Johannesburg, South Africa, the Nelson Mandela Children's Hospital had as a key element the search for an establishment that offered a child health treatment integrated with nature, and this connection with the natural outlined the idea of the entire design of the project. Divided into six wings, the hospital has a high incidence of natural lighting and ventilation, allowing a continuous view of the external and internal landscapes, through gardens and patios created between each wing (figure 2), designed to provide the idea of a natural healing environment (ARCHDAILY, 2017).

Figure 2: Nelson Mandela Children's Hospital



Source: PEDROSA, 2018, edited by the author.

To beautify and offer natural environments for treatment, the indoor and outdoor patios are used for occupational therapy and outdoor play, taking advantage of the proximity to the Parktown Ridge Conservation Area reserve. This resource of connection with the outside is intrinsic in humanization and further emphasizes the importance of being close to nature, assisting in the treatment and resulting in a complex that offers, both inside and outside, contemplation and calm (THESANZALA, 2018).

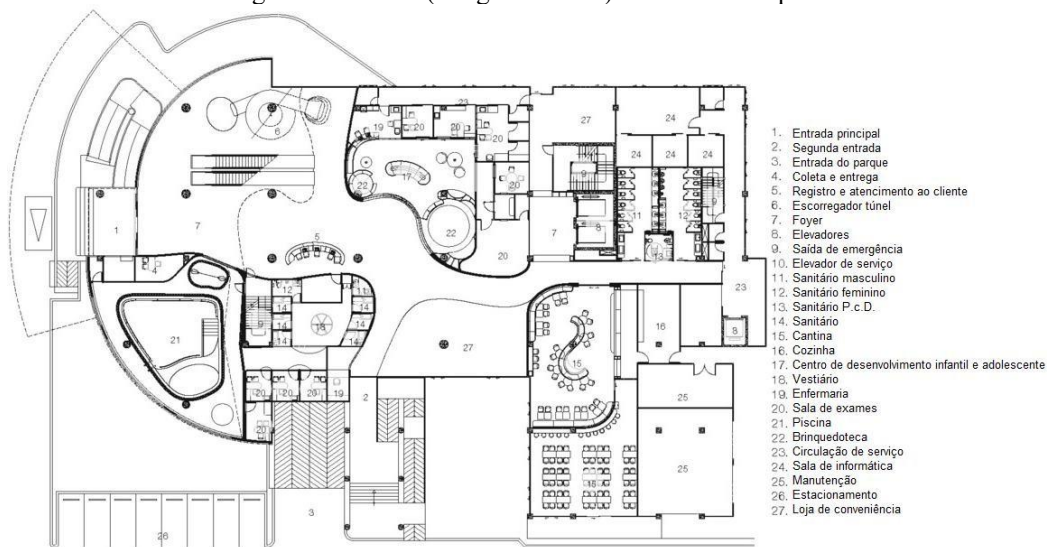


In this context, elements that refer to nature and environments that are integrated are essential to create, in addition to a more pleasant climate, an advanced stage of well-being for patients, ensuring that the treatment is peaceful and effective.

2.5.2 EKH/IF Children's Hospital - Integrated Field (Samut Sakhon, Thailand)

To turn hospitalization into a playful experience, the EKH/IF (Integrated Field) Children's Hospital, located in Thailand, used several interior architecture strategies, which enabled distraction, fun and a different look at the hospital from the little patients. With the concept "playing is healing", a large spiral slide (figure 3 and 4), in yellow, was designed at the reception of the development, right in front of the entrance hall (with a glass façade), allowing a first contact with the idea of attracting the patient's attention, with a decoration that refers to shopping malls or luxury hotels (ARCHDAILY, 2020).

Figure 3: EKH/IF (Integrated Field) Children's Hospital



Source: ARCHDAILY, 2020, edited by the author.

Linking to this idea, waiting rooms are true playgrounds throughout the hospital (figure 4). In addition, the lines of the furniture allow the imagination to fly far, through curves, offering the feeling of freedom and of being purposely sized to match the proportion of the children's body, making the space more inviting and comforting, as well as corresponding to the architectural party called "children's dimension" (ARCHDAILY, 2020).



Figure 4: EKH/IF (Integrated Field) Children's Hospital



Font: ARCHDAILY, 2020.

In addition, the use of indirect lighting in all circulations allows users to feel more at ease, without the discomfort of direct light incidence and excessive glare. Another peculiarity of the project is that all bedrooms have, on top of the bed, a constellation that glows in the dark, ensuring playful, interactive lighting (figure 5) and that during night medications patients do not feel bothered by direct lighting (ARCHELLO, 2020).

Figure 5: EKH/IF Children's Hospital (Integrated Field)



Font: ARCHDAILY, 2020

Recognized for being an attractive and recreational place, the EKH Hospital has its project based on the search for promoting "fun", dimensioning spaces and creating physical shapes, colors and materialized symbols that, from the child's perspective, become delicate and transmit good sensations, allowing the target audience to enjoy and explore the hospital's environments, with the use of their imagination and creativity (ATHAYDE, 2020).



2.5.3 Nemours/Stanley Beaman & Sears Children's Hospital (Orlando, United States)

The Nemours/Stanley Beaman & Sears Children's Hospital in Orlando, United States, has its philosophy linked to reassuring, encouraging and entertaining patients and users of the place. Designed with the collaboration of parents and healthcare professionals, the hospital has strategies that facilitate and support the hospitalization process. The rooms, for example, have beds for two companions, laundry, pantry and sitting. Also, the color of the scenic lighting, present in the windows of the front façade (figure 6), can be chosen by the child himself, creating a colorful façade and allowing control by the patient, who feels more comfortable in making decisions, leaving the environment in his own way and feeling that he is actively participating in the treatment (ARCHDAILY, 2013).

Figure 6: Children's Nemours/Stanley Beaman & Sears



Source: ARCHDAILY, 2013, edited by the author.

The hospital adopts the term "healing environment" to reassure parents and caregivers, as well as to delight the target audience. In addition, the architectural proposal provides a good relationship and solidity to the interdisciplinary and multidisciplinary works, thus ensuring a service of excellence and high level (LEITNER; PINA, 2020).

In addition, the interior architecture project contemplates a simple and modern aesthetic, with colorful furniture and various illustrations arranged on the walls of the hospital. A different alternative proposed was in the entrance hall, where illuminated panels that change color and fun shapes were displayed on the furniture, floors, walls and ceiling (figure 07) (SIQUEIRA, 2015).



Figure 7: Children's Nemours/Stanley Beaman & Sears



Font: ARCHDAILY, 2013.

Thus, the hospital, which is considered a reference within the United States, is known for its differentiated architecture, designed to serve, support and provide small patients with an experience that goes beyond the real health treatment, integrating joyful and fun moments (SIQUEIRA, 2015).

3 METHODOLOGY

The research was carried out through bibliographic analysis in articles, works and enterprises developed and based on the theme in question. The analysis and data collection helped in the selection and support of tools that support the subject, evidencing the need and importance of inserting humanization in the spaces intended for pediatric care, in addition to diagnosing tools and strategies that.

They assist in the promotion and adherence of "humanizing" through interior architecture in health environments for infants.

3.1 TYPOLOGY AND RESEARCH METHODS

The article was developed by mixed methods, responsible for gathering and contextualizing data, providing a greater relationship and approach with the subject in question (DA LUZ, 2018).

In addition, the research was developed from the theoretical, empirical and critical:

3.1.1 Theoretical framework

Encompasses studies already carried out with bibliographic studies and children's hospital projects (Nelson Mandela Children's Hospital, EKH/IF [Integrated Field] Children's Hospital and Nemours/Stanley Beaman & Sears Children's Hospital), relating and pointing out the connection between space and the human being;



3.1.2 Empirical framework

Gathers the collection of information regarding the processes of child hospitalization, linking the importance of humanization to help and improve treatments;

3.1.3 Critical Framework

Combination of diagnoses that contribute to the development and creation of humanized projects focused on the specific public.

3.2 DATA COLLECTION INSTRUMENTS

For the collection of research data, the following techniques were used: bibliographic studies, documentary studies with sources on websites, books, articles, scientific journals, academic papers, institutional documents and case studies.

These instruments helped to bring together different types of approaches within the method system adopted for the research, promoting the varied collection and analysis of data in a single study.

The main result expected from data collection was the identification of the important relationship between the health space (architectural design) and the well-being of the user, especially the children. Thus, based on the case studies, it was possible to gather and diagnose strategies and methods used to minimize the frightening character of child hospitalization, emphasizing the fusion of the critical sense of the little patient, companions and health professionals in relation to the environment, seeking the quality of the treatment desired through humanization and also the inclusion of the responsibility and importance of the specialized professional to develop and project the constant transformation of these environments (ELALI, 1997).

3.3 DATA ANALYSIS TOOLS

In order to gather the elements that promote the discussion of the importance of inserting the concept of humanization in health spaces, the instruments used for data analysis were basically the selection and synthesis of the bibliographic studies previously collected, in order to gather, in a single study, the strategies and ideas published, evidencing the relevance of humanization in children's hospital spaces and the alternatives for the insertion of the concept in concrete cases.

Thus, studies show that, in order to obtain humanized care in the field of pediatrics, according to the research carried out, the promotion of well-being must be translated through strategies that help in the patient's healing process. Thus, with the survey of data collected in the theoretical framework, it was possible to gather the methods for inserting the concept in the pediatric environment and its benefits. In addition, the analysis of case studies in reference hospitals (Nelson Mandela Children's Hospital, EKH/IF [Integrated Field] Children's Hospital, and Nemours/Stanley Beaman & Sears



Children's Hospital) was essential to identify how each strategy was employed in the elaboration of interior architecture, making these hospitals models in humanized child care.

In this context, chart 02, below, demonstrates the strategies mentioned in the theoretical framework of the research, relating them to the hospitals analyzed in the case study, showing which alternative was used in each of them to achieve the concept of "humanizing". It is worth noting that each project has unique characteristics and needs, due to its demand, terrain, location, solar orientation, dimensioning, and several other peculiarities that come from each need program, but, even so, all projects have managed to achieve humanization, with the use of the most diverse possibilities offered by interior architecture.

In view of the data presented, it is possible to affirm that, with the help of an interior architecture professional, health units for the care of children (0 to 12 years old) should offer better care through the basic fulfillment of the concept discussed throughout this study. It is necessary that the work is multidisciplinary and Have as a premise the appreciation of the infant, their needs, and desires. In view of the arguments presented, the strategies can be employed both in a new project, including and exploring different methods for the insertion of the concept, as well as in existing enterprises, gradually, reforming and creating spaces to offer a service of excellence and uniqueness.

Table 2: Data analysis

DATA ANALYSIS FRAMEWORK				
Strategies for humanization	Case studies	Nelson Mandela Children's Hospital	EKH/IF Children's Hospital - Integrated Field	Nemours Children's Hospital/Stanley Beaman & Sears
Theoretical Reference				
Playful, interactive environments with appropriate furniture, concerned with scale and rounded corners, stimulate the imagination, drawing the child's attention.				
Family support, with adequate spaces to serve those responsible, reducing the impact caused during the treatment process				
Environmental comfort (thermal, acoustic and visual) concern with natural lighting and ventilation, shape, texture and nature of the elements, guaranteed sensory stimulation, providing a calmer and more pleasant process.				
Insertion of colors, lights, sounds and aromas, promoting physical and psychological comfort, as well as emotional support				
Interactive and play spaces in order to provide a happier, more welcoming environment and balance in your physical, psychological and emotional states.				

Source: prepared by the author, 2021.



Thus, the study listed the most varied strategies to achieve the concept of humanization, solutions that are already being used in renowned children's hospitals and that have satisfactory results, both in treatment and hospitalization as well as in the physical and emotional behavior of patients and users, allowing the concept of To become a cold, unsafe space, become welcoming, fun, and recreational.

4 RESULTS DISCUSSION

The study gathered and addressed essential elements for the promotion of the concept of humanization in children's hospital spaces, based on bibliographic analyses and case studies referring to hospital projects already created and executed based on the various elements that permeate the theme.

As previously mentioned, the humanization of environments has become a vast and necessary theme, as the concept is directly related to the emotional and psychological aspects of those who frequent the place, seeking to promote well-being (CAVALCANTI; DUARTE; AZEVEDO, 2007).

As shown in Chart 02, the strategies mentioned in the theoretical framework, seeking to achieve the concept of humanization, were widely used in the renowned hospitals analyzed in the case study, ensuring positive results for a child treatment process, with tranquility, acceptance, and safety. Still, by the observance of the verified aspects, it was evident, in the three projects studied, that, due to the effectiveness of the various methods adopted, these health spaces are considered a reference in the treatment of children, because of the daily benefits provided by the interior architecture project, together with high technology and medical staff of excellence.

The results obtained with the study went beyond the definition of the importance that the concept has adhered to over the years. The extreme relevance of the solutions present in interior architecture, applied to health spaces for small patients, was demonstrated, relating the approaches to the benefits promoted through each strategy used, as well as seeking to present proposals that ensure the use of several alternatives, not only aimed at professionals in the field of architecture but also at professionals responsible for health institutions. using them in isolation or not, thus approaching the ideal concept of humanization.

You can't just heal physical pain, you have to heal spiritual pain as well. I think that the health centers we have built prove that it is possible to have a more humane hospital, without giving up functionality. We have come to think of functionality as a broader word: it is functional to create environments in which the patient is at a will, that make possible his psychic cure. Because beauty may not feed the belly, but it feeds the spirit (LIMA, 2004, p.50).

When it comes to children, the concept of humanization becomes essential, ensuring solutions that reduce the stress caused by the treatment process. Therefore, these strategies can be inserted from



the beginning of the project, but also added to existing spaces, allowing all services to be inserted in the concept.

To understand the strategies addressed in the research, case studies were carried out in renowned hospitals of excellence in pediatric care, namely: Nelson Mandela Children's Hospital, EKH/IF Children's Hospital (Integrated Field) and Nemours/Stanley Beaman & Sears Children's Hospital. The surveys contributed to the understanding and perception of the most varied techniques used to offer a highly complex, primacy and humanized care.

The integration of the indoor environment with the outdoor environment, promoting greater lighting and natural ventilation, is the first alternative addressed in the research, allowing nature to provide calm and encouragement, with regulation of serotonin levels, ensuring a feeling of happiness and well-being. The second solution addressed is to transform cold and often frightening spaces into playful environments, with playgrounds and interactive toys, which stimulate creativity and communication, which is most often complex and difficult. Psychoneuroimmunology is also highlighted in the research, as it is one of the pillars of the concept of humanization, responsible for directing the creation of environments that stimulate healing, based on sensory stimuli, ensuring a more intimate and optimized experience. As a last approach, colors, lights, textures and shapes are listed as essential for the excellent execution of the "humanize", facilitating and assisting various types and levels of treatment, and can be inserted in furniture, equipment, walls, among others.

Thus, it was found that humanization in the health space aims to bring the patient closer to the hospital complex, with the exploration of the senses through thermal comfort, shape, scale, colors and textures, providing a space that goes beyond the obvious for its purpose, but a more humane environment, with quality in the care offered by health professionals and greater effectiveness of the results.

What makes these spaces humanized is the fact that they establish a strong and good connection with the user. In the case of hospital environments, this aspect must be even stronger, as the spaces are designed to receive people usually in recovery stage, where the emotional factor greatly influences. Thus, the environment should provide the individual with a sense of well-being and tranquility, which, consequently, will provide him with a sense of security and reliability (CIACO, 2010, p.68).

According to the strategies and solution addressed in the research, it is evident the need to use the concept for the elaboration of hospital architecture projects, especially in the case of pediatric patients, and it is the architect's co-responsibility to offer and create the best solution to make the health space effective and functional.



5 FINAL THOUGHTS

This article aimed to present a synthesis of some studies and published studies that demonstrate the importance of inserting the concept of humanization in hospital environments aimed at the pediatric public (0 to 12 years old).

The influence of physical spaces is one of the pillars for the recovery and treatment of patients in a health facility. Based on this awareness, it is necessary to introduce alternatives that contribute significantly to the physical and psychological benefits of all those involved in the process.

To demystify the cold and frightening nature of the pediatric treatment process, the need to understand the relationship between the psychological state of the human being and the physical environment became evident over the years, with the direct influence of both concepts in promoting the well-being, comfort and safety of patients becoming clear.

In this way, the spaces for healing and treating the sick must be designed for their specific target audience, ensuring that all needs and requirements are met. When it comes to the pediatric public, this space must accommodate, in addition to the small patient, a large medical team and companions, who are extremely important for a more tranquil service.

The adoption of the most different strategies presented – natural ventilation and lighting, integration of internal and external environments, creation of play spaces, furniture and structures sized for children, use of colors, texture and lights that promote well-being, among others – aims to bring comfort, tranquility, and safety to children's hospital environments, allowing the treatment applied to be less traumatic. revealing an experience that combines the restoration of health with more to the detriment of the heavy emotional burden that certain medical interventions place on children.

In this sense, the architect is responsible for connecting, in a functional and formal way, in a single project, the little patients to the hospital environment, who stop seeing the medical space in a terrifying and traumatic way, to become a welcoming, comfortable and good experience environment.

Thus, the research served as a basis for the continuation of the study, which proved to be broad and peculiar, in addition to being an area of interior architecture in constant evolution (hospital architecture). Thus, the article will serve as an instrument for the continuation of the subject in question, both to help in the multidisciplinary child treatment, with emphasis on the physical space, and for the interior architecture of humanization.



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