



Designing for Children

- With focus on 'Play + Learn'

Integrating an Element of Play in Healthcare Environments for Children

Tanvi Singhal, Pearl Academy, Delhi, India, tanvisinghal040@gmail.com
Alok Bhasin, Pearl Academy, Delhi, India, alok.bhasin@pearlacademy.com
Puja Anand, Pearl Academy, Delhi, India, puja.anand@pearlacademy.com

Abstract: The idea of spending time in a hospital as a patient or visitor is stressful and scary for anyone, and more so for children. The aim of this paper is to understand how children's hospitals could be designed to make the hospital experience for children to be less stressful, while striving to make them more pleasant and child-friendly. The paper explores ways to integrate elements and principles of play in children's hospitals to create a playful, cheerful and healing environment where the child will forget his/her pain and will not be scared of hospitalization.

The researchers have studied a few children's hospitals in Delhi and two International children's hospitals online. They have conducted interviews of parents and children and collected data to determine the elements that can be used to strengthen the designs for children's hospital environments. According to the authors, a children's hospital that incorporates Play can lead to a positive mindset in young patients, while aiding and quickening the healing process.

Key words: Children, Healing, Hospital, Play

1. Introduction

Play is very important for children and academic studies have found that play can help a child to deal with stress, and can potentially have protective, therapeutic and healing benefits.

"play is of utmost importance for the subsequent social well-being of the individual and those around him" (Suomi and Harlow 1971: 493).

Healthcare environments that manage to be less daunting for children by way of providing a vibrant and cheerful atmosphere with playfulness can succeed in allaying the fears and help the healing process.

Hospitalization changes a child's entire routine and a hospital stay often causes negative and depressing thoughts in the mind of a child patient. Different children react in different ways with emotions and behaviors ranging from crying or becoming dull and listless, becoming aggressive and rejecting medical ministrations. If the child is hospitalized for a longer time, it affects his growth and development.

As children are one of the most vulnerable and highly sensitive groups in a hospital environment, it is necessary to support these children emotionally and socially. This can be done by creating an environment that allows the children to be children, irrespective of their illness or life-threatening diseases.

According to the Center on the Developing Child at Harvard University, Stress can affect the healthy development of a child, and these stresses induced by hospital visits for treatment could be reduced by providing opportunities for play in a hospital environment. In the normal course of day-to-day life, a child would ideally go through periods of study/learning and play. This would however, change in the case of children requiring medical attention, as their daily routine is disrupted. As the famous proverb says "*All work and no play makes Jack a dull boy*". In the case of hospital environments, medical treatment and hospitalization is akin to Work, and not having opportunities for Play can make Jack a depressed boy. As mentioned by developmental psychologist Brian Sutton-Smith, the entire experience of Play for children is very powerful and if there is no play or lack of play then the result is depression.

The aim of this paper is to understand how children's hospitals could be designed to make the hospital experience for children to be less stressful and disconcerting, while striving to make them more pleasant, playful and child-friendly.

"Childhood fears can cause undue anxiety, distress, and impairment in everyday living. Fears can interfere with children's daily activities. They may prevent children from doing things they enjoy" (Nicastro, Whetsell, 1999).

This paper explores ways to integrate elements and principles of play in children's hospitals to create a healthy, playful, cheerful and healing environment where the child will forget his/her pain and will not be scared of hospitalization.

2. Methodology

This project proposes to explore the importance of play and learning facilities in the hospital environment for children. The first step was to understand how children's hospital functions and to achieve this, live and online case studies for national and international children hospitals were done.

The author has conducted a few live case studies and few international online case studies of children's hospitals to understand how children's hospitals could be designed to

make the hospital experience for children to be less stressful and disconcerting while striving to make them more pleasant and child-friendly.

List of hospitals studied:

- Phoenix Hospital, Delhi, India
- Madhukar Rainbow Children's Hospital & Birth Right By Rainbow Hospitals, Delhi, India
- Evelina Children Hospital, London, UK
- Helen Devos Children Hospital, Grand Rapids USA
- Ann & Robert H. Lurie Children's Hospital, Chicago USA

Apart from case studies, interviews and questionnaires were also conducted focusing on various target groups and stakeholders:

- Children younger than 12 and those older than 12
- Parents of children who have undergone/undergoing medical treatment and hospitalization
- Family members of pediatrics patients
- Doctors, nursing and care-giving staff in pediatrics departments in some hospitals

As part of the surveys and interviews, an exercise was conducted wherein the child patients were given paper and colors, and were asked to draw their interpretations of a hospital as the way they would like it to be. These interpretations can be seen in the sketches given below. Inferences from these sketches became the starting point /basis for the design of the Children's hospital which was taken up as the Final Year project of one of the authors during her course of study.



Figure.1 Interpretation of hospital environment by Children who were interviewed by authors

3. The Importance of Play for Children

Among the other physical and emotional needs of a child, play is one of the most important ones. While playing is a relaxation and fun activity for children, it also helps

develop positive emotions and build relationships. Through play, children learn to express and manage their feelings, and also overcome any upsets and challenges that may occur in their lives.

“Play is a self-healing medium of self-expression that kids can use to work through their new and potentially stressful situation, and some argue that play therapy is just as important for the psyche as physical treatment is for the body” (Noble, 1967; Weller, 1980).

According to The National Association of Health Play Specialists (NAHPS), Play is a way of reducing stress and anxieties that a child may be experiencing, and also helps them in gaining confidence and self-esteem.

3.1. Why is it important to engage children in play and learn during hospitalization?

Play also accelerates recovery and rehabilitation, and incorporating the element of play in hospitals will create environments that can allow children to be less tense and fearful about medical treatment and procedures. Thus, play is a natural mechanism which helps in healing and also resolves psychological challenges through a self-guided and self-healing process.

Some points to be considered in the treatment of children:

- To make the child understand their illness and treatment
- Allow the child to express their feelings and anxieties which are invariably going to crop up during treatment/hospitalization
- Engender trust in the mind of the child towards the hospital staff (doctors, nurses)
- To soothe and allay fears; to correct any false ideas about medical treatments/procedures
- To increase the child's ability to cope up with treatment and encourage speedy recovery
- Using Distraction Therapy can help alleviate the child's anxieties and suffering, and play can be used very effectively for this purpose.

As seen through literature study, children can benefit from play, such benefits being emotional and mental as well as physical. Some benefits of Play are:

- Creating joyfulness and reducing any depressive tendencies.
- Reducing fears and anxieties
- Keeping the children engaged through play activities
- Increases mobility, agility and flexibility
- Improves both Fine and Gross motor Development skills

- Increases emotional flexibility
- Creates a sense of curiosity and wonderment, qualities that enhance a child's brain development and contribute to the Learning process
- Improves verbal and non-verbal skills
- Mitigates emotional and mental stresses
- Increases empathy and encourages qualities like compassion and sharing
- Attention spans are improved
- Induces staying calm and adapt to deal with change
- Heals emotional pain
- Reduces physical stress and allows children to recover faster from injuries/illnesses
- Play contributes to better functioning of physiological systems (digestive, cardiovascular and endocrine etc.)

4. Interior Environment and Children's Health

The healing environment of the hospital is very critical and can have a positive effect on the recovery of young patients. This healing environment also includes the design of the Interior Environment. Quality design and thoughtful planning can address the safety and security concerns of pediatric patients, and help eliminate their fears. These measures result in substantial improvement in the health and recovery of patients. The physical environment of the children's hospital plays an active role during the healing process, and if an element of play is added in the physical environment, it can divert the attention of the patients from physical pain and emotional traumas and anxiety towards fun and learning. According to Filipazzi, "... it is important for all patients, no matter how old they are, but it is particularly important for children, who often fear their stay in hospital may be forever..." (Filippazzi, 2009) .

"...Architecture for children should adapt to the child's needs and scale, it is all about the child's perception of space and the way it can experience it. Spaces made for children should exceed the tiresome experiences of everyday life and consist of motivating factors that can awake the child's imagination and creativity" (Paraskeva, 2009).

By using appropriate design concepts and elements, a welcoming and playful interior environment can be developed where the children find themselves in a comfortable space, do not miss their home and will not end up with the fear of visiting a hospital. The two important factors that need to be kept in mind while designing a Children's hospital are: Firstly, that the design of the space should enable children and their families to maintain psychological balance by providing home-like comforts, opportunities for social interaction, a sense of security, privacy and independence. Secondly, the design should enable play and play-related activities (Pinhao, 2016).

5. Findings from Primary Research

As mentioned above, formal structured interviews were conducted with the hospital staff, nurses, doctors and parents. At the end of this primary research, the findings suggest that a child friendly hospital environment supports continuity of daily life and provide home-like comfortable and playful environment.

The key findings from Primary research:

- Personalization of space came out as one of the important factors to be kept in mind while designing and styling the interiors of the space
- Homelike environment where the child and parents feel comfortable, less stressful and more playful and cheerful environment as play is very important for social welfare and development of a child.
- A view of life outside the hospital came out as a key point. During interviews it was found that preference was given to natural views/spaces and connection with outside world through hospital windows.
- Young patients would be more comfortable with a place that is less explicitly a hospital
- Minimal disruption to the established routines of daily life would be helpful (barring those serious medical cases where this might not be entirely feasible)
- Opportunities for play and entertainment to foster healing and hope
- Ambience to be cheerful, bright and colorful

6. Findings from Secondary Research

The design (both Architecture and Interiors) of a hospital plays an important role as this deeply impacts and affects the young mind and body of children during their treatment /visit to the hospital. Emphasis must be placed on providing a home-like environment and comfort so that the children are at ease and are able to find commonality in hospital to their home environment(Coad and Coad 2008) particularly with activities they engage with when they are at home (Jensen et al 2012)

Focus should be given on the use of materials, finishes, colors and textures and elements of design. How these elements are used and applied becomes an important factor while designing interiors of a hospital. The interiors of a children's hospital have to be designed keeping in mind the psychological, physical, social, emotional etc. needs of young children so as to ensure that the physical environment can have positive effects on the patient.

The design of interiors should have aesthetic variation, provide opportunities for entertainment and engagement, creating spaces that are able to distract the children and try to help them disassociate from their physical pain and stress and at the same time help

them to maintain a positive frame of mind and remain positively engaged throughout their hospital experience.

The patient rooms can be incorporated with features that could make the space interactive for the patient where he/she gets an access to change certain features (colorful graphics, artificial lighting that can be changed by the patient themselves) which can further change the mood and ambience of the space for the child. With the use of technology the walls, ceilings, floors of the spaces in the hospital can be turned from bland and blank walls and to various scenes from Nature, cartoon characters, stories from children's fairytales, Jungle book, Disney themes etc.

Use of technology, digital mediums are the new trends in hospitals for children. Using Art and Art installations in hospitals can be beneficial as these can have an impact on the psychology of patients and also positively affect the healing process.

Using colourful graphics and playful images like cartoons, animals etc. on the various surfaces in the interiors can make children feel welcome and offer them distractions so that they do not dwell upon their situation.

Signages, way finding, the directions and entrances to various departments, wards or public facility etc. should be designed keeping in mind the users of the space.

“What children experience at the front door of a hospital, will color the impression of their entire stay”

The entrance of the hospital should be designed in such a way that it creates a positive and welcoming feeling in a patient and it sets the scene of what is to follow (Lambert et al 2014).

Color is also an important aspect of the healing environment and is an element of visual stimulus. Application of colors as per the children's age can help them feel happy and cheerful in the space.

In a study conducted by Coad and Coad (2008), it was found that the most preferred color scheme was of the mid blue-green type. Single colour preferences tended to blue accent, pastel yellow and pastel orange.

Along with pleasing indoors, Outdoor areas also play an important factor for relieving stress and healing for young patients. Connecting nature in hospitals is another way to provide opportunities for patients to move out in the lap of nature as nature is any ways healing and soothing for the mind and body. Whitehouse et al. (2001), suggested that integration of nature improves mood and hospital satisfaction

7. Children Hospital as designed by Author as Part of the Final Year Project

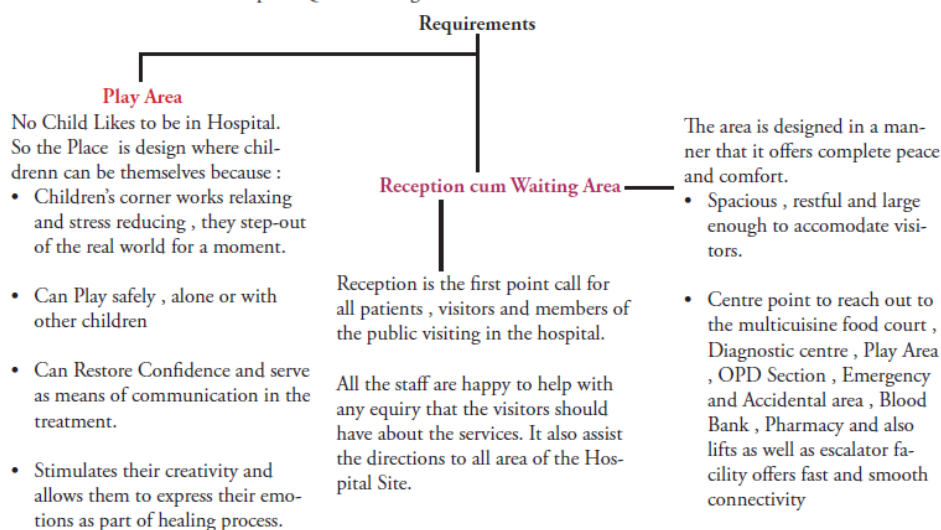
After conducting Primary and Secondary Research and literature study, it was found that very few Children’s Hospitals exist in our country that encourage Play-fullness and have interiors that cheer up and inspire young patients.

With a view to address this gap in the healthcare industry, this student project proposes a design for a children’s hospital that will not only offer world class medical facilities but will also offer an intimate and homely, cozy and playful healing environment both for patients and their family members, thus ensuring quick healing and positive recovery. The Design includes provision for Outdoor healing environments such as a healing garden and activity spaces that will be filled with natural light, are spacious and safe which when considered on the whole will create opportunities to forge improved outdoor/indoor connections for the patients.



Figure.2 Concept for design of a Children Hospital by Author

The Hospital will be based on an underwater/ocean theme to create a soothing atmosphere from the moment a child sets foot inside. The theme will help create an environment that will not only be friendly but also supplement in quick healing.



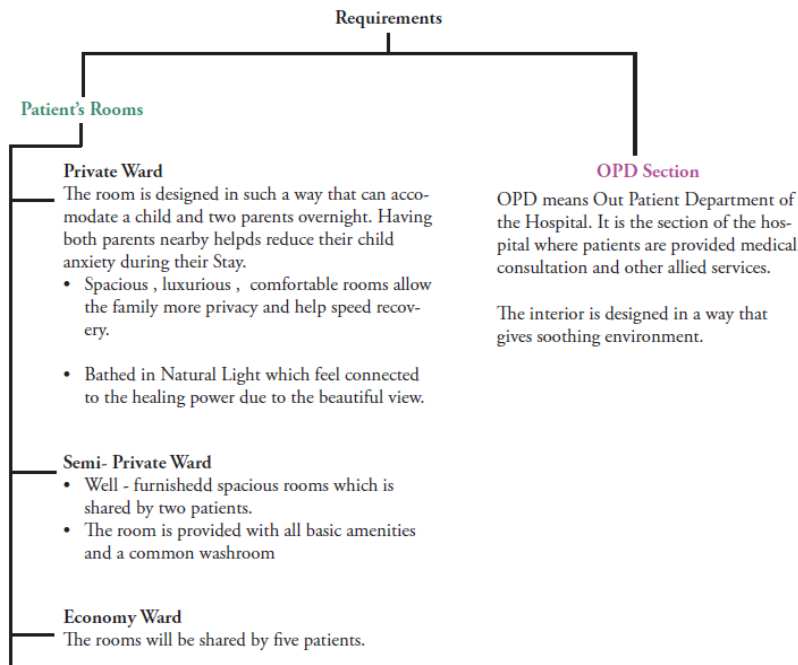


Figure. 3 Requirements for the Children Hospitals as mapped by authors after case studies and Interviews.

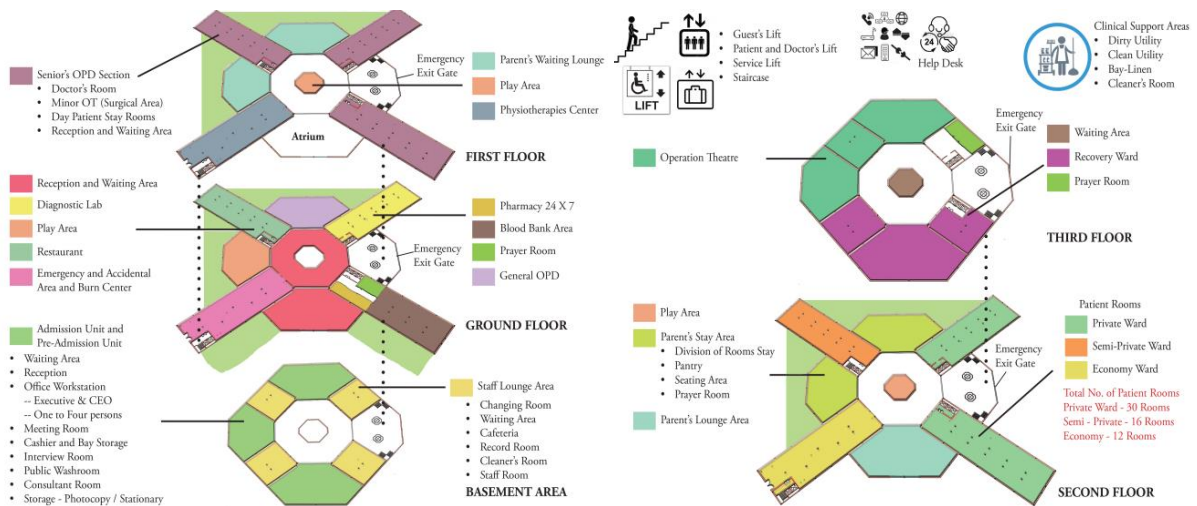


Figure. 4 Zoning for the Children Hospital by Authors



Figure. 5 View of Childrens Hospital from Entrance Porch

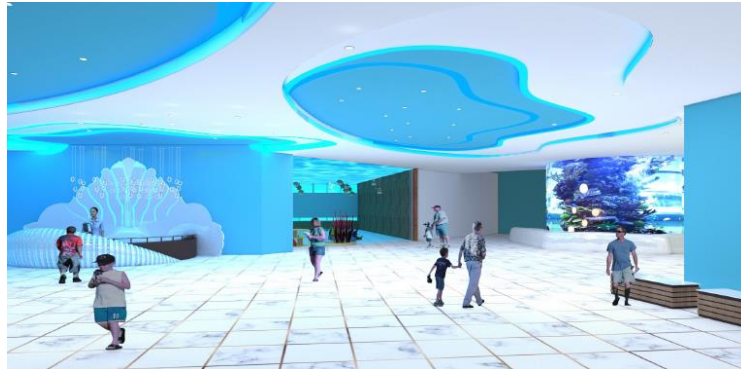


Figure. 6 View of Entrance Lobby and Reception



Figure. 7 View of the Play Area for Children



Figure. 8 View of the Semi Private Ward Room

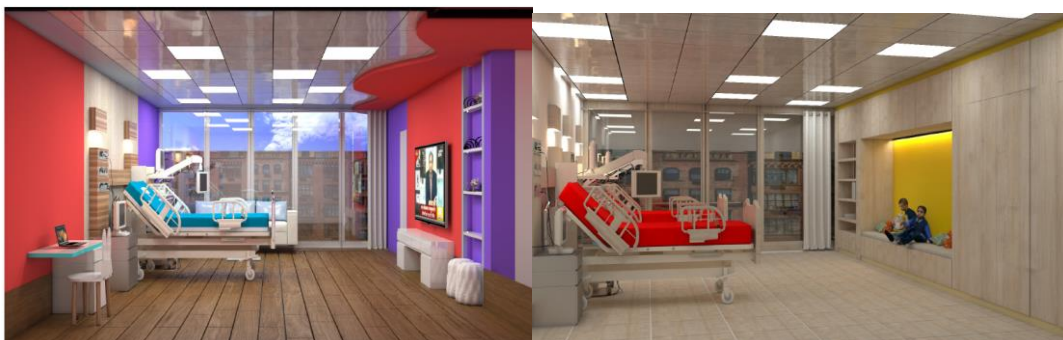


Figure. 9 & 10 Private Ward Room in the Hospital in different color schemes, with outside view to connect with outdoors

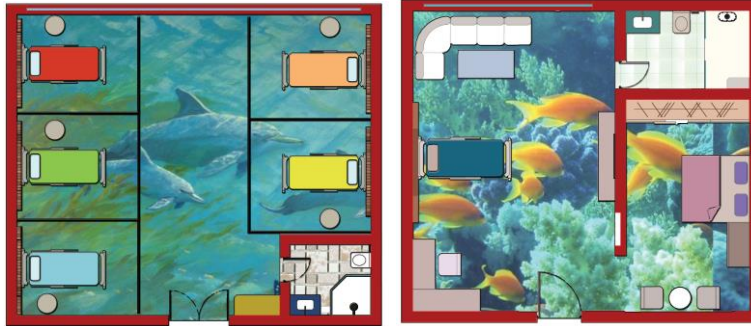


Figure. 11 Flooring pattern inspired by under water theme in the ward



Figure. 12 Playing and Learning



Figure. 13 Playing and Learning



Figure. 14 Playing and Learning



Figure. 15 Different signages for hospital

Conclusion

As healthcare is one of the leading service industries today, with increasing number of children who require medical attention, it makes sense to examine ways to provide better facilities to this segment of the population. A child-friendly, pleasant and welcoming environment may not cure the illness of a child, but using Play as its underlying component can work wonders for the healing process of patients. Being hospitalized brings many stressful and worrying thoughts in the psyche of the children, and this is also disruptive of their regular routines. With playfulness in hospitals, the signal can be sent to the child that nothing major is going to happen to them, and their daily routine is undisturbed. Creating positive and playful experiences in the hospital environment can transform an otherwise stressful and anxiety-ridden stay for children to an entertaining one.

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