

Study of Interior Elements in Women And Children's Hospital on Application of Healing Environment. Case Study: RSIA Grha Bunda

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Abstract. Women's and Children's Hospital is a health facility that serves maternal examination during pregnancy until deliver and provides services for children's health. Hospital should pay attention to aspects of patient psychology and patient needs in the design order that can support the healing process. In addition to the need for facilities that can accommodate all user activities, it also requires an environment that can provide a sense of comfort, safety and reduce stress while can be able to accelerate the healing process. Therefore, this paper aims to review the application of healing environment in women and children's hospitals. This research is a qualitative descriptive study. This study describes, examines theory with existing designs for application to hospital interior. The results of this study can provide theoretical contributions and knowledge in the academic field as well as practical use in the field by the community especially the hospital for interior development.

Key words : Women's and Children's Hospital, Healing Environment.

1. Introduction

Women's and Children's Hospital is a health facility that organises obstetrical and gynaecology specialist medical services and also pediatricians, medical support services, outpatient and inpatient care and installation services. Therefore, the Women and Children's Hospital should pay attention to aspects related to space users by considering the design of the physical environment to support the healing process. Because the environment has an important role in the healing process that is equal to 40%, medical factors by 10%, genetic factors by 20% and other factors by 30%. Based on the large percentage the environment gets a big attention in health facility design and the design concept called Healing Environment (Jones, 2003).

In this study the author will review aspects that have an effect on achieving goals of healing environment, especially interior elements such as the use of colour in space, circulation and lighting.

In this study the author will review the application of healing environment in Women and Children's hospitals in Bandung, which is based on literature aspects that need to be considered in the application of healing environment.

2. Literature Review

The Indonesian Ministry of Health in the Hospital Classification and Regionalization describes women and children's hospital is a hospitals specifically for pregnant women, mothers who want to give birth and child health.

Healing environment is an environment that is designed to provide holistic health facilities where treatment is not only physical but also psychological aspects of the patient with the aim of accelerating patient adaptation so it will provide positive benefits so the patient and family stress level due to the process of medical action can decrease. (Nurmayadi, 2007).

This can be considered because the environment has an important role in the recovery process that is equal to 40%, medical factors by 10%, genetic factors by 20% and other factors by 30%. Because the percentage is quite large, the environment needs great attention in health planning and the design concept is Environmental Healing. (Jones, 2003).

(Murphy, 2008) explains three aspects that need to be discussed in interior design with the concept of environmental healing, there are psychological aspects, natural elements, and senses.

- A. Psychological aspects that can help the patient's recovery process become faster, reduce pain and stress. Patient care is given considering the choices, needs and values that lead to the clinical assessment of the patient. In terms of interior, psychological space users can be determined through the color of the interior elements.
- b. The natural aspect is a tool that is easily accessible and involves the five senses. Nature has restorative effects such as reducing blood pressure, contributing to positive emotional changes, decreasing levels of stress hormones and increasing

positive energy. Natural elements needed in patient care can help relieve stress suffered by patients.

- c. The sensory aspects include sight, hearing, touch, smell and taste. In applying the concept of healing environment aspects of the senses that need high attention is lighting. According to (Huisman et al., 2012) lighting in hospitals can affect the occurrence of errors during the treatment period.

The interior has an important role in creating a conducive healing environment in hospitals specifically for women and children's hospital. To achieve the desired benefits with the concept of healing environment, there are several things need to be considered, including; use of color in interior elements, lighting, natural elements and circulation.

The use of Color in the Interior

In general, the use of color in interior elements has a great influence on the comfort of users of space. Space characters can be created by using certain colors.

Based on the psychological effects caused, the color is divided into two categories, there are the hot color group and the cold color group. The psychological effect of hot colors, such as red, orange and yellow is to give the impression of warm, spirit, pleasing and exciting (Goethe & Eastlake, 2006). Cold colors such as green and blue give a calming, peaceful psychological effect. Green and blue colors are abundant on earth so that it symbolizes natural connotations so that the impression is peaceful, calm, fresh, purity and

positive feelings. While neutral colors such as white give the impression of being clean, open and bright. The black color gives the impression of weight, formal and unpleasant. (Birren, 1961). The following color studies can be applied to spaces directly related to patients:

• The Waiting room

The waiting room is the main room when the patient arrives at the hospital through an outpatient installation. Activities in this room are the patients doing administrative activities and waiting for a call for the next process. In this space the atmosphere created is a friendly, pleasant and warm atmosphere. It aims to reduce the fear of patients and give a feeling of being welcomed.

The color that can give a pleasant, warm and welcome feeling is light brown (Wright, 2008). As for the fun in space can be created by giving a cheerful color as an accent on the interior elements.



figure 1. brown color palette
source : author



figure 2. Accent color palette
source : author

• The Exam room

Activities in this room is that the patient examined by a doctor according to his complaint, then conducts an interview with

the doctor. In this room it is very important to create a calm and relaxed environment, because generally the patient's tension increases during the examination. The colors that should be applied to the examination room are natural colors such as blue, green and light brown. Green and blue colors are abundant on earth so that it symbolizes natural connotations so that the impression is peaceful, calm, fresh, purity and positive feelings (Birren, 1961). While the brown color gives a warm impression to the room.



Figure 3. Color Palette for Exam Room
Source : Author

• Inpatient room

The inpatient room serves as a place for patients to receive medical care and stabilize their physical condition. Therefore this room should provide a calm, relaxed atmosphere but also gives the spirit environment. The color that should be applied in this room is a

figure 4. color palette for exam room
source :

cold color to give the impression of calm and relax to help patients to rest and also warm colors that are used as asked in the room



because warm colors can give the impression of enthusiasm for the users of the room (Wright, 2008).

Lighting

Lighting system are divided into two, there are natural light and artificial light. Natural lighting in buildings can be obtained from windows on the walls or skylights on the ceiling. In (Ulrich et al., 2008) natural lighting can reduce psychological anxiety as well as encourage positive emotions.

While the artificial light in the room can be adjusted to the needs and activities in the room to decrease medication errors . According to (Huisman et al., 2012) lighting is very influential on medication errors in hospitals.

Elemen of Nature

According to (Huisman et al., 2012) patients with a view of nature (trees) had shorter postoperative stays at the hospital compared to patients who do not have a natural view. This proves that the natural scenery has positive benefits to accelerate the patient's healing process. The application of natural elements can also utilize the image of nature, according to (Lankston et al., 2010) visual arts in hospitals can give a positive effect on patients. Visual art that provides benefits is what creates calmness such as a natural landscape, while abstract visual art triggers stress.

Circulation

Circulation the corridor area in hospital interior design, it is necessary to pay attention on activity flow, adaptation of space users, ergonomics and universal design to provide comfort for users to

movement (Cardiah et al., 2019; Firmansyah et al., N.d.).

Circulation in hospitals should be able to accommodate patients, medical staff, and other users to facilitate access between rooms. Things to note from the hospital's technical circulation is easy to reach, communicative, informative, slippery free, free of collisions and comfortable circulation dimensions.

3. Methodology

The method that will be used in this research is a qualitative method with a rationalistic paradigm. According to Muhadjir (1996) in (Yetti, 2017), the rationalistic paradigm emphasizes empirical meaning namely intellectual understanding and logical argumentation abilities that need to be supported with relevant data.

4. Result and Discussion

Based on a literature review, the concept of healing environment can be interpreted as a concept of forming the environment,



Figure 5 & 6. Waiting Room of Administration and Outpatient Installation
figure 8 & 9: windows in the waiting room and corridor
Source : Author



Figure 7. Waiting Room of Child's area
Source : Author

especially in health facilities that combines natural, physical and psychological aspects with the aim of providing positive benefits in the process of patient adaptation. A good adaptation process will have an impact on reducing the level of stress the patient can help the recovery process. To achieve the desired benefits with a healing environment approach, there are a number of things that need attention, including; circulation, lighting, use of color in space and natural elements. This research was conducted at the Women and Child's Hospital of Grha Bunda Bandung with the following results:

a. The use of Color in Interior

Outpatient installation at RSIA Grha Bunda is divided into two areas, there are the mother area and child area. The use of color in these two areas is different. In the mother's area, the colors used tend to be neutral, dominated by black and silver, while the children's area uses a lot of brown, yellow and green.

b. Lighting

Lighting at Grha Bunda RSIA is quite good, because almost all rooms have quite large windows. In the corridor and waiting area there has large windows too facing the garden so that during the day the users can



take advantage of natural lighting.

c. Natural Elements

The form of the RSIA Grha Bunda building has an inner court in the middle of the building, so there is direct access to nature, especially from the 1st floor area. The inner court is used as a source of natural lighting during the day and also as a healing garden.



figure 12 & 13: corridor at inpatient area and outpatient area
figure 10 & 11: Inner Court
Source : Author
source : author

d. Circulation

Circulation at Grha Bunda RSIA has met the standard. In the outpatient area, there are seating facilities on the edge of the corridor, but due to the size of the corridor, the seating facilities do not interfere with circulation. Likewise in the inpatient area.



5. Conclusion

The interior design of the women and children's hospital should produce a comfortable design both physically and psychologically for patients, visitors and medical staff. The concept of healing environment must be able to support the patient's recovery process by reducing stress, increasing comfort and safety so that the patient's adaptation becomes faster.

Based on the results of this study, the application of healing environment in the interiors of Grha Bunda Bandung's mother and child hospital has not been fully in accordance with the theoretical studies discussed earlier. Especially the use of colors in the interior elements of the waiting room, it is recommended to use warm colors and minimize the use of black which gives a formal psychological effect, stiff and unpleasant.

So it can be suggested for interior designers and hospital officials to be able to apply similar methods, but it does not rule out the possibility of applying and reviewing concepts that are appropriate for women and child's hospitals through other methods.

References

- Birren, F. (1961). *Color Psychology and Color Therapy* (New Hyde Park, NY. University Books, Inc.
- Cardiah, T., Firmansyah, R., & Sudarisman, I. (2019). The Application of Standard Anthropometry and Furniture Ergonomics Through Sub-District Office Interiors Design in Dayeuhkolot-Bandung District [The Application of Standard Anthropometry and Furniture Ergonomics Through Sub-District Office Interiors Desig. *Proceeding of Community Development*, 2, 467–476.
- Firmansyah, R., Wulandari, R., Cardiah, T., Syahida, A. N., & Hasanah, N. (n.d.). Analysis of the Application of Universal Design Standards to Interior-Architecture Design. *6th Bandung Creative Movement 2019*, 334–337.
- Goethe, J. W. von, & Eastlake, C. L. (2006). *Theory of colours*. Dover.
- Huisman, E. R. C. M., Morales, E., van Hoof, J., & Kort, H. S. M. (2012). Healing environment: A review of the impact of physical environmental factors on users. *Building and Environment*, 58, 70–80. <https://doi.org/10.1016/j.buildenv.2012.06.016>
- Jones, K. V. L. (2003). *Health and human behaviour*. Oxford University Press.

- Lankston, L., Cusack, P., Fremantle, C., & Isles, C. (2010). Visual art in hospitals: case studies and review of the evidence. *Journal of the Royal Society of Medicine*, 103(12), 490–499.
- Murphy, J. (2008). The Healing Environment. Website: *Www. Arch. Ttu. Edu*.
- Nurmayadi, D. (2007). (*S Tudi K Asus K Ota B Andung*). 1(26), 157–164.
- Ulrich, R. S., Zimring, C., Zhu, X., DuBose, J., Seo, H. B., Choi, Y. S., Quan, X., & Joseph, A. (2008). A review of the research literature on evidence-based healthcare design. *Herd*, 1(3), 61–125.
<https://doi.org/10.1177/193758670800100306>
- Wright, A. (2008). Psychological properties of colours. *Colour Affects*, 16.
- Yetti, A. E. (2017). Kajian konsep healing environment. *Proceeding Health Architecture*, 1(1), 17–20.
<http://mmr.umy.ac.id/artikel/proceeding/>