

ANALYSIS ON THE EFFECT OF COLOR ON PATIENT IN HOSPITAL ROOM (A CASE STUDY AT KALIDERES GENERAL HOSPITAL)

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ABSTRACT

The main factor for recovery process of patients who stay in the patient room not only requires medical assistance but also psychological [1]. The important things that affect patient comfort is psychological color in the patient room. The appropriate color is expected to reduce the patients' stressed. The right color is also expected to reduce the anxiety of patients who are undergoing the healing process, so that healing can be faster and optimal. According to Sadjiman Ebdil Sayoto, color is the nature of light that is emitted or as part of the experience of the sense of sight [2]. The purpose of the design is to speed up the patient's healing and reduce anxiety. This design uses the Rosemary Kilmer design method. The method is carried out by analyzing patient needs and synthesizing the results of solving patient problems [3].

Keywords: Color, healing, patient room

1. PREFACE

Today, the world is being shaken by a great pandemic called Covid-19 (Corona Virus Disease). The lack of patients seeking treatment at the hospital on the one hand makes it difficult for hospital management and employees. [4]. Doctors and health workers are also advised to provide general medical services remotely or online. Apart from the hospital policy itself, this condition is also influenced by the stigma of the community who considers that the hospital is one of the places most vulnerable to the spread of Covid-19.

Seeing these various phenomena, hospitals need to make new innovations in increasing income, one of which is by increasing health facilities for non-Covid-19 patients. In the current situation, the safety of patients who are in the hospital, especially inpatients, is a priority for nurses by keeping the rooms of patients infected with COVID-19 away from other patients and distinguishing nurses who will treat COVID-19 patients from nurses with other diseased patients.

Good hospital visuals can contribute to the patient's healing process and productivity of actors, medical service procedures can be carried out effectively and efficiently, and cleanliness is easily maintained. A beautiful, functional, efficient and clean building gives a positive impression to all hospital users, both in the form of physical responses to certain psychological effects that arise in the mind.

Every room in the hospital will have a strong enough influence on the behavior patterns and attitudes of people who are active in it. Thus, supporting interior design for health care places is increasingly needed in the face of increasingly advanced technology and the current pandemic period. The demands of comfort and safety are the top priority for patients.

The main factor for recovery process of patients who stay in the patient room not only requires medical assistance but also psychological [1]. The important things that affect patient comfort is psychological color in the patient room. The right color will reduce the patients' stressed. The right color is also to reduce the anxiety of patients who are undergoing the healing process, so that healing can be faster and optimal.

The healing process of patients is also intended for lower-middle class hospitals such as type D hospitals. In general, there are many inpatient rooms in type D hospitals that are uncomfortable, so that the function of the room is not optimal for healing patients [5].

Based on the explanation above, the authors solve the problem by choosing the appropriate color to support the patient's healing more optimally and reduce anxiety.

2. RESEARCH METHOD

The method used is qualitative method, according to Moleong qualitative method is descriptive research in the form of words that contain comparisons of theory with data in the field [6]. According to Kilmer the design process can be divided into two stages, namely analysis, at this stage the problem is identified, and researched. and synthesis, at this stage the designer processes the results of the analysis process to produce a design solution which is then applied [3]. The design process used is an 8-step process, namely:

- a) Commit – At this stage the designer submits a survey permit to the management of the Kalideres Hospital to make the Kalideres Hospital the object of the final project design.
- b) State – At this stage, the designer defines the existing problem in the form of an arrangement that is not in accordance with the health protocol.
- c) Collect – At this stage, the designer collects project data as well as literature data to support the design of the Kalideres Hospital.
- d) Analyze – At this stage, the designer analyzes the data and problems collected in the form of a concept map (mind map).
- e) Ideate – at this stage, the designer makes an alternative design to get a final solution in the form of an elaboration of the concept that will be used in the project.
- f) Choose – at this stage, the designer chooses the best alternative design by looking at the chosen concept according to the image of the Kalideres Hospital.
- g) Implement – at this stage, designers channel ideas through 2D drawing (black and white working drawings) and 3D (color presentation images).
- h) Evaluate – at this stage, the designer makes revisions in order to get a more mature final result.

3. RESULT AND DISCUSSION

According to Sadjiman Ebdi Sanyoto, color is the nature of light that is emitted or as part of the experience of the sense of sight [2]. Meanwhile, according to Ali Nugraha, says that color is light that is reflected on objects that are caught by the eye [7].

According to Brewster, colors are grouped into 4, namely [8]:

- a) Primary colors are basic colors, namely blue, red, and yellow. Primary colors cannot be produced by mixing colors with each other.

- b) Secondary Colors are mixing primary colors with other colors. Secondary colors consist of green, purple and orange.
- c) Tertiary colors are secondary colors mixing, or mixing primary colors with secondary colors.
- d) Neutral colors are black and white colors that can be combined with any color.

Color Psychology:

- a) Red is a color that gives the impression of being energetic, passionate, love and cheerful in the room. Red is usually used in the dining room to increase appetite and in the bedroom to give a dramatic impression.
- b) Yellow is a color choice that can add joy, happiness, optimism and energy. Yellow is commonly used in the kitchen, dining room, study or workspace.
- c) Orange is a color choice that can give joy, happiness and warmth. Orange has a striking color so orange is usually used in commercial space.
- d) Green is a color choice that can give the impression of balance, growth, harmony, freshness, fertility and recovery. Green can be used in any space.
- e) Blue is a color choice that can give the impression of comfort, tranquility. This color is commonly used for bedrooms, bathrooms, or home offices.
- f) Pink is a color choice that can give the impression of a soft feminine, and romantic.
- g) Purple is a color choice that can give the impression of luxury, majesty and wisdom. Since antiquity, this color is associated with royal shades.
- h) White is a color choice that can give the impression of being clean, hygienic, and spacious. White color can be used in various room walls and ceilings.
- i) Black is a color choice that can give the impression of strength, mystery, sophistication, and serenity. Black is usually used as a complement in combination with other colors.
- j) Gray is a color choice that can give the impression of strength, security, intelligence, and solidity. This color is used on industrial theme walls.
- k) Brown is a color that gives the impression of warmth, strength and security. Brown belongs to a neutral color so it is suitable for use in any space but in moderation.

In designing the patient room at the patient room at the Kalideres General Hospital, the designer uses colors that can create calm, are not intimidating, have a broad, clean, hygienic and warm impression. Therefore, the colors that designers use in the inpatient room are blue, white, gray and brown and green.

Table 1
The Color Used in The Room

No	Colors	Psychology Effect
1	White	Clean and Hygienic
2	Gray	Safety and Strength
3	Blue	Calm and Comfort
4	Brown	Safety and Warm
5	Green	Refresh and Recovery

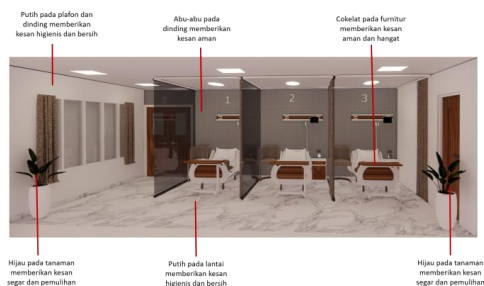
Source: *Friscily, 2021*

Table 2
Element of the Interior

No	Interior Element	Color Effect
1	Wall	White, Gray and Blue
2	Floor	White and Light Brown
3	Plafond	White
4	Furniture	Blue, White and Brown
5	Decoration	Brown on rack wall and Green on plant

Source: Friscily, 2021

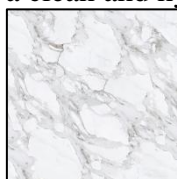
Figure 1
Patient Room Class 1



Source: Friscily, 2021

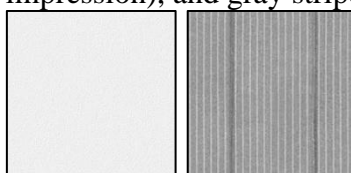
a) Floor

In the first-class patient room, the floor uses white marble measuring 120x120cm, white gives a clean and hygienic impression.



b) Wall

In the 1st class patient room, the walls use white wall paint (gives a clean and hygienic impression), and gray striped wallpaper (gives a safe impression).



c) Plafond

In the first-class patient room, the ceiling uses white gypsum measuring 2400x1200x9mm (gives a clean and hygienic impression).



d) Furniture

In the first-class patient room, the furniture uses HPL with brown wood motives, giving the impression of being safe and warm.

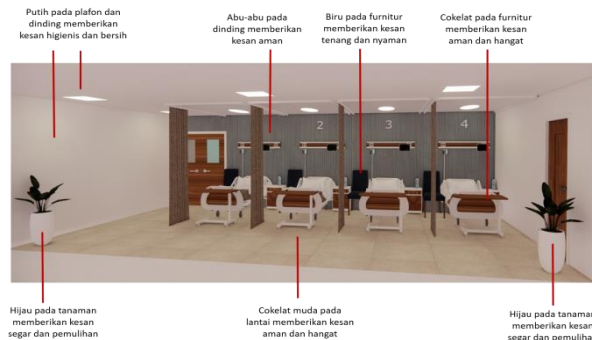


e) Decoration

In the 1st class patient room, the decoration uses HPL with brown wood motives (giving a safe and warm impression) on the wall shelves and green on plants (giving a fresh and restorative impression).



Figure 2
Patient Room Class 2



Source: *Friscily, 2021*

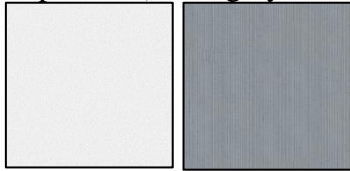
a) Floor

In the 2nd class patient room, the floor uses light brown sandstone measuring 60x60cm, giving the impression of being safe and warm.



b) Wall

In the 2nd class patient room, the walls use white wall paint (gives a clean and hygienic impression), and gray textured motif wallpaper (gives a safe impression).



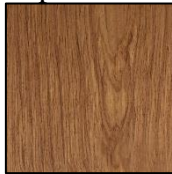
c) Plafond

In the class 2nd patient room, the ceiling uses white gypsum measuring 2400 x 1200 x 9 mm (gives a clean and hygienic impression).



d) Furniture

In the 2nd class patient room, the furniture uses HPL with brown wood motifs, giving the impression of being safe and warm.

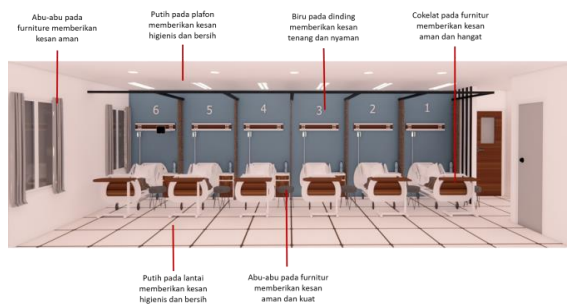


e) Decoration

In the 2nd class patient room, the decoration uses HPL wood motifs in brown (gives a safe and warm impression) on the wall shelves and green on plants (gives a fresh and restorative impression).



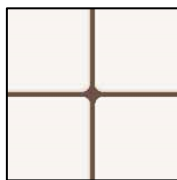
Figure 3
Patient Room Class 3



Source: *Friscily, 2021*

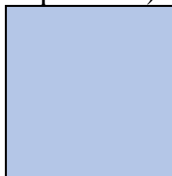
a) Floor

In the 3rd class patient room, the floor uses white composite tile measuring 60x60cm, white gives a clean and hygienic impression.



b) Wall

In the 3rd class patient room, the walls use light blue wall paint (gives a calm and comfortable impression).



c) Plafond

In the 3rd class patient room, the ceiling uses white gypsum measuring 2400x1200x9mm (gives a clean and hygienic impression).



d) Furniture

In the class 3 patient room, the furniture uses HPL with brown wood motifs, giving the impression of being safe and warm.



4. CONCLUSIONS AND RECOMMENDATIONS

The main factor for recovery process of patients who stay in the patient room not only requires medical assistance but also psychological [2].

To solve the existing problems, it is necessary to design an inpatient room with appropriate colors to support optimal patient healing and reduce anxiety.

In designing the patient room at the Kalideres General Hospital, the designer uses colors that can create calm, safety, cleanliness, hygiene and warmth. Therefore, the colors that designers use in the inpatient room are blue, white, gray and brown and green.

The colors used in the design of the Kalideres Hospital inpatient room are:

- a) White is a color choice that can give a clean and hygienic impression to an inpatient room in a hospital. This color is used on walls, ceilings and floors.
- b) Gray is a color choice that can provide security and strength to inpatient rooms in hospitals. This color is used on walls and floors.
- c) Blue is a color choice that can give the impression of comfort and tranquility in an inpatient room at a hospital. This color is used on walls and furniture.
- d) Brown is a color choice that can provide a sense of warmth and security. This color is used on furniture, doors and wall shelves.
- e) Green is a color choice that can give the impression of freshness and recovery in an inpatient room in a hospital. This color is used for decoration in the form of plants.

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