

Colour Consideration for Waiting areas in hospitals

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ABSTRACT

Colour is one the most important factors in the nature that can have some affects on human behaviour. Many years ago, it was proven that using colour in public place can have some affect on the users. Depend of the darkness and lightness; it can be vary from positive to negative. The research will mainly focus on the colour and psychological influences and physical factors. The statement of problem in this research is what is impact of colour usually applied to waiting area? The overall aim of the study is to explore the visual environment of hospitals and to manage the colour psychological effect of the hospital users in the waiting area by creating a comfortable, pleasant and cozy environment for users while spend their time in waiting areas. The analysis concentrate on satisfaction and their interesting regarding applied colour in two private hospital waiting area in Malaysia.

Keywords : Hospital environment, Human psychology, Colour, Waiting areas.

1 INTRODUCTION

This research will be the application of colour and how to apply to public areas in hospitals should take account of the emotional and psychological factors which can affect their well-being at waiting room. The skilful use of colour can help to overcome the sensory deprivation caused by lack of visual stimuli associated with drab or monotonous environments. Hospital has a wide range of users with different requirements, from the elderly to the very young. A well-designed visual environment can be particularly helpful to visitor with partial sight. [1]

Colour can play a major role in creating accessible environments .Colour contrast can identify obstacles and hardware that might prove difficult to negotiate. It is important to address the subjective needs and preferences of the users especially in buildings of anthropozemic character and service oriented building such as hospitals.Viewing environment as nourishing us to address the issues between living and lifeless spaces, life renewing and life sapping spaces.

In this research, researcher was able to study relationship between colour and human-environment on waiting areas in hospitals and also study is to establish current colour application in the design of hospitals, revealed a wide range of literature presenting mixed evidence on this aspect of colour as well as a diversity of strategies for colour usage in interior design of the public area.

This research will mainly focus on the colour and psychological influences and physical factors. Research in environmental psychology has demonstrated that different environmental stimulus can affect both mood and behavior [2, 3].The effect of the physical environment may be of particular importance in healthcare setting, where people experience a relative-

ly high degree of uncertainty, fear and stress. Possible effects of the physical healthcare environment on the healing process of patients have received some attention. [4,5,6].

2 COLOUR

Colour is the visual perceptual property corresponding in humans to the categories called red, green, blue and others. Colour is considered informative and a way to interpret and understand meaning of designed environments [7].Colour inundates every facet of our lives, primarily in the form of manufactured colour.

Colour has a strong impact on our emotions and feelings [8,9].The relationship between colour and emotion is closely tied to colour preferences, i.e. whether the colour elicits a positive or negative emotion.

Some colour may be associated with several different emotions [10], and some emotions may be associated with more than one colour [11].Emotions can be divided into moods and feelings. A mood is a state of mind, an attitude, or a disposition that may take into account memory, language, context and physiological state. A feeling is an emotional state that is the result of sensation, a more immediate perceptual Response.

2.1 COLOUR IN HEALTHCARE

The colour of our surroundings can both create stress and ease the stressed in life. Many of the effects of colour on our moods may be the result of social and psychological associations with a particular colour.

Colour as property of designed environments may not have intrinsic meaning. Much research has demonstrated that healthcare occupant-patients, users and staff experience considerable stress, and one of the major stresses is produced by poorly designed physical environments[12]. Research has shown that certain colours directly affect human emotions, human feelings and human behaviors. To better explore this belief, researchers developed a theory called the psychology of colour which is concerned with the effects that specific colours have on individuals' moods, emotions and behaviors as they perceive colours.

As a fundamental element of the physical environment, colour in healthcare setting is increasingly considered as an environmental factor that can impact users' and staffs' stress, safety, fatigue and way finding. On the contrary, colour palettes have also been found to positively affect people's healing processes as well as increase the work efficiency of healthcare staff. [13, 14]

2.2 COLOUR DESIGN FOR WAITING AREAS

Colour design for waiting area covers all materials and surfaces. Furniture, colour and lighting can do much to alleviate stress and enhance those areas. Good design can provide a visually calming environment. Comfortable seating with flexible configurations of small group arrangements could provide a friendly, welcoming atmosphere. Daylight and a view out, particularly of planting, make a waiting area much more pleasant and should be provided wherever possible. [1]

Image of nature, shown in number of studies to distract patients, reduce stress and alleviate pain, can be used to great advantage [15]. The colour of walls should be soft earth tones, yellows, greens or blues, which all promote a calming effect.

According to several environmental studies, views of nature significantly reduce stress. If windows aren't available, images of natural landscapes and gardens, versus abstract paintings, work well [16].

In waiting areas, this device can be interesting and engaging. However, care should be taken with over-enthusiastic flooring designs as people may tire of two dominant a design and find these motifs unfashionable or even annoying after some time.

3 METHODOLOGY

This part explains the methodology, which was used in achieving the research objectives.

Main methods of investigation comprised of:

- Interviews with patients and staff
- Conducting literature reviews
- Observation and gathering information from site

Observations of the physical attributes of the waiting areas were taken. Photographs and note related to emotional and psychological of using colour in this area were documented. Each of waiting area of the hospitals was interviewed based on their willingness to participate.

3.1 CONDUCTING THE STUDY

This study has been conducted on two private hospitals' waiting areas in Malaysia, Subang jaya (A) and Bandar Sunway (B) cities. Table 1 shows the characteristics of the two waiting areas for each hospital.

Table 1 characteristics of waiting area

Hospitals	Waiting Areas	Design Characteristics
Hospital A	Public Waiting Area	The study witnessed an attempt to create a comfortable waiting area with the play of soft and pastel colours for the walls, seats, floor, screen, view to outside and lack of light
	Outpatient Waiting Area	To create more comfortable waiting area compare with public waiting area. Mini artificial garden corner, though the attempt is admirable but it creates a lifeless environment due to the artificial plant used and its non strategic location.
Hospital B	Public Waiting Area	There was an attempt to design the interior space but still lacks aesthetic input and coziness to the feel. However, comparatively more comfortable than the outpatient waiting area.
	Outpatient Waiting Area	Enclosed outpatient waiting area with seats arranged linearly in rows which does not encourage social interaction among users. The interior was purely functional and lack aesthetic and coziness.



Fig 1A



Fig 1B

Fig.1A-1B: Sunway Hospital: In General waiting area has been Used more of orange and light brown colour also sofa and furnished are in same colour, as a harmonic of colours. There was an attempt to design the interior space with artificial plant, so it created a lifeless environment. Use of television and windows to view outside; make more welcome feeling to users.



Fig 2C



Fig 2D

Fig.2C-2D: Sunway Hospital: Outpatient waiting area. Enclosed waiting area with row of seats in narrow corridor which does not encourage social interaction .the interior was purely and can see lack of aesthetic. Colour of furnish is not harmony with area.



Fig 2A



Fig 2B

Fig.2A-2B: Subang Hospital: General waiting area. Use more artificial garden corner, though the attempt is an admirable but it created a lifeless environment due to the artificial plant. Cold colour used for furniture and hot colour used for painting wall. Make area bright, friendly, and cozy and relax.



Fig 2C



Fig 2D

Fig.2C-2D: Subang Hospital: outpatient waiting area .Used warm and cold colour for design seating area and wall painting. Design square shape with most artificial nature design for decoration, but use of weak range of light that make this place not bright.

3.2 DATA COLLECTION

The data sources were classified into prime sources and secondary sources. Primary research was carried out to enable the collection of data that fits the exact purpose of this research and to increase the reliability of the information. The methods used to collecting data form fact-to-face interview and observation of two waiting areas.

Interviews were conducted only with those who were willing to participate. The secondary sources are journals, books and previous study, articles and paper which have been published or available online.

The study recorded the responses by taking note from in view of the relatively small number of respondents (n=20) involved. Table 2 presents the main interview questions.

Table 2 Interviews questions used in the study

Interview Questions	Research objectives
1. Which colour do you prefer for applying in waiting area?	1
2. How do you feel in the waiting area?	2
3. Are you satisfied with the colour scheme that used in waiting area?	3

4 DATA ANALYZE

4.1 COLOUR CONSIDERATION FOR GENERAL WAITING AREAS IN BOTH HOSPITALS

4.1.1 OVERALL LAYOUT:

As discussed in literature review chapter, colour design for waiting area covers all materials and surfaces. Furniture, colour and lighting can do much to reduce stress in waiting area. Good design can provide a visually calming environment. Based on observation, most warm colour has been used for sofa, floor, wall and ceiling lighting in Sunway hospital. Yellow colour which has been applied for walls make self-confidence and encourages optimism to area and can bring on feelings of fear. Brown colour that used for furniture and carpet will bring feelings of stability and security.

In Subang hospital, most used light colour especially pink and blue for sofa, floor, wall, ceiling lighting for waiting area thus we feel relaxed and calmed and light blue that used for floor make patients and staff feels quite and away from the rush of the day. In Subang hospital consideration on interior design and make place more welcoming for visitors and patients comparing with Sunway hospital.

4.2 COLOUR CONSIDERATION FOR OUTPATIENT WAITING AREAS IN BOTH HOSPITALS

4.2.1 OVERALL LAYOUT:

Colour which has been Observed in waiting areas are; green, gray and white colour combine for colour of sofa, floor, wall, and ceiling in Sunway hospital. Furthermore used suitable lighting make area bright but in Sime Darby Hospital mostly apply green colour for furniture and type of lighting that used, make waiting area darker.

Using the right colours in waiting areas, can have a definite affect on user motivation and stress levels. Both hospitals used white colour painting for wall.

As discussed in literature review, the colour of walls should be soft tone, like yellows, greens or blue, which all promote a calming effect. Too much white colour can give feelings of separation and can be cold and isolation.

In Sunway hospital has been used gray colour for carpet. Plastic and ceramic finishing for floor combined variety range of colours such as; dark and light blue, green, light yellow in Subang hospital. As discussed before, well-maintained flooring could be light in tone and preferably warm in colour.

Nature elements and artwork using in Subang hospital, are providing for more positive energy. Both nature and artwork help users having a greater "sense of well-being" where spac-

used lighter colour for floor, wall and ceiling. In waiting areas of both hospitals can see artificial garden that it created a lifeless environment due to the artificial plant. After observation can say waiting areas in Subang Hospital are inviting, cheering, fresh that get arousing affective quality.

It is recommend that, the colour use, both in the interior and lighting, is an important factor in the waiting area. The colour of the interior is makes an area pleasant and welcoming. It is also one of the things that remained people of being at home.

Colour in architecture has multiple applications. Warm colour can be used to reduce scale of area and cold colours visually enlarge a space, making it less confining. It can make appearance of space boring or pleasant. That's why colour and emotion relationship is closely tied to colour preferences.

According to interview, users prefer warmer colours more positively rather than colder colours. Colours of a warmer temperature, such as yellow-brown, make the room feel warmer. Strong colours like red-orange are used to decorate the waiting room increase the patient's patience level which lead them to be restless while they wait in the room.

Floor colour is better use a lighter shade of colour like; white, cream and light gray tone. Light colours were consistently preferred for all objects such as ceiling, wall, floor, furniture. It should be emphasized that even white was a desirable colour for ceiling.

For future study, we can develop this article in: direct communicators, the arrangement of the furniture, colour use and messages that communicate the waiting room is a nice place to be.

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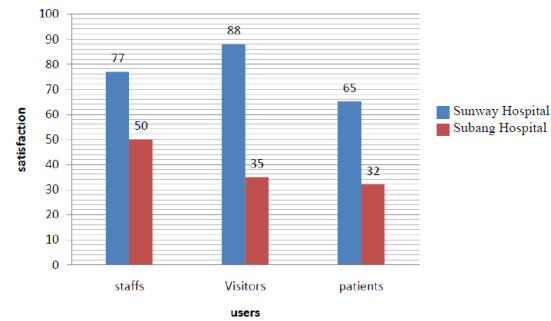
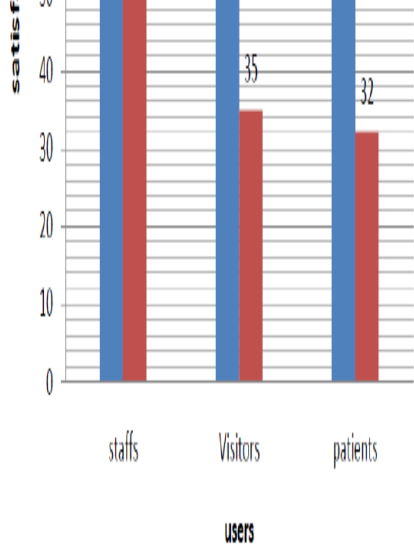


Figure 3 users satisfaction in general waiting areas in both hospitals

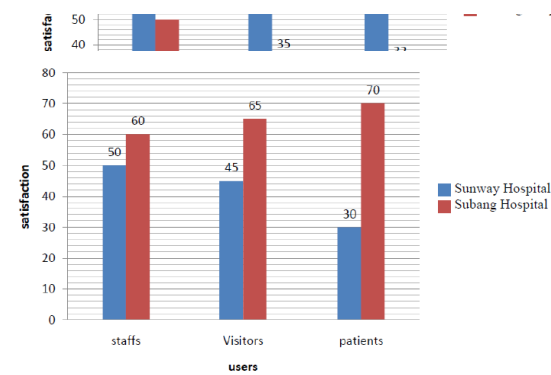


Figure 4 users satisfaction in outpatient waiting areas in both hospitals

5 CONCLUION AND RECOMMENDS

The mainly purpose of this research was to determine factors that must be taken into consideration colours in waiting areas in two private hospitals from users satisfaction perspective , to identify which impact of colour most commonly applied in waiting areas and to determine whether colour consideration could influence on mood and behavior of users in waiting areas in hospitals.

Comparison that done for two mention hospitals in waiting areas specified that general waiting area in Sunway Hospital applied modern design with harmony of colour for each part. Therefore result is leading to relax and pleasant environment combining with calming, cozy, quiet, nice, home comfort but the outpatient waiting area is so simple, lake of design, narrow and quite boring area. Both waiting areas in Subang Hospital

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