

## Affecting Waiting Rooms as Key to Patient Satisfaction in Public Health Centers

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### ABSTRACT

To create a waiting room that can withstand change, patient satisfaction with the waiting room must be maintained. This paper reviews the standard of waiting room comfort at the Public Health Center (Puskesmas). The measurement refers to the standardization of the waiting room based on the Decree of the Minister of Health of the Republic of Indonesia concerning Minimum Service Standards for Hospitals. Waiting time for patient services is one of the indicators for assessing the quality of health services. Both central and local governments have implemented several strategies to improve health services for the Public, especially in rural areas. This paper examines the factors influencing patient satisfaction and their relationship to physical and psychological comfort in the waiting room. This paper reveals that the factors that influence patient satisfaction are: social (relational), physical architecture (material), environment (ambient), and distraction (related to attention). In this article, I want to convey that a comfortable waiting room can indirectly increase the patient's immunity so that people who come to the puskesmas are not burdened by time while in the waiting room.

Keywords: Public Health Center, waiting room, patient satisfaction, building design, interior arrangement

### 1. INTRODUCTION

The length of time people have to wait in a hospital or clinic is a big problem that has become an important topic of study in many places (Afrane & Appah, 2014; Ishijima et al., 2016; Mohseni et al., 2014; Pillay et al., 2011; Tsui & Fong, 2018). Dewi et al. (Dewi 's et al., 2020) research in a hospital found that the average wait time for outpatients was more than 60 minutes. This is not what the Decree of the Minister of Health of the Republic of Indonesia Number 129/Menkes/SK/II/2008 on Minimum Service Standards (SPM) for Hospitals should happen (RSUD KORPRI Provinsi Kalimantan Timur, n.d.). One way to judge the quality of health services is by how long patients have to wait for care.

Malang district will have 40 Public Health Centers (Puskesmas) in 33 sub-districts until 2021. (Badan Pusat Statistik Kabupaten Malang, 2021). There are no specific rules about how the waiting room for registration desks, emergency rooms, and outpatient services should look that can be used as a guide or standard for developing Puskesmas. The central and local governments have used several plans to improve Public health care, especially in rural areas. The general public still often complains of pain when they go to the Puskesmas for treatment (Maameah et al., 2022; Toliaso et al., 2018). This study aims to find out how physical and environmental factors affect the physical and mental comfort of patients in the Puskesmas waiting room. This is done so that a standard design for the waiting room at the Puskesmas can be made for registration counters, emergency rooms, and outpatient services. It is hoped that the idea of comfort in waiting rooms can be used in building design and interior layout to make patients happy. A higher level of patient satisfaction affects the quality of health care, which speeds up a patient's recovery (Khan, 2010). This research aims to come up with (1) tools to

measure how well waiting rooms at Puskesmas work and (2) design standards for waiting rooms at Puskesmas's registration desks, emergency rooms, and outpatient services.

## 2. LITERATURE REVIEW

As an architectural setting, the Puskesmas Waiting Room (RTP) has never been chosen for study. But the RTP typology can be understood to be useful for some user groups in general. The words "waiting room architecture," "social factors," "psychological factors," "hospitals," and "health centers" were used to find articles about the architecture and interior design of RTP.

During the process of reading about the RTP design, four main categories came to light: 1) social (relational), 2) physical architecture (material), 3) environment (ambient), and 4) distraction (related to attention).

### 2.1. Social Factors

Social media is used in architecture and interior design to affect how patients, their friends, and health workers at the Puskesmas interact. As a lot of the research shows, when thinking about FH as a social (behavioral) space, it's important to think about three things: 1) Family and staff; 2) Privacy and secrecy; 3) The way the furniture is set up.

#### 2.1.1 Patients, health workers, and people who care for them

Part of the Waiting Room experience is ensuring that the people with the patient (family or friends) are happy. In a 2003 study, Ulrich et al. (Ulrich et al., 2003) found that there are six important ways to improve interaction and communication between hospital health workers and patients and their caregivers in the hospital waiting room: 1) Waiting rooms close to where patients get care; 2) Being able to see the patient often; 3) Provide essential utilities, like restrooms near the Waiting Room; 4) Put furniture in the waiting room; 5) Put easy-to-reach communication tools and facilities, like phones and snack machines, in or near the waiting room; 6) Give the patient and their companion a place to be alone in the waiting room.

According to the qualitative research by Anderson et al. (Anderson et al., 2007), there are a few key ways to make healthcare facilities more efficient for both patients and healthcare workers: 1) Friendly and knowledgeable staff who can talk to patients in the Waiting Room easily and happily; 2) Giving patients or their companions enough information about how the hospital works; 3) Creating a "safe" environment in the Waiting Room; 4) Keeping the Waiting Area clean and tidy at all times; 5) Making food and drinks easy to get.

#### 2.1.2. Privacy and keeping things secret

More research has shown the importance of installing high-performance ceiling tiles and other sound-absorbing panels in healthcare facilities to reduce reverberation time, sound travel, and noise pressure (Hagerman et al., 2005). These things can be used in important places like waiting rooms and reception areas, where patients and healthcare workers exchange more private information (Joseph & Ulrich, 2007). According to a study by Ubel, Zell, and Miller (Ubel et al., 1995), healthcare workers often break the privacy and confidentiality of their patients by talking about or with them in places where other healthcare workers or patients could hear them.

#### 2.1.3. Furniture Layout

Much evidence shows that giving people places to meet can improve social interactions in healthcare settings (Thompson & Kent, 2014). Design can help "institutionalize" people in healthcare by giving them furniture. This means allowing them to act on their own, actively rather than passively, and "exercise power" through their actions (Malenbaum et al., 2008). Moving the furniture around the dining area in a well-planned way will make it easier for patients and caregivers to talk to each other. It will also help patients eat better in healthcare settings (Peterson et al., 1977).

## *2.2. Factors of the physical architecture*

Ulrich et al. (Ulrich et al., 2003) showed that privacy, social support, freedom, control, and peace of mind are all physical factors that affect the health environment. In her research on the birth environment, Doreen Balabanoff (Balabanoff, 2017) points out five rules that architects should follow to make a better birth space: "1) Closeness, 2) Privacy, 3) Organization of Space, 4) Expression of Emotion, and 5) Time and Life."

### *2.2.1. Color*

Mahnke (1996) talks about how important color corridors are in hospitals and how colors can affect the moods of patients and staff. When picking colors for the hallway that leads to the ICU, Mahnke suggested using cool colors like blues and greens. He also said that the colors should not be too dark or too light. Mahnke says that designers should not only think about how things look but also about nurses, patients, and their caregivers who use wheelchairs, carts, and other medical equipment to move around the hallways. Dalke et al. (Dalke et al., 2006) looked at 20 UK hospitals and found that many patients used colored orientation tools instead of signs and plates with medical terms to find their way around. The researchers also concluded that hospital waiting rooms with fewer institutional colors were more personal and less stressful.

### *2.2.2. Building Materials*

(Mahnke & Mahnke, 1996) Warns healthcare interior designers not to use mirrors or other reflective surfaces that trick the eye (floors, ceilings, and windows). He also said that walls, floors, and furniture should not have too many complicated patterns. Dalke et al. (Dalke et al., 2006) also said that materials with shiny or reflective surfaces should be avoided in healthcare facilities. They also concluded that patients and hospital staff liked waiting rooms that looked like homes with quiet, comfortable furniture.

### *2.2.3. The Placement and Movement of Furniture*

The layout of waiting rooms is an important part of making the time spent waiting in hospital waiting rooms more pleasant. People think circulation is an important part of the patient waiting room experience. Circulation between rooms in health facilities improves workflow and makes health workers more efficient. In the healthcare setting, these things make patients happier (Pierce II et al., 1990)

### *2.2.4. Landscapes and green spaces*

It is thought that giving patients access to outdoor landscape spaces will help them get along better with healthcare workers. Garden space is considered an excellent place to escape the room's artificial, clinical atmosphere (Ulrich, 1999). Cooper-Marcus and Barnes (Marcus & Barnes, 1995) found that healthcare workers went to parks to get away from stress and

pressure. They also found that when patients and their friends went to parks, their moods improved, and their stress and anxiety levels went down. Ulrich (Ulrich, 1999) says that there is strong evidence that being in a natural setting, even for a short time (like 3 to 5 minutes), can help people recover from stress and anxiety in a healthcare setting.

#### *2.2.5. Signs and finding your way*

Some ways to improve healthcare facilities for patients, nurses, and other health workers, such as putting braille-marked plates in the waiting room for blind patients, are clear and direct. When it makes sense, multilingual signs are also thought to be useful. Also, it is a good idea to use interactive electronic screen walkthroughs and information kiosks. Lee et al. (2014) found that patients and caregivers went to and waited in the wrong hospital ward because they could not read the signs and the map. Researchers suggest that hospitals in areas where people speak more than one language use numerical signs to help people find their way.

### *2.3. Environmental (Ambient) Factors*

There are a lot of sensory and "experiential" things that have a significant effect on how we feel about space. Ulrich et al. (Ulrich et al., 2003) say that lighting, sound, and ventilation are important for patient comfort. However, because these things cannot be seen or touched, they may not be taken into account enough when designing the Hospital Waiting Room. This section talks about temperature, lighting, ventilation, and sound and how these things can affect the waiting time for patients and staff.

#### *2.3.1. Temperature and Airflow*

Evidence suggests that higher ACH (air changes per hour) levels in healthcare settings make it less likely that people will get sick. Between 12 and 15 ACH is the best range for ACH. In a study comparing SARS infections in a single hospital, researchers found that the wards with the most ventilation had much lower infection rates among healthcare workers (Jiang et al., 2003).

Escombe et al. (Escombe et al., 2007) looked at three old hospitals (built before 1950) and five new hospitals in Lima, Peru (1970-1990). They found that older hospitals with higher ceilings and more oversized windows let in more fresh air than newer hospitals with lower ceilings and smaller windows.

#### *2.3.2. Light*

Natural and artificial lighting is an important part of designing a space for comfort. Balabanoff (Balabanoff, 2017) talks about how light, color, and darkness can't be separated. He says that light, color, and darkness are affordable architectural elements that improve embodied, atmospheric, and spiritual experiences. It is a significant part of having a good birth. Mahnke's (Mahnke & Mahnke, 1996) recommendations for lighting in healthcare rooms include: 1) Use artificial light with a spectrum composition similar to natural light; 2) Use balanced spectrum lamps to help staff members with the diagnostic process in triage areas ('unbalanced' spectrum lamps are not good for seeing the patient's skin tone and reduce co-patient encouragement); 3) The Illuminating Engineering Society to use 'color-enhanced' lamps with a high

#### *2.3.3. Sounds*

Music can help patients in waiting rooms feel less stressed and anxious, making them less likely to be violent toward health workers in hospitals (Routhieaux & Tansik, 1997). In the same way, Cabrera and Lee (Cabrera & Lee, 2000) say that people should replace noise pollution with soft, quiet music.

Orellana et al. (Orellana et al., 2007) did a 24-hour observational case study in a large US hospital. They found that high sound pressure in hospital emergency rooms is caused by the need for frequent communication between healthcare workers, patients, and colleagues. This, in turn, makes the healthcare environment tiring.

#### *2.4. Elements of Distraction*

Distractions in the waiting room are thought to be one of the most important things that affect how patients and caregivers spend their time waiting in the hospital. Mahnke (Mahnke & Mahnke, 1996) says that distraction in the waiting room is an important tool that helps patients pay attention to things outside themselves instead of their pain. A positive distraction is a thing or situation in the space that draws the patient's attention and keeps them busy so that they do not think about the pain or other things that make them feel bad. Music, pets, TV (especially news or comedy shows), art, nature, and landscapes can be distractions (Ulrich et al., 1991).

##### *2.4.1. Work of art*

Several qualitative and quantitative studies are looking for proof that arts interventions can help people get better. It is reported that the study provides clear evidence that integrating the visual and performing arts in the healthcare setting has a clear impact on patient comfort. After showing two groups of psychiatry patients two different kinds of art, Ulrich et al. (Ulrich et al., 1991) found that the first group of patients did not like art that was unclear, surreal, or could have more than one meaning. The second group responded very positively to works of art with scenes from nature or natural elements.

In a study done at a Swedish hospital, researchers found that cardiac surgery patients in the ICU who were shown artwork with trees or water surfaces (like lakes or waterfalls) were less anxious, stressed out, and needed less pain medication. Fewer people than the group shown abstract artworks (Ulrich et al., 1991).

##### *2.4.2. Media*

Studies have shown that if a waiting area cannot have natural landscape features, nature-themed TV programs or shows on visual display screens (like TV screens or Sunglasses) could be a good alternative (e.g., nature documentaries). Haris et al. (Harris et al., 2002) concluded that certain things could make patients happier with their time in a health facility as a whole. This includes wall colors, artwork, and things that are easy to get to that are distracting (e.g., television, landscape).

##### *2.4.3. Natural Elements*

Humans have a strong bond with nature. As previously mentioned, natural elements enhance the well-being of patients in the Hospital Waiting Room. Nature simulations with visual and

auditory elements can also play an important role as distraction agents. Malenbaum et al. (2008) have talked about how noise and stress can worsen the pain.

Ulrich (Ulrich, 1984) looked at two groups of people recovering from cholecystectomy, which is surgery to remove the gallbladder. The first group of patients was put in a room with a view of nature. The second group of patients was put in a room with a view of a brick wall (i.e., a construction view). Compared to the group with the construction window view, the group with the natural landscape view got better faster, took less pain medicine, and heard less negative feedback.

### 3. DISCUSSION

Four themes or potential design areas affect the patient's experience in obtaining service satisfaction: social, physical, ambient, and impaired.

- 1) Social Factors are about how patients, caregivers, and health workers talk to each other in the waiting room.
- 2) The architectural and interior design of the Waiting Room is the main physical factor.
- 3) "Ambient Environmental Factors" discusses how the Waiting Room is ventilated, lit, and sounds.
- 4) The Distraction element focuses on things that seem to lessen pain and the feeling of time passing (e.g., artwork, journals, TV, and nature elements).

The main concepts that emerged from the review of the relevant literature and the focus of the research:

- 1) The value of the information provided by: a) Healthcare workers who know their jobs and can give patients accurate information about their health and waiting times; b) Road-finding plans and sign plates that are clear, easy to understand, and easy to follow.
- 2) It is important to give the patient or caregiver a private place where their privacy and privacy will be respected. For example, this can be fixed by putting up a material with a high surface area that absorbs sound.
- 3) The arrangement of furniture and other things in the waiting room can help people get along better and feel better.
- 4) Use of calm colors and adequate natural and artificial light (large windows and balanced spectrum lighting) (large windows and balanced spectrum lighting)
- 5) A window that looks out onto the landscape outside.
- 6) Having a space with good ventilation and a high ACH level (hourly air change)
- 7) Voice control, such as noise-absorbing surfaces, hearing rings, or infrared systems, helps people with hearing aids and their caregivers.
- 8) The provision of positive attention-distraction elements in the Waiting Room includes works of art, live media (optimally nature-themed programs and performances), plants, flowers, and natural and artificial water elements (for example, artificial fountains and waterfalls) (for example, artificial fountains and waterfalls).

Lastly, reviewing the literature is an important part of learning about the architecture and interior design of the RTP. These elements vary from finishing materials (color, texture, reflectivity of walls, floors, ceilings); furniture layout; artificial and natural lighting; road map/map; distracting elements (prints, media screens, artwork); landscape elements (plants, water elements, yard); privacy elements (partition walls, privacy curtains/screens); and children's play areas (or other childcare environment approaches) (or other childcare environment approaches).

## 5. CONCLUSION

This paper has succeeded in exploring the physical and environmental elements and their influence on the physical and psychological comfort of patients in the waiting room so that later it can be used to produce waiting room design standards in various areas in the Puskesmas such as registration counters, emergency rooms, and outpatients. Through a review of the literature, this paper shows that social (relational), physical architecture (material), environment (ambient), and distractions are the physical and mental factors that affect how happy a patient is (related to attention).

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