

# The Influence of the Hospital Environment on the Psychological State of Patients in the Hospital Prof. Yamin Pariaman

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## ABSTRACT

*The hospital environment is an important factor influencing patients' psychological conditions during treatment. Previous studies have focused more on medical and clinical services, while the impact of the hospital's physical and social environment on patient psychology is still limited, especially in regional hospitals. This study aimed to analyze the influence of the hospital environment on patients' psychological conditions at Prof. M. Yamin Hospital. This quantitative study used a cross-sectional design with 75 respondents selected through purposive sampling. Data were collected using valid and reliable structured questionnaires. Univariate analysis showed that 56% of respondents assessed the hospital environment as good, while 52% of patients had good psychological conditions. Bivariate analysis using the chi-square test indicated a significant relationship between the hospital environment and patients' psychological conditions ( $p = 0.003$ ). The study concludes that the hospital environment significantly affects patients' psychological well-being. Improving environmental comfort, cleanliness, and communication quality of health workers is important to support patients' psychological recovery and healing process.*

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## INTRODUCTION

Health is a fundamental aspect in human life that includes physical, psychological, and social conditions. In health services, the hospital not only acts as a place for the provision of medical therapy, but also as an environment that affects the patient's recovery process as a whole. A comfortable, safe, and supportive hospital environment can help promote patient calm, while a



less supportive environment can trigger stress, anxiety, and discomfort during the treatment period. Therefore, the hospital environment becomes one of the important factors in supporting the success of the patient's healing process. (Hafidz, 2019; Zakariya, 2024)

The hospital environment includes physical and social aspects, such as room cleanliness, lighting, noise levels, ventilation, facility comfort, and interaction between patients and health workers. Previous research has shown that an environment that has elements of healing environment, such as natural lighting, a comfortable space, and a calm atmosphere, is able to provide a restorative effect on the psychological condition of patients. A good environment can increase the patient's sense of security, optimism, and comfort during treatment. Conversely, an uncomfortable environment can increase psychological distress, exacerbate anxiety, and degrade the quality of the patient's experience in the hospital. (Haffidz, 2019; Zakariya, 2024)

Various studies have also shown that the quality of the hospital environment is related to the level of patient satisfaction with health services. Aspects such as physical facilities, waiting room comfort, cleanliness, and quality of service interactions are proven to affect patient perceptions of hospital service quality. However, most of these studies still focus on patient satisfaction and quality of care in general, rather than on the psychological condition of the patient directly. (Azzahra et al., 2024; Daughter & Daughter, 2024)

In fact, the patient's psychological condition is an important factor that can affect the healing process. Patients who experience anxiety and stress tend to have lower levels of treatment adherence as well as a decreased immune response. In fact, psychological stress is experienced not only by the patient, but also by the accompanying family during the treatment period. This condition indicates that the hospital environment has a great contribution to the psychological well-being of the individuals who are in it. (Situmeang et al., 2024; Zakariya, 2024)

Although research on the quality of the hospital environment has been widely conducted, there are still research gaps that need to be considered. Previous studies have generally focused on the relationship of the hospital environment with patient satisfaction, service quality, or facility comfort, while studies that specifically analyze the influence of the hospital environment on the psychological condition of patients are still limited, especially in regional hospitals. In addition, some studies only assess the physical aspects of the environment without integrating social aspects, such as communication and interaction of health workers with patients. Thus, there are not many studies that comprehensively examine the relationship of the hospital environment to the psychological condition of patients during treatment.

This research gap is important to be studied because regional hospitals generally have limited facilities and resources compared to large urban hospitals. This condition has the potential to affect the patient's comfort and psychological experience during treatment. However, empirical evidence regarding the influence of the hospital environment on the psychological condition of patients in regional hospitals is still very limited. Therefore, this study is important to provide a more specific picture of the relationship between the hospital environment and the psychological condition of patients in the context of regional hospitals in Indonesia.



Prof. M. Yamin as one of the referral hospitals in the Pariaman region has a responsibility to provide quality health services and oriented to the needs of patients. However, until now, no research has been found that specifically examines the influence of the hospital environment on the psychological condition of patients in the hospital. This study is important because it can provide empirical data on the conditions of the hospital environment and its impact on the psychological state of patients during treatment.

The results of this study are expected to contribute scientifically in the development of the concept of healing environment in regional hospitals, especially related to the integration of physical and social aspects of the hospital environment to the psychological condition of patients. In practical terms, this study is expected to be an evaluation material for hospitals in improving the quality of the service environment, such as space comfort, cleanliness, and communication of health workers, in order to support the holistic healing process of patients.

## **METHODS**

The research method used in this study is a quantitative approach with cross-sectional design, which aims to analyze the relationship between the hospital environment and the psychological state of patients at one time measurement. The research was conducted at Prof. M. Yamin Pariaman with a sample of 75 respondents selected using purposive sampling technique. Inclusion criteria in this study include inpatients who are 18 years old, conscious, able to communicate well, and willing to be a respondent. The exclusion criteria were patients with cognitive impairment, critical condition, or who did not complete the questionnaire. Hospital environment variables were measured using the Hospital Environment Assessment Tool (HEAT) which has been modified according to the context of the study. This instrument consists of 20 question items covering aspects of hygiene, lighting, noise level, space comfort, ventilation, and interaction of health workers with patients. Ratings use a Likert scale of 1-4, ranging from strongly disagree to strongly agree. The total score was then categorized into two categories, namely good and bad hospital environment based on the median score of respondents. The results of the validity test showed that all items had a value of corrected item-total correlation  $> 0.30$ , while the reliability test obtained a Cronbach's Alpha value of 0.87 which indicates a reliable instrument.

The patient's psychological condition was measured using the Depression Anxiety Stress Scales (DASS-21) instrument with a focus on anxiety and stress dimensions. The instrument consists of 14 items, 7 items each for anxiety and 7 items for stress, using a Likert scale of 0-3. The total score is categorized into good psychological condition, mild, moderate, and severe disorders based on the dass-21 interpretation guidelines. The results of the validity test showed that all items have a value of corrected item-total correlation  $> 0.30$ , while the results of the reliability test obtained Cronbach's Alpha value of 0.91 which indicates a very good level of reliability. Data collection was carried out through the distribution of questionnaires directly to respondents with the assistance of researchers to ensure data completeness. Data analysis was carried out in a univariate manner to describe the frequency distribution of the characteristics of respondents and



each variable of the study. Furthermore, bivariate analysis was performed using the chi-square test to determine the relationship between the hospital environment and the psychological state of patients with a significance level of 95% ( $\alpha=0.05$ ). This study has paid attention to ethical aspects by providing explanations related to the objectives, benefits, and research procedures to respondents before data collection is carried out. Respondents who are willing to participate are asked to sign an informed consent sheet as a form of approval. In addition, the confidentiality of the respondent's identity is maintained and all data obtained are only used for research purposes.

## RESULTS

### 1. Frequency Distribution of the Hospital Environment and the Psychological State of the Patient

**Table 1. Frequency Distribution of The Hospital Environment and The Psychological State of The Patient**

| Variable                           | Categories | Frequency (n) | Percentage (%) |
|------------------------------------|------------|---------------|----------------|
| Hospital Environment               | Good       | 42            | 56,0           |
|                                    | Less Good  | 33            | 44,0           |
| Psychological State of the Patient | Good       | 39            | 52,0           |
|                                    | Disturbed  | 36            | 48,0           |
| Total                              |            | 75            | 100            |

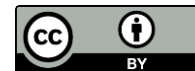
Based on the table above, most respondents rated the hospital environment in the good category as many as 42 people (56.0%), while 33 people (44.0%) rated the environment in the less good category. For psychological conditions, as many as 39 respondents (52.0%) were in the good category, while 36 respondents (48.0%) experienced mild to moderate psychological disorders. This shows that although the majority of respondents rated the hospital environment as good, there was still a considerable proportion with impaired psychological conditions.

### 2. The Relationship of the Hospital Environment with the Psychological State of the Patient

**Table 2. The Relationship of The Hospital Environment With the Psychological State of the Patient**

| Hospital Environment | Psychologically Well | Psychologically Disturbed | Total | p-value |
|----------------------|----------------------|---------------------------|-------|---------|
| Good                 | 30                   | 12                        | 42    | 0,003   |
| Less Good            | 9                    | 24                        | 33    |         |
| Total                | 39                   | 36                        | 75    |         |

Based on the results of bivariate analysis in the table above, it is known that of the 42 respondents who assessed the hospital environment as good, most have good psychological conditions, namely as many as 30 people (71.4%). In contrast, of the 33 respondents who assessed



the environment as unfavorable, the majority experienced psychological disorders, namely as many as 24 people (72.7%). Chi-square test results showed a p-value of 0.003 ( $p < 0.05$ ), which means there is a significant relationship between the hospital environment with the psychological state of patients. Thus, it can be concluded that the better the hospital environment, the better the psychological condition of the patient.

## DISCUSSION

### 1. Frequency Distribution of Hospital Environment and Psychological State

The results showed that most respondents rated the hospital environment in the good category, which is as much as 56.0%, while 44.0% of respondents rated the hospital environment is still not good. In psychological condition variables, as many as 52.0% of respondents were in the good category, while 48.0% experienced mild to moderate psychological disorders. These findings indicate that the majority of patients have a positive perception of the hospital environment, although the percentage of respondents who assess the environment as unfavorable is still quite large. In addition, the psychological condition of the patients also showed almost balanced differences between patients with good psychological condition and patients with psychological disorders.

The results indicate that the hospital environment in general is quite good in supporting patient comfort during treatment. However, there are still 44.0% of respondents who assess the hospital environment is not good, indicating that there are several environmental aspects that need to be considered and improved. The patient's psychological condition also still requires attention because almost half of the respondents experienced mild to moderate psychological disorders. This shows that the hospital treatment process can still cause emotional stress for patients, both due to disease conditions and the environment during treatment.

The results of this study are in line with the research of Andrade and Devlin (2021) which states that the quality of the hospital environment affects the comfort and experience of patients during treatment. A clean, comfortable, and low-noise environment can help patients feel safer and calmer. Other studies also mention that the concept of healing environment can have a positive effect on the psychological condition of patients through a comfortable atmosphere and support the recovery process. (Ulrich et al., 2020)

The findings of this study are also supported by the research of Xie et al. (2020) who explained that less comfortable hospital environments, such as noise, inadequate lighting, and crowded room conditions can increase patient stress and discomfort. In addition, the study of Zhang et al. (2021) showed that patients undergoing hospitalization are likely to experience psychological distress due to changes in the environment, disease conditions, and uncertainty during the treatment process.

Other studies have shown that in addition to physical aspects, social interaction between patients and health workers also plays an important role in shaping the psychological condition of patients. Good communication can increase the patient's sense of security, comfort, and trust



during treatment. Support from family and health workers is also known to help reduce anxiety and increase patient motivation to recover. (Street et al., 2020; Taylor, 2020)

Based on the results of the study, researchers assume that the quality of the hospital environment has an important role in supporting the psychological condition of patients during treatment. A comfortable, clean environment, and supported by good communication from health workers can help create a sense of security and calm in patients. Therefore, hospitals need to make efforts to improve the quality of the environment, both from physical and social aspects, such as maintaining cleanliness, reducing noise, increasing the comfort of treatment rooms, and strengthening therapeutic communication between health workers and patients to support the healing process optimally.

Overall, the results of this study indicate that the hospital environment has an important role in determining the psychological condition of patients. Although most respondents rated the environment in the good category, there is still room for improvement. The patient's psychological condition that is not optimal indicates the need for more attention to environmental aspects.

Researchers assume that good environmental conditions have not been fully perceived by all patients due to differences in perception and individual experience during treatment. In addition, other factors such as the condition of the disease and social support also influence the psychological state of the patient. Therefore, a comprehensive approach is needed to improve the overall well-being of the patient.

## **2. The Relationship of the Hospital Environment with the Psychological State of the Patient**

The results showed that there was a significant relationship between the hospital environment with the psychological state of patients ( $p = 0.003$ ). Respondents who assess the hospital environment in the good category tend to have a better psychological condition than respondents who assess the hospital environment is less good. In contrast, patients who rated the hospital environment unfavorable experienced more mild to moderate psychological disorders. These findings indicate that the quality of the hospital environment has a real contribution to the psychological condition of patients during treatment.

The relationship can occur because inpatients are in a more sensitive condition physically or emotionally. During treatment, the patient must adapt to the new environment, limited activity, and worry about the condition of the disease experienced. In these situations, the hospital environment becomes an important factor that can affect the patient's comfort and emotional stability. A clean, quiet, and comfortable environment can help patients feel more secure and relaxed, while a noisy and uncomfortable environment can increase stress and anxiety.

In this study, patients who assess a good hospital environment tend to have a better psychological condition because a comfortable environment can support the quality of patient rest. Noise from hospital activities, conversations, and medical devices can interfere with sleep and increase a patient's emotional fatigue. Patients who do not get good quality sleep during treatment tend to feel anxious, tense, and uncomfortable more easily. Conversely, a quieter treatment room



helps patients rest more optimally so that emotional conditions become more stable. These results are in line with the research of Xie et al. (2020) which states that hospital noise can increase the stress level of patients during treatment.

In addition to noise, lighting and comfort of the treatment room also affect the psychological state of patients. Sufficient lighting and good ventilation can create a more comfortable and less emotionally depressing atmosphere in the room. Patients who are in a well-lit room tend to feel more calm and comfortable than patients who are in a dim and crowded room. Comfortable room conditions also help patients more easily adapt to the hospital environment during treatment. Beute and de Kort's (2020) research also explains that natural lighting can help improve mood and lower patients' stress levels.

Another factor that also affects the psychological condition of patients is the interaction between patients and health workers. In this study, patients who felt good communication from health workers tended to feel safer and have a better psychological condition. A friendly attitude, attention, and clear communication from nurses and health workers can reduce the patient's fear and uncertainty about the condition of the disease. Conversely, poor communication can increase the patient's anxiety during treatment. This suggests that the social environment in the hospital has an equally important influence as the physical environment. This finding is supported by the research of Street et al. (2020) who stated that therapeutic communication can help lower patient anxiety.

The results of this study also showed that patients who were in a less supportive hospital environment experienced more psychological disorders. This suggests that uncomfortable environmental conditions can be a risk factor for stress and anxiety during the treatment period. Patients who feel uncomfortable with the condition of the treatment room, cleanliness, and hospital atmosphere tend to experience higher emotional distress. The condition can worsen the patient's experience during treatment and affect the overall recovery process.

The results of this study are in line with the research of Andrade and Devlin (2021) which shows that a comfortable and supportive hospital environment can improve the psychological well-being of patients. Research Ulrich et al. (2020) also mentioned that the concept of healing environment plays a role in creating an atmosphere that supports the healing process of patients physically and psychologically. Thus, the quality of the hospital environment not only affects the comfort of patients, but also the emotional condition and recovery process of patients during treatment.

Based on the results of the study, researchers assume that the hospital environment is an important factor that needs to be considered in health care because it is directly related to the psychological condition of patients. Improvements in the physical environment, such as noise control, improved space comfort, lighting, and hygiene, as well as strengthening therapeutic communication between health workers and patients, can be an effort to help reduce patient stress and anxiety during treatment.



Researchers assume that this significant relationship is due to the interaction between environmental factors and the individual condition of the patient. A good environment can help patients feel more comfortable and safe, so that the psychological condition becomes better. Conversely, an unfavorable environment can increase the patient's stress and anxiety. Therefore, improving the environment is an important step in improving the quality of Health Services.

## CONCLUSION

Based on the results of the study, it can be concluded that there is a significant relationship between the hospital environment and the psychological condition of patients in Prof. M. Yamin ( $p = 0.003$ ). Patients who assess the hospital environment better tend to have a better psychological condition during treatment. These findings suggest that the quality of the hospital's physical and social environment plays an important role in supporting the comfort and psychological condition of patients.

This study has limitations on the use of cross-sectional design and subjective questionnaire-based measurements. Therefore, further research is recommended to use a longitudinal design and add other variables that can affect the psychological condition of patients so that the results of the study are more comprehensive.

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## REFERENCES

- Andrade, C., & Devlin, A. S. (2021). Stress reduction theory and healthcare environments: A systematic review. *Health Environments Research & Design Journal*, 14(2), 45–60.
- Azzahra, R., Pratama, Y., & Lestari, D. (2024). Hospital service quality and inpatient satisfaction. *Journal of Public Health*, 12(1), 55–63.
- Beute, F., & de Kort, Y. A. W. (2020). Natural environments and restorative outcomes in healthcare settings. *Journal of Environmental Psychology*, 69, 101430.
- Choiniere, J., Watt, J., & Walter, R. (2021). Hospital stressors and patient recovery outcomes: A clinical review. *BMC Health Services Research*, 21(1), 112.
- Davis, M., Salas, E., & Burke, C. (2020). Hospital cleanliness and patient satisfaction: A multi-center study. *International Journal of Health Care Quality Assurance*, 33(5), 789–802.
- Epstein, R. M., & Street, R. L. (2020). The values and value of patient-centered care. *Annals of Family Medicine*, 18(3), 1–7.
- Gifford, R. (2021). Environmental psychology principles in healthcare design. *Annual Review of Psychology*, 72, 273–298.



- Hafidz, M. (2019). The influence of hospital environment on patient comfort. *Journal of Environmental Health, 11*(2), 101–108.
- Hamilton, D. K., & Watkins, D. H. (2020). Evidence-based design for healthcare environments. *HERD: Health Environments Research & Design Journal, 13*(1), 5–15.
- Mourshed, M., & Zhao, Y. (2020). Healthcare environment design and patient adaptation. *Building and Environment, 169*, 106529.
- Putri, A. N., & Putri, R. (2024). Analysis of hospital facilities on patient satisfaction. *MARAS: Journal of Health, 6*(1), 33–41.
- Rosidah, S., Yuliana, E., & Hidayat, A. (2024). Evaluation of regional hospital environments on service quality. *Cendekia Medika, 9*(2), 77–85.
- Situmeang, F., Siregar, R., & Nasution, D. (2024). Anxiety among patients' families in intensive care units. *SISTHANA: Journal of Health Sciences, 8*(1), 21–29.
- Street, R. L., Makoul, G., Arora, N. K., & Epstein, R. M. (2020). How does communication heal? Patient–physician communication in healthcare. *Patient Education and Counseling, 103*(5), 931–937.
- Syahna, N., Wahyuni, S., & Karim, M. (2024). Patient perceptions of hospital environments. *MARAS: Journal of Health, 6*(2), 44–52.
- Taylor, S. E. (2020). Social support: A review of health benefits. *Current Directions in Psychological Science, 29*(1), 76–81.
- Ulrich, R. S. (2020). Evidence-based healthcare design: Healing environments. *The Lancet, 395*(10231), 1743–1744.
- Xie, H., Kang, J., & Mills, G. H. (2020). Clinical noise and patient stress in hospitals. *Applied Acoustics, 165*, 107273.
- Zakariya, A. (2024). The concept of healing environment in modern healthcare services. *Journal of Architecture and Design, 15*(1), 1–10.
- Zhang, Y., Li, H., & Chen, W. (2021). Anxiety and depression among hospitalized patients: A cross-sectional study. *BMC Psychiatry, 21*(1), 1–9.