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Analysis of Public Satisfaction with The Comfort of the Waiting Area at Tegal City Station

ABSTRACT

High-quality public services are essential for addressing citizens' needs and enhancing their experiences with government-provided amenities. The primary aim of this research is to evaluate the level of satisfaction among passengers utilizing the waiting room facilities at Tegal City Rail Station, with a focus on comfort, cleanliness, accessibility, and overall service quality. A questionnaire survey method was employed to gather feedback from passengers, who were asked to rate various aspects of the waiting room services. The collected data were analyzed to identify key factors influencing satisfaction levels and to provide insights into potential areas for improvement. The findings reveal both strengths and specific elements that could be enhanced to better meet public expectations. This study contributes to ongoing efforts to improve public service quality in transportation facilities, promoting a more comfortable and efficient environment for passengers.

Keywords: *Public Services; Transportation; Public Transportation; Waiting Area; Comfort*

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INTRODUCTION

Trains are a key mode of land transportation that significantly contribute to regional development and provide efficient mass transit solutions. In terms of operational costs, they are the most economical option available, as trains offer the lowest cost per distance traveled compared to other land transportation modes. Additional advantages include speed, safety, and environmental sustainability, making this mode particularly suitable for heavy and long-distance transport. (Baig et al., 2022)

Tegal Station (TG) is a Class A major railway station located at the border of Panggung and Slerok Villages in Tegal Timur, Tegal City, and is positioned at an elevation of 4 meters. This station runs in a north-south orientation. The northern direction of the railway line turns east toward Semarang, while to the south, the line bends west and subsequently splits into two branches: one leading to Brebes–Cirebon and the other to Slawi–Prupuk. (Ghosh et al., 2022)

With the growth of the population comes an increasing demand for transportation, particularly rail services. This growth necessitates enhancements in service capacity, speed,

safety, and comfort. The waiting area of the station, both indoors and outdoors, is frequently utilized by passengers. Therefore, to improve passenger comfort while waiting at the station, it is essential to consider and plan strategies that address these concerns, one of which involves the redesign of the waiting area, particularly at Tegal City Station.

METHOD OF RESEARCH

Research Location

The study was conducted at Tegal City Station, located at Jalan Semeru No. 16, Slerok, Tegal Timur District, Tegal City, Central Java 52125. The researchers specifically focused on the station's waiting rooms, including both indoor and outdoor areas.

Data Collection

The implementation of this research involved field observation methods, interviews, questionnaire completion, and anthropometric data measurement. The study was conducted in the waiting room of Tegal City Station, with the objective of evaluating the comfort level of the waiting area for prospective train passengers. The subjects of our research consist of prospective train passengers utilizing the waiting area of Tegal City Station. The analysis of the questionnaire has provided insights into the profiles of the respondents involved in our study (Soy & Tavacioglu, 2023).

Data and Tools

The tools used in the research are a roll meter used to measure the dimensions of the Tegal City Station waiting room, Google form, and equipped with a laptop/computer with the SPSS Version 27 software program above. The research material is the waiting room at Tegal City Station.

Data Collection

The questionnaire measurement tool is utilized to assess responses related to the research topic. The Likert scale method was employed to evaluate the questionnaire distributed to respondents. This scale is effective in transforming qualitative data into quantitative data, enabling researchers to measure individuals' attitudes, opinions, and perceptions regarding the comfort level of the waiting area at Tegal City Station. In this study, a 5-point Likert scale was implemented to gauge each variable, which includes the options of strongly disagree, disagree, agree, and strongly agree. Subsequently, these variables are assigned weights based on the anticipated responses to the questionnaire, ranging from 1 to 5.

The minimum requirement for a research questionnaire item to be deemed valid is that the calculated r value must exceed the table r value. An item is considered valid if its

calculated r value is greater than the corresponding table r value. In this study, a validity test was performed on 14 research samples.

FINDING AND DISCUSSION

1. Research Implementation

The implementation of this research utilized field observation methods, interviews, questionnaire completion, and anthropometric data measurement. The study took place in the waiting area of Tegal City Station, aiming to evaluate the comfort level of the waiting area for prospective train passengers.

2. Subjects

The subjects of our research consist of prospective train passengers utilizing the waiting area at Tegal City Station. The results of the questionnaire analysis provided insights into the profiles of the respondents who participated in our study.

a. Age

Based on the results of the questionnaire, the researcher determined that the respondents' ages ranged from 15 to 65 years.

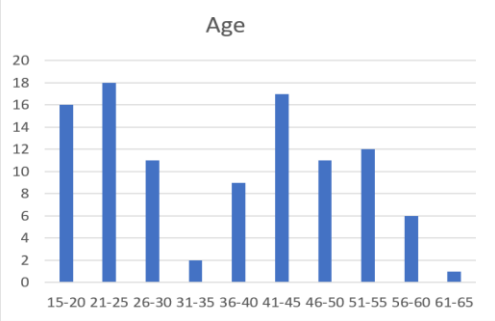


Chart 1: Age

b. Gender

The respondents comprise both men and women. Data collected by the researcher indicate that the majority of respondents are male, totaling 55%, while females account for 45%.

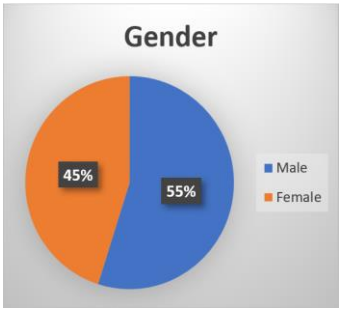


Chart 2: Gender

c. Occupation

The analysis of respondents' occupations reveals a diverse group, including housewives, private sector employees, students, university students, civil servants, and educational staff.

3. Comfort Level

The comfort level of the public facility examined in this study, specifically the waiting room at Tegal City Station, was assessed through a questionnaire completed by 100 individuals. The results indicate that the respondents' satisfaction with the facility is low. This finding suggests a need for enhancements in both ergonomics and overall comfort. Such improvements can be realized through the redesign of the structure and amenities of the waiting room.

a. Questionnaire Completion

The questionnaire consists of 15 questions that must be answered by users of the waiting room at Stasiun Kota Tegal. Below is a summary of the data for each question.

This question assesses the comfort level of the chair design in the waiting area outside Tegal City Station. The data is presented as follows:

1. I feel comfortable with the shape of the chairs in the waiting room outside Tegal City Station.

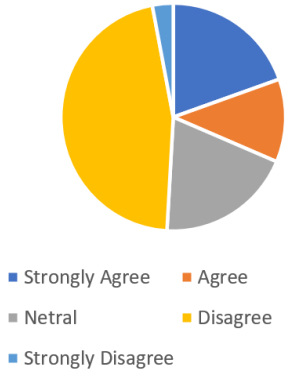


Chart 3: Question 1

2. I find the design of the chairs in the waiting room outside Tegal City Station to be quite appealing.

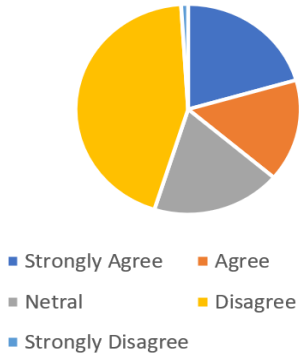


Chart 4: Question 2

3. I find the temperature in the outer waiting room of Tegal City Station to be comfortable.

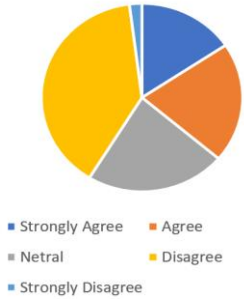


Chart 5: Question 3

4. I find the temperature in the waiting room of Tegal City Station to be comfortable.

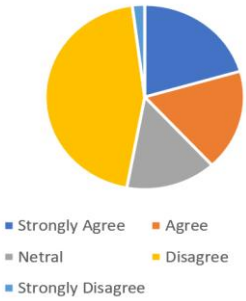


Chart 6: Question 4

5. Access to the **outdoor waiting room** of Tegal City Station facilitates my entry and exit.

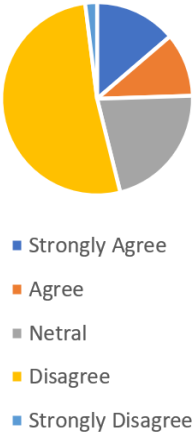


Chart 7: Question 5

6. Access to enter and exit the **waiting room inside** Tegal City Station makes it easier for me.

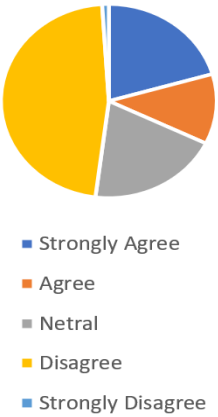


Chart 8: Question 6

7. The layout of the **outdoor waiting room** at Tegal City Station is organized and well-maintained.

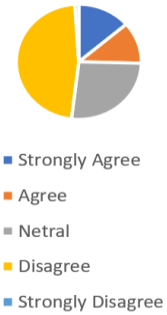


Chart 9: Question 7

8. The layout of the **inside waiting room** at Tegal City Station is organized and well-maintained.

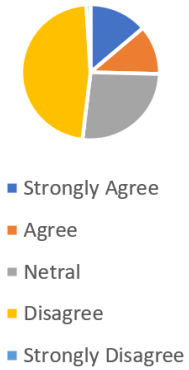


Chart 10: Question 8

9. The lighting in the waiting room of Tegal City Station is suitably arranged.

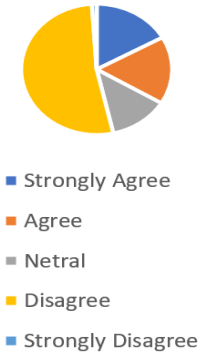


Chart 11: Question 9

10. The lighting in the **outside waiting room** of Tegal City Station is suitably arranged.

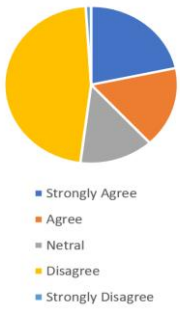


Chart 12 : Question 10

11. The conditions **outside the waiting room** at Tegal City Station are suitable for weather exposure.

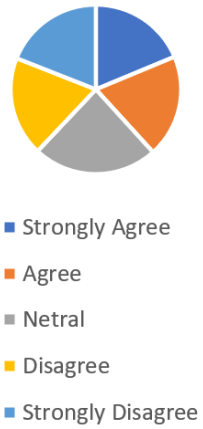


Chart 13: Question 11

12. I feel comfortable with the conditions **outside the waiting room** at Tegal City Station.

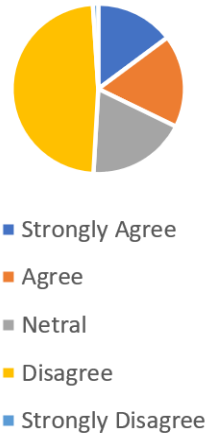


Chart 14: Question 12

13. The waiting room at Tegal City Station is designed to be accessible for children, the elderly, and individuals with disabilities.

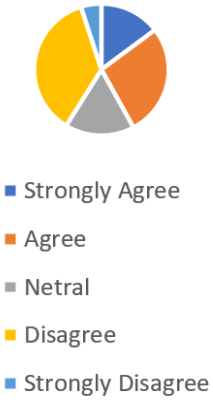


Chart 15: Question 13

14. The station's waiting room includes a lactation room for breastfeeding mothers.

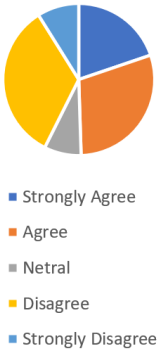


Chart 16: Question 14

b. Direct Observation

The findings from the observation and examination of the physical condition of the waiting area at Tegal City Station are as follows:

c. Existing Waiting Room Data

The current waiting room, both indoors and outdoors, features hard and uncomfortable seating materials, an elevated temperature, and a somewhat disorganized layout with inadequate lighting. It is equipped with only one entrance and one exit. Furthermore, the exterior is exposed to weather elements.

d. Results of Validity and Reliability Testing

Case Processing Summary

		N	%
Cases	Valid	100	100.0
	Excluded[a]	0	.0
	Total	100	100.0

a. Listwise deletion based on all variables in the procedure.

From the output results using the SPSS Version 27 software above, the validity value obtained with the number of data (N) of 100 is 100%, which means that all the data are valid.

Reliability Statistics

Cronbach's Alpha	N of Items
.774	15

From the output table above, it can be seen that the number of samples or respondents (N) analyzed in SPSS Version 27 software, there are 15 items with a Cronbach's Alpha value of 0.774. Because the Cronbach's Alpha value of 0.774> 0.60 it can be concluded that all items in the distrbuted gform are reliable or consistent.

e. Interview Results

The findings from analysis of public satisfaction with the comfort of the waiting area at Tegal Station reveal that the current waiting area is uncomfortable for users due to several factors. These factors include the insufficient size of the outdoor waiting area to accommodate the number of individuals, resulting in some needing to sit on the floor; seating that is unsuitable for elderly users; inadequacies in the outdoor waiting area during rainy conditions; and uncomfortable temperatures in the outdoor waiting area during hot weather. Furthermore, the arrangement of the waiting area inside the station is poorly organized, with the placement of seats obstructing the pathway for passengers traveling from the train to the exterior of the station.

CONCLUSION AND RECOMMENDATION

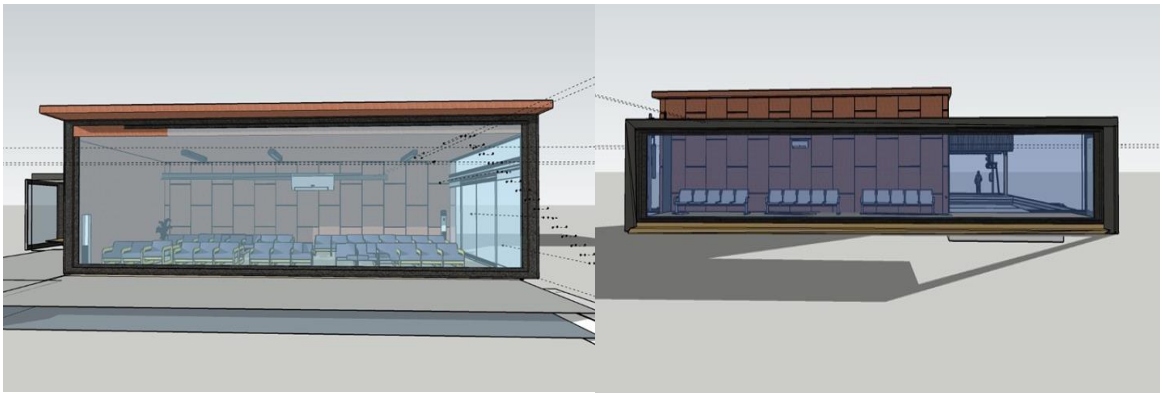
The research conducted indicates that the waiting area conditions at Tegal City Station are unsatisfactory for prospective passengers. Key findings include an unorganized arrangement of the waiting area, which appears cluttered; insufficient seating in the outdoor waiting area; high temperatures that contribute to discomfort; and the presence of only one entrance and one exit. Additionally, the station does not offer a lactation room for passengers and lacks amenities that would make it more accommodating for children, the elderly, and individuals with disabilities. Therefore, several enhancements are necessary to ensure that the waiting area at Tegal Station aligns with the principles of comfort, ergonomics, and safety for its users.

Several improvements, specifically redesigns, are necessary to ensure that the waiting area of Tegal Station meets the criteria of comfort, ergonomics, and safety for its users.

Redesign is the process of modifying or enhancing an existing design to improve, update, or adapt it to better fulfill specific needs or objectives. This process can encompass various aspects, including aesthetics, functionality, ergonomics, and efficiency. In this context, redesign may involve changes to physical products, user interfaces, organizational

structures, and more.

Redesign can effectively address weaknesses or shortcomings in the previous design, ultimately resulting in a higher quality product or system. By updating a product or system, redesign enables alignment with the latest technology. Furthermore, it allows for adjustments based on user feedback, making the product or system more user-friendly. Here are the results of the Research Object redesign project.



Picture 1: Redesign

REFERENCES

Bush, P. M. (2013). Ergonomics: Foundational Principles, Aplications, and Technologies. CRC Press. New York; 2012. In *Journal of Chemical Information and Modeling* (Vol. 53, Issue 9).

Hutabarat, J. (2017). *Dasar Dasar Pengetahuan Ergonomi.* Malang: Media Nusa Creative.

Kartikasari, D., & Widyarini, E. (2007). *Perencanaan Jalur Ganda Kereta Api Dari Stasiun Pekalongan Ke Stasiun Tegal*. http://eprints.undip.ac.id/34211/5/1744_chapter_II.pdf

Rijanto, B. (2011). *Pedoman Pencegahan Kecelakaan di Industri.* Jakarta: Mitra Wacana Media.

Sulianta, F. (2010). *IT Ergonomics Edisi 1.* Jakarta: PT Flex Media Komputindo.

Baig, F., Zhang, D., Lee, J., & Xu, H. (2022). Shaping inclusiveness of a transportation system: Factors affecting seat-yielding behavior of university students in public transportation. *Transportation Research Part A: Policy and Practice*. https://doi.org/10.1016/j.tra.2021.11.004

Ghosh, T., Kanitkar, T., & Srikanth, R. (2022). Assessing equity in public transportation in an Indian city. *Case Studies on Transport Policy*. https://doi.org/10.1016/j.cstp.2022.10.007

Soy, O., & Tavacioglu, L. (2023). Satisfaction of Istanbul Citizens with Urban Public Transportation. *Transactions on Maritime Science*. https://doi.org/10.7225/TOMS.V12.N01.017