The effect of public space availability on children's creativity (case study: Taman Sari kota Banda Aceh)

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Abstract. The purpose of this study was to determine the effect of Taman Sari as a public space on children's creativity, what factors were the most influential of public space facilities on children's creativity, and how much the Taman Sari facility was structured for children. The research location was Taman Sari, a City Park, in Baiturrahman Sub-District, City of Banda Aceh. Primary data collection was done by dividing the questionnaire. This research was conducted by multiple linear regression analysis. The results showed that the existence of Taman Sari with its variables (accessibility, facilities, environment, and comfort), together, had a significant effect on children's creativity. The factors that have the highest impact on children's creativity were facilities and comfort. Taman Sari at present, 2019, has undergone improvements and handling. There are many improvements in both quantity and quality facilities. The government has been performing marked improvement to make Taman Sari as a public space.

1. Introduction

A city park is one form of public spaces that are widely used by various communities to carry out various types of activities. Based on the Minister of Public Works Regulation of No. 05/PRT/M/2008, the city park is an open space that some of the purposes are for social and aesthetic functions such as recreational- and educational activities. City park also has a purpose as an urban green open space. A good city facilitates activities of the communities, including children [1].

In general, public space should have the ability to support human needs for gathering and interacting with each other. The good-handled public space can produce activities between people who do not know each other beforehand. Public space is expected to inspire the public to be smarter, innovative, and creative. Public space should be accessible for- and free of charge by the city people from various walks of life. Community and children need public space. Children who perform beneficial- and cultural activities in their leisure time would have a bright future; Contrastly, children, who spent time for negative activities, could disturb their achievement and the society’s comfort and safety.

Taman Sari is one of the most popular public spaces in the city of Banda Aceh. Taman Sari is now a choice of family recreation destinations. Taman Sari has several advantages, including mileage that does not require a long time which is located in the middle of the city. Also, Taman Sari is equipped with public facilities that support the creativity of the community, especially children. In accordance with its function as a public space, Taman Sari, which is located in the city center and among the office areas, should be a comfort-, safe-, secure-, healthy place for children to develop their creativity.
For this reason, this study is intended to see the effect of Taman Sari as a public space on children's creativity. This study could be an input to the relevant agencies in implementing several strategies, namely, socializing and improving the functions of Taman Sari as the public and the open space city.

2. Methodology
Yudistira (2015) did research studying Taman Sari’s existing conditions. Based on the research, Taman Sari has a score of 1-2 (bad-moderate), which means that many existing facilities in Taman Sari are damaged or not available. For this reason, further handling by the city government is needed to pay more attention to the maintenance of existing facilities in Taman Sari so that residents of the City of Banda Aceh can increase their visit to Taman Sari. As a result, in this case, the writer wants to examine the existence of the Taman Sari again nowadays. The author wants to connect several aspects that are related to creativity.

2.1. Definition of public space
Public space is an abstract space for the public to express opinions or oppose other opinions based on the principle of freedom of responsibility [2]. Public space is a place for communal activities where community interaction takes place in a variety of activities.

Public space is a space in which people's conversations, ideas, and thoughts meet [3]. Pro contra is the main element of the public sphere to find solutions for various social problems.

2.2. Criteria and indicators of public space
Criteria and indicators for designing public spaces can be seen in table 1 as follows.

Table 1. Criteria and indicators for designing public spaces.

| No. | Criteria          | Indicator                                                                 |
|-----|-------------------|---------------------------------------------------------------------------|
| 1   | Accessibility     | Location is easily accessible                                               |
|     |                   | The garden is accessible for children                                       |
|     |                   | There is public transportation integrated into the park                    |
| 2   | Facilities        | Playing facilities                                                         |
|     |                   | Learning facilities                                                        |
|     |                   | Talent development facility                                                |
|     |                   | Recreational facilities                                                    |
| 3   | Environment       | Availability of vegetation                                                 |
|     |                   | There is space to interact                                                 |
| 4   | Convenience       | There is a pedestrian path                                                 |
|     |                   | Cleaning facilities                                                        |
|     |                   | Adequate parking area                                                       |

2.3. Children's creativity
Creativity is the ability of a person to produce to something new, in the form of ideas and the real works and in the form of new works and combinations of things that already exist, all of which are relatively different from what has been there before [4]

Aspects and indicators in assessing a child's creativity can be seen as follows:
1. Flexibility among them, generating varied ideas, answers or questions, ability to see problems from different perspectives and look for many different alternatives or directions.
2. Originality, which means that the person able to produce new and unique expressions, think of
unusual ways to express himself or herself, and have a strong will to complete the task.

3. Elaboration, which includes responding to questions passionately, completing tasks actively and eagerly, daring to accept or carry out heavy tasks, being happy to find practical methods or methods of learning, and asking questions aggressively.

4. Fluency, which includes sparking lots of ideas, answering, solving, or questioning problems, and being independent in learning.

2.4. Research method
The research method used is a combination of qualitative and quantitative approaches.

2.5. Research location
The research location was Taman Sari, a city park located in Baiturrahman Sub-District, the City of Banda Aceh. Taman Sari is one of the public spaces in the City of Banda Aceh.

2.6. Population and samples
The population in this study was 125 visitors per day. The sample calculation was done using the Slovin formula [5]. The sample in this study was 95 visitors.

2.7. Data processing
Data processing was done by multiple linear regression analysis using SPSS software.

3. Results and discussion
From the results, the linear regression calculations can be written in the following equation.

\[ Y = 19.628 + 0.08X1 + 0.510X2 + 0.023X3 + 0.523X4 \]

3.1. Correlation test and determination coefficient (R2)
To test and assess the significance of the estimates obtained from multiple linear regression equations, several correlation tests were conducted, and the coefficient of determination about the relationship and influence of accessibility variables (X1), facilities (X2), environment (X3) and comfort (X4) on children's creativity (Y) was discussed. Coefficient of determination and correlation model summary is shown in table 2 as follows.

| Model | R       | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---------|----------|-------------------|---------------------------|
| 1     | 0.710(a)| 0.504    | 0.482             | 1.93165                   |

Table 2. Coefficient of determination and correlation model summary.

The correlation coefficient (R) was = 0.710, which indicates that the degree of relationship between the independent variable and the dependent variable was 71.0%. This means that based on the table of interpretation of the correlation coefficient, the value of 0.710 lies in the coefficient interval 0.60 - 0.799, then the level of the relationship was said to be strong between accessibility factors (X1), facilities (X2), environment (X3) and comfort (X4) with children's creativity.

Children's creativity in using Taman Sari as a public space is measured while the child is playing. Children's playing facilities in Taman Sari should be improved such as playground infrastructure for children, visitor accessibility, and an environment that makes visitors feel comfortable. Modern playgrounds usually have recreational tools such as seesaw, turntable, swing, slide, sandbox, seesaw, game house, and labyrinth. By playing, children have the value of the opportunity to express
something that he feels and thinks. Also, by playing, children are practicing skills and developing themselves. In playing, children can develop coarse and fine muscles, increase reasoning, understand the sustainability of their environment, form the power of imagination fantasy power, and creativity.

The determination coefficient (R²) was 0.504. This means that 50.4% of changes in creativity can be explained by changes in accessibility factors (X₁), facilities (X₂), environment (X₃), and convenience (X₄). While the rest, which was equal to 49.6%, was explained by other variable factors outside of this study.

3.2. F Test
In order to test the hypothesis regarding the determination of accessibility significance (X₁), facilities (X₂), environment (X₃), and convenience (X₄) on creativity, F tests were carried out as well. Test results can be seen in the following table.

| Model  | Sum of Squares | df | Mean Square | F       | Sig. |
|--------|----------------|----|-------------|---------|------|
| 1      | Regression     | 341.490 | 4 | 85.372      | 22.880  | 0.000(a) |
|        | Residual       | 335.816 | 90 | 3.731      |         |      |
| Total  |               | 677.305 | 94 |           |         |      |

a. Predictors: (Constant), Comfort, Environment, Facilities, Accessibility
b. Dependent Variable: Creativity

The ANOVA or F test results (F_count value) in the table above is 22.880, while F_table at the significance level α of 5% was 2.473 with a significance level of 0.000, which is smaller than 5%. As a result, F_count > F_table, H_a was accepted, and H_0 was rejected. This means that accessibility, facilities, environment, and comfort significantly influence children's creativity.

3.3. t Test
The t test was performed in this research.

a. Accessibility variables (X₁)
   For accessibility variables (X₁), t_count = 0.338, while t_table = 1.662. The results of this calculation indicate that t_count < t_table with a significance of 0.000 or a probability above α = 5%. From these results, it can be concluded that partially the accessibility variable did not significantly influence children's creativity.

b. Facility variable (X₂)
   In terms of facility variables (X₂), t_count = 3.249, while t_table = 1.662. The results of this calculation indicate that t_count > t_table with a significance of 0.000 or a probability above α = 5%. From these results, it can be concluded that partially the facility variables significantly influence children's creativity.

c. Environment variable (X₃)
   In terms of environmental variables (X₃), t_count = 0.117, while t_table = 1.662. The results of this calculation indicate that t_count < t_table with a significance of 0.000 or a probability above α = 5%. From these results, it can be concluded that partially the environmental variables did not significantly influence children's creativity.

d. Variable convenience (X₄)
   For comfort variables (X₄), t_count = 3.112, while t_table = 1.662. The results of this calculation indicate that t_count > t_table with a significance of 0.000 or a probability above α = 5%. From these results, it can be concluded that partially the comfort variable has a significant effect on children's creativity.
Based on the results of the tests described above, the results that facilities and comfort in this study have significantly affected the creativity of children. This can be seen from the $t_{\text{count}} > t_{\text{table}}$ with a significance level below $\alpha = 5\%$.

4. Conclusion

Based on the results of the research, data processing, and discussions that have been carried out, several conclusions and suggestions can be taken, including:

1. The existence of Taman Sari, with its variables of accessibility, facilities, environment, and comfort, has a significant effect on children's creativity. $F_{\text{count}}$ was 22.880, while $F_{\text{table}}$, at a significance level of $\alpha = 5\%$, is 2.473 with a significance level of 0.000, which is smaller than 5\%. As a result, $F_{\text{count}} > F_{\text{table}}$, $H_a$ was accepted, and $H_0$ was rejected.

2. The main factors that influence children's creativity are facilities and comfort. This can be seen from the fact that $t_{\text{count}} > t_{\text{table}}$ with a significance level below $\alpha = 5\%$. For facility variable (X2), $t_{\text{count}} = 3.249$, while $t_{\text{table}} = 1.662$ with a significance of 0.000. For comfort variable (X4), $t_{\text{count}} = 3.112$, while $t_{\text{table}} = 1.662$ with a significance of 0.000.

3. The facilities at Taman Sari has been improved. There are many improvements in facilities both in quantity and quality. The role of the government, in this case, the relevant agencies, is very intense in striving for Taman Sari to be a public space that can be utilized maximally by visitors.

References

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