Correlation between Age and Community Hygiene at Jodipan Tourism Village and Blue Arema Village, Malang, East Java, Indonesia

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Abstract. Malang City has quite new tourist destinations, namely Jodipan Tourism Village and Blue Arema Village. The two tourist destinations were originally slums area which were built in accordance with the regional structuring program of Malang City Government. The existence of the village provided a number of changes for the community, that need to be studied is the hygiene of the community in the two villages. The purpose of this study was to determine the correlation between age and community hygiene at Jodipan Tourism Village and Blue Arema Village. The research method used was quantitative descriptive by giving questionnaires to 23 people at Jodipan Tourism Village and also 25 people at Blue Arema Village. Data were analyzed by Pearson correlation if the data were normal or Spearman correlation if the data were not normal. The results showed that age and community hygiene at Jodipan Tourism Village were not normally distributed with p = 0.403 > α = 0.05, which means there was no correlation between age and community hygiene at Jodipan Tourism Village. While the data of age and community hygiene in Blue Arema Village were normally distributed with p = 0.840 > α = 0.05, which means there was no correlation between age and community hygiene in Blue Arema Village. Thus, it can be concluded that there was no correlation between age and community hygiene in Jodipan Tourism Village and Blue Arema Village.

Keywords: community hygiene, Jodipan Tourism Village, and Blue Arema Village.

1. Introduction
One of the environmental problems caused by population density is the emergence of slums [1,2,3]. Slum settlement is an area with very poor public housing conditions [4]. Indicators of slum settlement are lack of facilities and infrastructure, such as clean water services, environmental sanitation conditions, waste conditions, drainage conditions, road conditions, and Green Open Space [5]. Slums are usually found in big cities, including in Malang City. One of the causes of settlement slum is the tendency of people to dispose of waste into the river area.

Malang City has a history of slum settlements, but now it has begun to be repaired through a regional structuring program from the Malang City Government [3,6]. The area is Jodipan Tourism Village and Blue Arema Village. Jodipan Tourism Village is a village painted with a variety of striking colors in the...
Jodipan Village, Blimbing District. The Jodipan Tourism Village consists of 1 RW, which is divided into 5 RT, namely RT.05, RT.06, RT.07, RT.08 and RT.09. As for the houses that are used as tourist villages namely houses on RT.06, RT.07 and RT.09 [7, 8]. While Blue Arem Village is a village which is a blue nuance village in Kidul Dalem Village, Klojen District, Malang City. Blue Arem Village is adjacent to Jodipan Tourism Village and Tridi Village [9].

The existence of Jodipan Tourism Villages and Blue Arem Village is a new nuance in Malang City, which is known as a thematic village or character village in Malang City [9]. The village is now not too shabby, even now a tourist village. This certainly brings changes to the lives of the people, including economic, social, and environmental life in society [3]. The researcher was interested in researching the hygiene of the community in Jodipan Tourism Village and Blue Arem Village after the holding of a regional structuring program from the Malang City Government and the correlation with the age of the community.

2. Purpose
The purpose of this study was to determine the correlation between age and community hygiene and compare the hygiene at Jodipan Tourism Village and Blue Arem Village.

3. Methods

3.1 Type of research
Type of research is descriptive correlational by analyzing the correlation between age and community hygiene at Jodipan Tourism Village and Blue Arem Village.

3.2 Time & location
This research was carried out in Jodipan Tourism Village and Blue Arem Village in January-February 2019.

3.3 Population, sample, sampling technique
The population in this study were all people in Jodipan Tourism Village and Blue Arem Village. The sample in this study were 23 people in Jodipan Tourism Village and 25 communities in Blue Arem Village with ages ranging from 12 to 73 years. The sampling technique used was purposive sampling. Sampling is only based on the consideration of the researcher, only here the size and criteria of the sample have been determined in advance according to the objectives of the researcher.

3.4 Research instrument
The research instrument used was in the form of a closed questionnaire, namely a questionnaire that had a choice of answers, so that the sample only chose available answers and was not permitted to provide answers outside the choice of answers from researchers with the criteria in Table 1 [10, 11].

| Answer Category | Positive Statements | Negative Statements |
|-----------------|---------------------|---------------------|
| Very disagree   | 1                   | 5                   |
| Disagree        | 2                   | 4                   |
| Neutral         | 3                   | 3                   |
| Agree           | 4                   | 2                   |
| Very agree      | 5                   | 1                   |

3.5 Data collection technique
Primary data collection techniques using a questionnaire containing positive statements and negative statements related to environmental hygiene. The secondary data collection technique is done by looking for sources in journals, books, and the internet.
3.6 Data analysis

The correlation between age and community hygiene in Jodipan Tourism Villages and Blue Arema Village was analyzed by Pearson correlation analysis (if both data are normal). However, if the data is not normal then the analysis uses Spearman correlation. This correlation calculation uses the SPSS 16 application.

4. Results

Demographic characteristics of respondents in Jodipan Tourism Village can be seen in Table 2, while the demographic characteristics of respondents in Blue Arema Villages can be seen in Table 3.

| Table 2. Demographic characteristics of respondents in Jodipan Tourism Village |
|-----------------------------|-----------------|-----------------|-----------------|
|                            | Gender | Education | Work   | Age       |
| Total                      |        |           |        |           |
| Female                     | 14     | Not finished SD | 2 Private | 11 21-28 2 |
| Male                       | 9      | SD         | 5 Housewife | 9 29-36 4 |
|                            | SMP    | 8 Driver   | 3 37-44 3 |
|                            | SMA/SMK | 7          | 45-52 7 |
|                            | S1     | 1          | 53-60 7 |

| Table 3. Demographic characteristics of respondents Blue Arema Villages |
|-----------------------------|-----------------|-----------------|-----------------|
|                            | Gender | Education | Work   | Age       |
| Total                      |        |           |        |           |
| Female                     | 23     | SD         | 5 Trader | 3 12-22 2 |
| Male                       | 2 SMP  | 7 Housewife | 11 23-33 4 |
|                            | SMA/SMK | 11 Not work | 2 34-44 11 |
|                            | S1     | 1 Student  | 2 45-55 6 |
|                            | D3     | 1 Teacher  | 1 56-66 1 |
|                            |        | Private    | 6 67-77 1 |

The correlation between age and community hygiene in Jodipan Tourism Villages and Blue Arema Villages was calculated using correlation. Before calculating a simple linear correlation analysis, a normality test must be done. The results of the normality test for the age and community hygiene in Jodipan Tourism Villages can be seen in Table 4, while the results of the normality test for the age and community hygiene in Blue Arema Villages can be seen in Table 5.

| Table 4. Results of Normality Test for Age and Hygiene Data of Jodipan Tourism Village Community |
|-----------------------------------------------|-----------------|-----------------|-----------------|
|                                              | Kolmogorov-Smirnov* | Shapiro-Wilk |
|                                              | Statistic | Df  | Sig. | Statistic | df  | Sig. |
| Age                                         | .155      | 25  | .123 | .944      | 25  | .180 |
| Hygiene                                     | .321      | 25  | .000 | .714      | 25  | .000 |

a. Lilliefors Significance Correction

Based on the data above, p of age = 0.123 > α = 0.05, so that the age data of Jodipan Tourism Village community is normal, while p of hygiene = 0.000 > α = 0.05, so the data on the environmental hygiene...
of the Jodipan Tourism Village community was not normal. Because there are data that are not normally distributed, the next test uses Spearman Correlation.

**Table 5. Normality Test Results for the Age and Hygiene Data of the Blue Arema Village Community**

|                         | Kolmogorov-Smirnova | Shapiro-Wilk |
|-------------------------|---------------------|--------------|
|                         | Statistic | df | Sig. | Statistic | df | Sig. |
| Age                     | .118      | 25 | .200* | .980      | 25 | .882 |
| Hygiene                 | .152      | 25 | .137 | .912      | 25 | .034 |

a. Lilliefors Significance Correction

* This is a lower bound of the true significance.

Based on the data above, p of age = 0.200 > α = 0.05, so the age data of the Blue Arema Village community is normal, while p of hygiene = 0.137 > α = 0.05, so that the data on the environmental hygiene of the Blue Arema Village community is normal. Because the data is normally distributed, the next test uses Pearson Correlation.

The Spearman Correlation Test results regarding the relationship of age to the hygiene of the Jodipan Tourism Village community can be seen in Table 6, while the results of the Pearson Correlation Test on the relationship of age to the hygiene of the Blue Arema Village community can be seen in Table 7.

**Table 6. Correlation of Age with the Hygiene of Jodipan Tourism Village Community**

|                         | Age | Hygiene |
|-------------------------|-----|---------|
| Spearman's rho          | 1.000 | .175 |
| Age Correlation Coefficient |     |         |
| Sig. (2-tailed)         | .    | .403    |
| N                       | 25   | 25      |
| Hygiene Correlation Coefficient | .175 | 1.000 |
| Sig. (2-tailed)         | .403 | .      |
| N                       | 25   | 25      |

Based on the data above, p = 0.403 > α = 0.01, so there was no relationship between age and hygiene of the Jodipan Tourism Village community.

**Table 7. Correlation of Age with the Hygiene of Blue Arema Village Community**

|                         | Age | Hygiene |
|-------------------------|-----|---------|
| Age                     | 1   | .043    |
| Pearon Correlation      |     |         |
| Sig. (2-tailed)         | .    | .840    |
| N                       | 25  | 25      |
| Hygiene                 | .043 | 1      |
| Pearon Correlation      |     |         |
| Sig. (2-tailed)         | .840 | .      |
| N                       | 25  | 25      |

Based on the data above, p = 0.403 > α = 0.01, so there was no relationship between age and hygiene of the Blue Arema Village community. In addition to knowing the correlation between age and community hygiene in Jodipan Tourism Village and Blue Arema Village, it also compared the level of hygiene of the community in Jodipan Tourism Village and Blue Arema Village. The level of Blue Arema
Village in both villages was compared using the Mann-Whitney test because the data was not normal. The Mann-Whitney test data can be seen in Table 8.

**Table 8. The Correlation between Age and Community Hygiene in Jodipan Tourism Village and Blue Arema Village**

|                  | Hygiene in Jodipan Tourism Village and Blue Arema Village |
|------------------|----------------------------------------------------------|
| Mann-Whitney U   | 101.500                                                  |
| Wilcoxon W       | 377.500                                                  |
| Z                | -3.847                                                   |
| Asymp. Sig. (2-tailed) | .000                                                      |

Based on the Mann-Whitney test results above, it is known that p = 0.000 < \( \alpha \) = 0.05, so that there are differences in the level of hygiene of the community in Jodipan Tourism Village and Blue Arema Village.

5. Discussion

The results showed that age data and the level of hygiene of the community in Jodipan Tourism Village were abnormally distributed, with a significance value of Spearman correlation of 0.403, which means there was no correlation between age and level of hygiene of the community in Jodipan Tourism Village. While the data on age and level of hygiene of the community in Blue Arema Village are normally distributed, with a significance value of Pearson correlation of 0.840, which means there is no correlation between age and level of hygiene of the community in Blue Arema Village. Thus, there is no relationship between age and level of hygiene of the community, both in Jodipan Tourism Village and Blue Arema Village.

Age and level of hygiene of society is indeed not two things that are interrelated. Older people do not guarantee that they will maintain more environmental hygiene than young people, and vice versa. This depends on the education instilled from a young age, namely an understanding of the attitude of maintaining environmental hygiene. Everyone certainly has a different understanding of environmental hygiene, so it influences their attitudes and practices in life.

Hygiene generally refers to a set of practices related to health preservation and healthy living. The focus is mainly on personal hygiene which is reflected in the hygiene of hair, body, hands, fingers, legs and clothing, and menstrual hygiene. Environment is everything that surrounds us, includes all influences and external conditions that can affect our health, life and growth [12]. Thus, environmental hygiene is a practice related to the preservation of health and healthy living around us.

Environmental hygiene indicators include the use of clean water for drinking with access to dry season water that is safe in 300 meters, environment free from all faecal problems, habit of washing hands with soap after contact with faeces before touching food [13, 14, 15, 16], handling problems with menstrual hygiene [13], the habit of practicing hygiene behavior and saving clean water use [13, 14, 16], and the habit of using sanitation facilities [16, 17].

The age of the people who were used as respondents in Jodipan and Blue Arema Village villages were mostly 34-55 years old, namely the adult group. Most of his livelihoods are traders, while the dominating level of education is Senior High School (SMA). Only 1 respondent graduated (S1), both in Jodipan Tourism Village and Blue Arema Village. In addition to age, the level of education of this community is also very influential in terms of environmental hygiene. This can be seen from the filling out of the questionnaire conducted by one of the respondents who graduated from the bachelor degree. The respondents were fluent in completing questionnaires, and scores on environmental hygiene also
received high scores. Here it can be emphasized that the role of education is very important in supporting awareness of the environment, including environmental hygiene.

Education in higher education has a very vital role in the development of science, with the ultimate goal of improving the quality of human resources. Higher education does not only function to provide skills that are in accordance with the needs of the workforce but more than that provides insight, vision, wisdom, power of innovation, rapid learning power of the situation, critical reasoning power, and personality. Universities with all activities in them are an integral part of their environmental system [18]. Thus, the component of higher education will experience an interactive relationship with its environmental components. The existence of a relationship between the environmental subsystem and the education subsystem can be calculated and used as an illustration of support for education. Students have a great moral responsibility to preserve the environment. Students must be a good example for the community to preserve the environment [19].

Students must also be pioneers in environmental management. Effective environmental management depends on our efforts to adopt environmental ethics well in our behavior [20]. The behavior shown is behavior that reflects an environmentally friendly attitude and the ability to maintain biodiversity that can support life. Thus, education must be used as a means of effectively establishing attitudes and concerns for the environment [21].

Inadequate education, in the sense of not providing information about environmental problems will lead to a lack of knowledge that is owned by the community which can then result in the emergence of an attitude of less caring for the community which can then result in the emergence of a caring attitude towards the environment. Conversely, through intensive education it is very possible to improve the quality of positive attitudes and behavior towards the environment, because through education can be realized mental readiness and the tendency to behave positively towards a particular object which in this case is the environment. Education for our human resources that are related to environmental preservation is an important thing to empower [22]. Changes in human attitudes that we hope will depend on broad promotion through education, discussion and public participation [23].

Furthermore, there were differences in the level of hygienie of the community in Jodipan Tourism Village and Blue Arema Village. Based on the average level of hygiene that has been filled through questionnaires, the average hygienie level in Jodipan Tourism Village is 68.39, while the level of hygienie in Blue Arema Village is 75. This shows that environmental hygienie in Jodipan Tourism Village and Blue Arema Village is actually sufficient, but still there are some people who still lack environmental hygiene. The level of hygienie of Blue Arema Village community is higher than Jodipan Tourism Village. This is also in accordance with the results of observations, that the community in Blue Arema Village is indeed more active in protecting the environment, so that the surrounding environment becomes hygienie. The community in Blue Arema Village looks more orderly in protecting the environment, even planting vertical gardens is done, and has a place to cultivate plants and fish. While people in Jodipan Tourism Village are still found there are those who dispose of litter in the river and still lack attention to cleanliness because they are busy with trading.

6. Conclusion

Thus, it can be concluded that there is no relationship between age and level of hygienie of the community in Jodipan Tourism Village and Blue Arema Village and there was a difference the level of hygienie in Jodipan Tourism Village and Blue Arema Village.

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