

# The Influence of Cultural Heritage Status on the Quality of Life of Slum Settlement Community

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## Abstract

Surabaya is a fast-growing city facing challenges in infrastructure development, posing a threat to cultural heritage and historic areas. The Kalimas area has been abandoned, negatively impacting the environment. Cultural heritage is valuable as it instills pride, holds significance in civilization, and can improve the quality of life (QOL). The World Health Organization (WHO) defines the quality of life as an individual's perception of differences in life based on culture and the surrounding environment. This study aims to determine the impact of physical conditions in slum settlements on the QOL of the community and identify the slum settlement variables that can improve residents' QOL. The study uses a quantitative approach with analytical techniques such as literature review and multiple linear regression to analyze land characteristics, socio-economic factors, and physical characteristics. QOL is measured using the WHOQOL questionnaire. The data collection methods include secondary data from the Department of Housing, Settlement Areas and Land, and Bappedalitbang of Surabaya City, as well as primary data from observations, questionnaires, and interviews with the research sample. The results indicate that slum settlement variables significantly affect four domains of QOL: physical health, psychology, environment, and social relationships. However, physical characteristics partially do not affect the psychological, environmental, and social relationship domains.

**Keywords:** QOL; Slum settlement; Cultural heritage.

The rapid development occurring in a city, encompassing the essential needs for infrastructure development from economic to residential areas, has resulted in a shift in development focus. Old buildings and historic areas that once served as government and economic centers are gradually being abandoned and, in some instances, damaged by irresponsible

individuals. Cultural heritage is considered instrumental in enhancing the quality of human life, imbued with value and pride in civilization. Consequently, efforts to protect cultural heritage have garnered international attention over the last 50 years (Nuruddin, 2022). Preserving a historical area is intimately connected to the

identity of a place, influencing the quality of life of its inhabitants.

To date, there is no universally accepted concept of quality of life, given its presence across various scientific fields. The World Health Organization (WHO) perceives quality of life as an individual's subjective assessment of life, contextualized within culture and the surrounding environment. Another perspective suggests that quality of life is linked to an individual's physical living conditions and their perception of life—essentially, the interplay between life indicators and the environment (Kladivo & Halás, 2012). Thus, the physical condition of the surrounding environment stands out as a significant factor influencing the quality of life.

The metropolitan city of Surabaya is currently undergoing rapid development, especially in infrastructure, jeopardizing the preservation of cultural heritage and historical areas within the city. During the Dutch colonial period, the focal point of development was North Surabaya, known as the Old City, concentrating the cultural heritage areas on the north side. However, post-independence and in tandem with the evolving activities and land requirements in Surabaya, development shifted towards West and East Surabaya, leaving the Old City area in North Surabaya neglected (Putra, 2016). Consequently, North Surabaya, once the epicenter of city activities, is undergoing a functional transformation (Maulidyah & Jatningsih, 2019). This development direction has also led to the abandonment of ancient settlements in North Surabaya, resulting in many buildings losing their vibrancy and identity (Idajati, 2014). Additionally, informal residences are proliferating in cultural heritage areas, evident in the Cultural Heritage Villages with indications of slum settlements spread across Surabaya (Crysta & Budisusanto, 2017), including ancient settlements along the Kalimas River (Paramita, E. K., Suprobo, F. P., & Mutfianti, 2017) situated in the Pabean Cantian District, divided into 12 RWs (BPS, 2022).

The Kalimas River in Surabaya is the longest in the city and provides numerous benefits for its residents. During the Dutch colonial period (19th-20th century), the Kalimas River area played a pivotal role in Surabaya's growth, serving as a catalyst for the development of the city as a port and trade center (Dzul-Qo'dah, 2016). Over time, the area along the Kalimas River has evolved into both a residential and economic hub. However, with the aforementioned development conditions in the City of Surabaya, the Kalimas area is now being overlooked, abandoned, and its settlements are experiencing adverse effects on their physical condition. According to Ministerial of Public Works' Regulation No. 14 of 2018, the physical condition of the settlement, encompassing buildings, infrastructure, transportation, roads, and other structures, falls under the classification of slum areas. If these physical conditions remain unaddressed, the slum will likely expand, significantly impacting the quality of life for those residing in the area. Furthermore, cultural heritage areas face limitations in development interventions, restricting actions to preservation, reconstruction, rehabilitation, and revitalization. This limitation may impede efforts to enhance the physical environment and subsequently affect the community's quality of life.

Residents of slum settlements are often associated with low quality of life and poor health (Kharisma, 2020). Slum settlements are deemed unsuitable for habitation, characterized by building irregularities, high building density, and inadequate building quality, facilities, and infrastructure that fail to meet quality of life standards (Ministry of Public Works and Public Housing, 2018). When considering the quality of life, health, environment, and housing conditions are crucial aspects to discuss (Gil-Lacruz et al., 2022). This research aims to identify the influence of the physical conditions in slum settlement environments on the quality of life of their residents based on the conditions observed in settlements along the northern Kalimas River. Despite being a cultural heritage area requiring

attention and protection for its physical environmental conditions, the residents of Surabaya City, particularly those along the Kalimas River, deserve a high quality of life. It is hoped that this research will identify slum settlement variables that can positively impact the residents' quality of life.

METHOD

Data collection methods were employed to gather primary and secondary data. Primary data collection involved observations, questionnaires, and interviews with research samples. Secondary data were collected through agency surveys conducted at the Department of Housing, Settlement Areas, and Land, as well as Bappedalitbang of Surabaya City.

This research adopts a quantitative approach with Multiple Linear Regression analysis techniques due to the presence of multiple independent variables (Sugiyono, 2021). The collected data were based on measurements provided by the WHOQOL-BREF, consisting of 26 items classified into four domains of quality of life: physical health, psychological health, social relations, and environment. These items

are widely acknowledged for their validity and reliability (Salim, Sudharma, Kusumaratna, & Hidayat, 2016). Quality of Life measurements were conducted using the WHOQOL questionnaire (WHO, 1996).

The questionnaire instrument underwent reliability testing, with a calculated Alpha Cronbach > 0.6 and an r test exceeding the table r (Septiwi, 2011). To assess reliability, the following limits were applied: less than 0.6 considered not good, 0.6 to 0.79 deemed acceptable, and above 0.8 to 1 considered good with high consistency (Priyanto, 2014). Subsequent tests included classic assumption assessments, comprising normality, heteroscedasticity, and multicollinearity tests.

For normality, data is considered normally distributed if the significance is  $\geq 0.05$  (Priyanto, 2014). A good model is characterized by the absence of heteroscedasticity, determined when the significance value is  $> 0.05$  (Ghozali, 2018). A desirable regression model exhibits no multicollinearity, meaning there is no correlation between independent variables. A VIF value  $< 10$  and a tolerance number  $> 0.1$  are indicative of a sound model. Table 1 presents the variables used in the research.

Table 1. Research Variables

Variables	Sub-variables	Indicators	Sources:
Slum settlement (X)	Physical	Location (X1.1)	(Togubu, Warouw, & Tarore, 2014a)
	Character (X1)	The physical condition of the building (X1.2)	
		Condition of Infrastructure and Facilities (X1.3)	
	Social economy character (X2)	Demography condition (X2.1)	
		Income level (X2.2)	
		Type of work (X2.3)	
Education (X2.4)			
Land status (X3)	Land status (X3.1)		
Quality of Life (Y)	Environment (Y1)	Financial resources (Y1.1)	(WHO, 1996b)
		Freedom, security, and physical comfort (Y1.2)	
		Health and social care: accessibility and quality (Y1.3)	
		Home environment (Y1.4)	
		Opportunities to acquire new information and skills (Y1.5)	
		Participate in recreation and free time	

Variables	Sub-variables	Indicators	Sources:
		opportunities (Y1.6)	
		Physical environment (pollution, noise, climate, traffic) (Y1.7)	
		Transportation (Y1.8)	
	Social Relations (Y2)	Personal relationships (Y2.1)	(World Health Organization, 2012)
		Social support (Y2.2)	
		Sexual activity (Y2.3)	
	Physical Health (Y3)	Daily life activities (Y3.1)	(Directorate of Settlement Development Directorate General of Human Settlements Department of Public Works, 2006)
		Dependence on drugs and medical assistance (Y3.2)	
		Energy and fatigue (Y3.3)	
		Mobility (Y3.4)	
		Pain and discomfort (Y3.5)	
		Sleep and rest (Y3.6)	
		Working capacity (Y3.7)	
	Psychological Health (Y4)	Body shape and appearance (Y4.1)	
		Negative feelings (Y4.2)	
		Positive feelings (Y4.3)	
		Self-esteem (Y4.4)	
		Spirituality or belief (Y4.5)	
		Thinking, walking, memory, and concentration (Y4.6)	

The research also investigates slum settlement indicators. These indicators include physical characteristics such as building conditions, social characteristics, namely population and income, and land characteristics, namely land and house ownership status (Togubu, 2014). Based on these indicators, we found out which ones influenced the quality of life. The calculation weight for the level of slums can be categorized into light slums, with a total score of 2 - 2.9; moderate slums (total score of 3 - 4.9); heavy slums (total score > 5).

Descriptive analysis was also an important part of this research, particularly to describe, simplify and present sample data in a form that is easier to understand (Kurniasari, 2022). Information obtained from secondary data was explained descriptively and normatively based on the existing condition (Saraswati, 2015), while primary data was analyzed intensively including behaviour, characteristics, and other existing data (Satria & Navitas, 2016). Qualitative data analysis was conducted interactively and continuously until all important information was found (Restita, 2020). Based on

those analyses, conformity between primary data and secondary data was obtained.

## RESULTS AND DISCUSSION

### 3.1 Characteristics of the Research Sample

The respondents in this study were residents of the Cultural Heritage Area around the Kalimas River. Respondents were divided into residents of non-cultural heritage settlements, residents of buildings suspected of being cultural heritage, and residents of cultural heritage buildings that the government had designated. Table 2. Data was obtained based on a primary survey conducted by researchers.

Table 2. Research samples

Respondent type	Number of people
Settlement residents (non-heritage buildings)	102
Occupants of buildings that tend to be cultural heritage	55
Occupants of Cultural Heritage Buildings	5
Total	162

3.2 Identification of Slum Settlement Indicators

Identification of slum settlement indicators was carried out using a primary survey technique, namely a questionnaire. The question items are divided into 3 variables, namely physical, socio-economic, and land

characteristics. The total number of questions in the questionnaire is 18 questions. The characters of settlement (light, medium, and high slums) are addressed to 13 neighbourhood units (RW) in the study area. The following Table 3. shows the results of the slum assessment based on the responses to the questionnaire.

Table 3. Slum Settlement Classification

Neighbourhood (RW)	Number of Buildings	Total Score	Classification of Slum	3 Examples of Heritage Buildings: a) top to c) bottom	
RW1	4	3,0	Medium	a)	<i>Havenmeester tower</i> (view
RW 2	3	3,5	Medium		
RW 3	5	3,2	Medium		
RW 4	7	3,5	Medium		
RW 6	10	3,0	Medium		
RW 7	8	3,0	Medium		
RW 8	7	3,0	Medium		
RW 9	8	3,8	Medium		
RW 10	11	3,4	Medium		
RW 11	17	3,6	Medium		
RW 12	11	3,3	Medium		
RW 1 Ampel	11	3,3	Medium		
	Average score	3,3	Medium		
Classification of Building	Number of building	Average score	Classification of slum		
Buildings that can be classified as cultural heritage	51	3,2	Medium		
Cultural heritage residential buildings			Medium		
	3	3,3			

a) *Havenmeester tower* (view



b) *Langgar* (prayer home) Gipo



c) House of Qur'an



Based on the data in Table 3. Above, all research areas are classified as moderate slums, although with varying scores. The government is making serious efforts to improve the condition of existing facilities and infrastructure

throughout its territory. This has the potential to make this area free from slums. Because it is currently at a moderate slum level, things can potentially improve (light slums) or worsen (high slums). The increase in population is in line with

increasing environmental damage. It is feared that this condition will continue to occur in the future. So, if the synergy between the government, agencies, and citizens does not work well it will worsen the condition of this region.

### 3.3 Quality of Life

#### 3.3.1 Quality of Life of Cultural Heritage Building Residents

Quality of life identification is carried out in cultural heritage buildings in the study area. The total cultural heritage in the study area is 7 buildings. However, 2 buildings are empty and 2 other buildings are unoccupied. So in Table 4. as a sample there are 3 cultural heritage buildings.

Table 4. Quality of Life of Cultural Heritage Building Residents

Name	Raw scores				Transformed scores				Score	Classification
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4		
Har	28	11	33	27	63	69	94	88	78.5	Very good
Fransisca	37	12	34	29	94	75	94	94	89.25	Good
Abdullah	40	15	35	30	100	100	100	100	100	Very good
Average									89.25	Very good

Based on the identification results in Table 4. above, data was obtained that the majority of residents of cultural heritage buildings have a very good quality of life. This is influenced by satisfaction with variables that influence quality of life. The physical health domain has the highest score compared to the other 3 domains. This indicates that the physical health condition of the residents of cultural heritage buildings is in very good and healthy condition. None of them currently require medical assistance or are bothered by pain. In the psychological domain, the total score also shows that all aspects in this domain are in good condition. Such as positive feelings, spirituality, and self-esteem, they feel they are in a satisfactory condition. In the

environmental domain, complaints were encountered such as decreased water quality causing itching. Sometimes the water has a smell and is cloudy. Meanwhile, in the social relations domain, it is known that the community around the building does not interact with the residents of cultural heritage buildings. Even some of the closest neighbours don't know each other. However, support from family and friends is very good.

#### 3.3.2 Quality of Life of Occupants of Buildings That Tend to be Cultural Heritage

Next Table 5. shows the quality of life for residents of buildings that tend to be cultural heritage sites, totalling 51 samples.

Table 5. Quality of Life of Occupants of Buildings Cab be Classified Cultural Heritage

Number of households	Raw scores				Transformed scores				Score	Classification
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4		
51	30	12	28	25	69	75	75	81	75	Good

Based on the data Table 5. above, the total score shows different conditions for cultural heritage residents. Cultural heritage residents tend to enjoy and be satisfied with the conditions of all domains of their quality of life. Meanwhile, residents living in buildings suspected of being cultural heritage are classified as having a good

quality of life. The lowest score was in the environmental domain, this was due to their lack of satisfaction with the conditions of traffic jams, smells and pollution, and rubbish around the market. Because the function of the building is dominated by shops, their daily activities are trading. This condition affects the physical

health domain, energy, and fatigue aspects. However, their psychological condition shows the highest score, they have a sense of optimism and always develop positive feelings. Even though sometimes you still have negative feelings.

3.3.3 Quality of Life of Residents of Non-Heritage Buildings

Quality-of-life identification was also carried out in a sample of non-cultural heritage settlements in the study area. The total sample in the study area is 102 buildings and is divided into each neighbourhood (RW). The following Table 6. are the results of the classification of the quality of life of non-cultural heritage settlements.

Table 6. Quality of Life of Residents of Non-heritage Buildings

Neighbourhoods (RW)	Raw scores				Transformed scores				Score	Classification
	Y1	Y2	Y3	Y4	Y1	Y2	Y3	Y4		
RW 1	35	14	35	30	88	94	100	100	95,5	Very good
RW 2	32	12	31	22	75	75	88	69	76,75	Good
RW 3	33	15	34	29	81	100	94	94	92,25	Very good
RW 4	30	12	29	23	69	75	81	69	73,5	Good
RW 6	32	13	30	23	75	81	81	69	76,5	Good
RW 7	36	15	32	28	88	100	88	94	92,5	Very good
RW 8	38	14	34	30	94	94	94	100	95,5	Very good
RW 9	22	11	23	19	44	69	56	56	56,25	Fairly good
RW 10	32	14	30	29	75	94	81	94	86	Very good
RW 11	28	13	29	25	63	81	81	81	76,5	Good
RW 12	37	15	33	29	94	100	94	94	95,5	Very good
RW 1 Ampel	33	13	32	27	81	81	88	88	84,5	Very good
Average									83,44	Very good

The quality of life in the study area by Table 6. was classified and found that all RWs had a very good quality of life on average. Four RWs are classified as having good quality of life levels of 2, 4, 6, and 11. Of the four RWs, the domain scores that are not too high are the psychological and environmental domains. In the psychological domain, one aspect that is a concern because the score is the lowest is satisfaction with oneself and respect for one's achievements. Human nature is not quickly satisfied and always wants more, affecting their assessment of themselves. Apart from that, the concentration aspect is a complaint because many other things are always on the community's mind. This relates to worries about life, health, finances, etc. Their mindset regarding income is always trying to be grateful

for what they have, even though they always want more and worry about tomorrow. Therefore, the physical health domain is dominated by high scores, but low psychological scores. The limitations of the home environment also increasingly influence it, in the environmental aspect there are also questions regarding means of transportation which are considered less than satisfactory. Other environmental conditions such as facilities and infrastructure are always paid attention to by the local government, apart from that the government is also very helpful regarding the health of toddlers and pregnant women. Even the sub-district government also helps its residents who are still unemployed. These efforts are expected to improve the quality of life of each living in the study area.

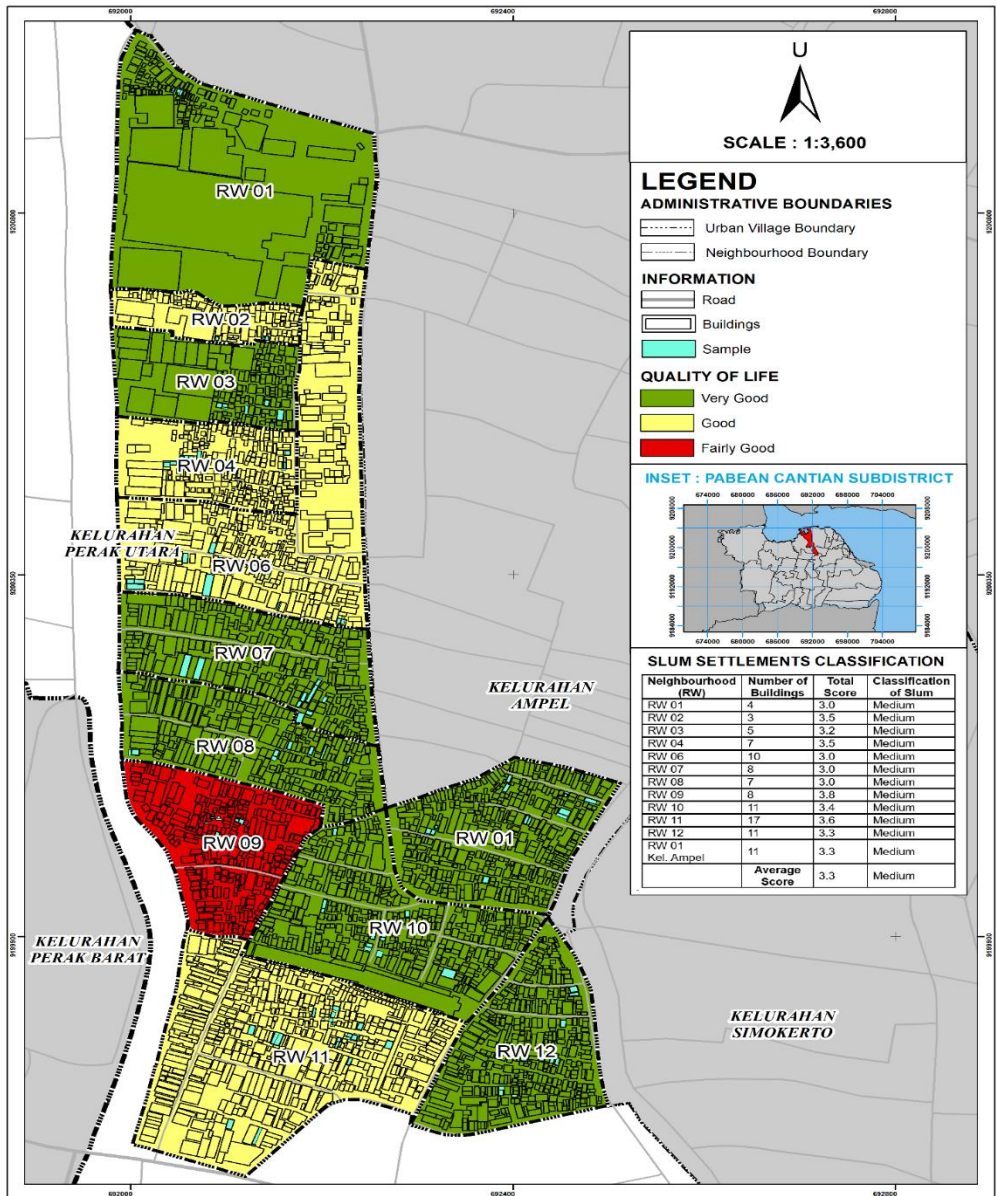


Figure 1 Quality Of Life Classification Map

### 3.4 Multiple Linear Regression Analysis

This analysis looks at the relationships between the Predictors (Physical Character (X1),

Social Economy Character (X2), and Land Status (X3)) and Dependent variables



(Environment (Y1), Social Relation (Y2), Physical Health (Y3), and Psychological (Y4))

3.4.1 Multiple Linear Regression Analysis of Slum Settlement Indicators with Environmental Aspects (Y1)

The analysis consists of four steps: analysis of R square, F-test, T-test, and regression model.

A. R Square/ Coefficient of Determination

Table 7. Coefficient of Determination

Model summary				
Model	R	R square	Adjusted R Square	Std Error of The Estimate
1	.631 <sup>a</sup>	.398	.386	4.240342

a: Predictors (Constant): Physical character (X1), Social economy character (X2), Land status (X3)

The adjusted r square value is 0.631 by Table 7., which means that the three variables (X1, X2, and X3) contribute a joint influence of 63.1% to variable Y and the remaining 36.9% is influenced by other variables outside this research.

B. F-Test

F test with the condition that if the sig value is <0.05, then the independent variables have a

significant effect simultaneously (together) on the dependent variable. Based on the results of Table 8. of the F test, the significant value is 0.000, which indicates that the value is smaller than 0.05. It can be concluded that physical, socio-economic, and soil character variables have a significant effect on environmental variables.

Table 8. F-Test

ANOVA <sup>a</sup>						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1768.933	3	589.64432.794		.000 <sup>b</sup>
	Residual	2679.094	149	17.980		
	Total	4448.027	152			

a: Dependent Variable: Environment (Y)

b: Predictors: Physical character (X1), Social economy character (X2), Land status (X3)

C. T-test

In the next stage, a hypothesis test (T) is carried out (Table 9) to determine whether the hypothesis can be accepted. Provided that if the sig value is <0.05, then the independent variable has a significant effect simultaneously (together) on the dependent variable. The hypothesis is that the three independent variables significantly influence the dependent variable. Based on the results in Table 9. of the t-test, respectively, the

sig value of the independent variable is 0.080; 0.003; 0.000 which means X1 is greater than 0.05, while X2 and X3 are smaller than 0.05. These results can be concluded that the physical character variables partially do not have a significant effect on environmental variables. Meanwhile, socio-economic and land character variables simultaneously have a significant effect on environmental variables.

Table 9. Hypothesis Analysis (T-Test)

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1(Constant)	37.961	2.276		16.676	.000
Physical character (X1)	-.174	.099	-.134	-1.765	.080

Model	Coefficients <sup>a</sup>		Beta	t	Sig.
	Unstandardized Coefficients	Standardized Coefficients			
	B	Std. Error			
Social economy character (X2)	-.515	.169	-.256	-3.044	.003
Land status (X3)	-.768	.179	-.353	-4.279	.000

a: Dependent Variable: Environment (Y1)

#### D. Regression model

An equation based on the regression analysis is stated as  $Y1 = a + b_1 X_1 + b_2 X_2 + b_3 X_3$ . Based on Table 9, the equation is  $Y1 = 37,961 - 0,174X_1 - 0,515X_2 - 0,768X_3$  with:

Y1 = Dependent variable (quality of life: Environment)

a = Constant value

b1 = Coefficient regression of

b2 = Second coefficient regression

b3 = Third coefficient regression

X1 = Physical character (X1)

X2 = Social economy character (X2)

X3 = Land status (X3)

The constant value obtained is 37.961, which means that if the variable x constant value is assumed to be 0 then the Y1 value is 37.961.

The regression coefficient value for variable X1 is negative at 0.174, meaning that if there is

a 1% increase in physical character, then the environment aspect of quality of life (environment) decreases by 0.174.

The regression coefficient value of the variable X2 is negative at 0.515, which means that if there is a 1% increase in the social economy variable, then the quality of life (environment) decreases by 0.515.

The regression coefficient value for variable X3 is negative at 0.768, meaning that if there is a 1% increase in the land status variable, then the quality of life (environment) decreases by 0.768.

#### 3.4.2 Summary of Regression Analysis of Environment (Y1), Social Relation (Y2), Physical Health (Y3) and Psychological Health (Y4)

The analysis uses the same process as described above. The predictors are the same (X1, X2, and X3). The first step of the analysis i.e., coefficient determination is shown in the following Table 10.

Table 10. Coefficient Determination for Y1, Y2, Y3, and Y4

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Model Y1	.631 <sup>a</sup>	.398	.386	4.240342
Model Y2	.503 <sup>a</sup>	.253	.238	1.749589
Model Y3	.808 <sup>a</sup>	.653	.646	2.519075
Model Y4	.652 <sup>a</sup>	.425	.413	2.865507

a: Predictors (Constant): Physical character (X1), Social economy character (X2), Land status (X3)

Table 10. shows that the three predictors (X1, X2, X3) contribute a joint influence to the dependent variables. The highest influence is on physical health (Y3), followed by psychological health (Y4), environment (Y1), and lastly social relations (Y2).

The second step, the F test for the other three models, shows that the Sig. values for all models

are < 0.05. The Sig. values of all models are 0.000, which means that the predictors (X1, X2, and X3) altogether have significant effects on Social Relations (Y2), Physical Health (Y3), and Psychological Health (Y3). The summary of the three models is as Table 11. follows.

Table 11. Summary of F test of the Four Models  
ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Y1	1768.933	3	589.644	32.794	.000
Y2	154.189	3	51.396	16.790	.000
Y3	1778.037	3	592.679	93.398	.000
Y4	902.700	3	300.900	36.645	.000

The third step is the hypothesis t-test. The analysis used the same criteria. If the significant value of the predictors is <0.05, then the variable has a significant influence on the dependent

variable. The Sig. values of the three predictors show the significance of the predictor variables simultaneously or partially. Table 12. shows the summary of the t-test calculation.

Table 12. Summary of T-test of the Four Models (Y1, Y2, Y3, & Y4)

Predictor variables	Sig. of Y1 model	Sig. of Y2 model	Sig. of Y3 model	Sig. of Y4 model
Physical character (X1)	.080	.474	.015	.971
Social economy character (X2)	.003	.001	.000	.000
Land status (X3)	.000	.035	.000	.000

Table 12. indicates that Physical Character (X1) does not significantly influence Environmental aspects (Y1), Social Relation aspects (Y2), and Psychological Health aspects (Y4) of quality of life. Other predictor variables (X2 and X3) significantly influence all dependent variables.

The last step is the formulation of regression equations. The equations were identified from the hypothesis t-test. Constant values are taken from B value of the unstandardized coefficient, while the regression coefficients were taken from t values. The four regression formulas are described as follows:

$$Y1=37,961-0,174X_1-0,515X_2-0,768X_3$$
$$Y2=14,326-0,029X_1-0,239X_2-0,158X_3$$
$$Y3=35,888-0,145X_1-0,499X_2-0,824X_3$$
$$Y4=25,751-0,002X_1-0,424X_2-0,629X_3$$

The regression models show that the three independent variables influence the four aspects of quality of life. Land status (X3) is relatively the most influential variable. It highly corresponds to the quality of life of environmental aspects (Y1), physical health (Y3), and psychological health (Y4). Psychological health (Y4) is one of the fundamental functions of land ownership, similar to the finding of Rao associated with

psychological well-being (Rao, 2018). Land status also influences the social relation aspect (Y2) in the second order. The first order is certainly the social economic character (X2). The least influential variable within the four equations is the physical character (X1). The physical character indicators, which are the most significant aspects in determining slum areas, are not too dominant in influencing the quality of life of the community in the study area. This finding confirms Sen’s work on the relationship between quality of life that is different to standard economic approach (Dang, 2014) and the relationship between quality of life and functioning: a set of valuable ‘beings and doings’ (Wells, 2012).

CONCLUSION

The Kalimas area in Surabaya is a historical site that has been neglected and left undeveloped, despite its potential for many buildings to be designated as cultural heritage sites. Only seven buildings have received such recognition from the government, and two of them remain unoccupied. Merely three of these buildings bear cultural heritage plaques, with only one being revitalized by the Surabaya City Government. Divergent treatment of these structures is

attributed to ownership and occupancy challenges, as some have been abandoned by their owners, rendering them difficult to locate or contact. The researchers identified 55 buildings suspected of being cultural heritage based on criteria such as historical value, age, architectural style, and their impact on the area. In analyzing slum settlement indicators, all residential areas are classified as medium slum class with an average score of 3.3, influenced by physical conditions, socio-economic factors, and soil characteristics. The quality of life questionnaire reveals that residents in both cultural heritage and non-cultural heritage buildings enjoy a very good quality of life, whereas those in buildings suspected of being cultural heritage, mostly on Panggung Street, are classified as having a good quality of life. The key factor influencing this classification is the environment, particularly the proximity to the Pabean Market. Additionally, the analysis reveals that slum settlements significantly impact four domains of quality of life: physical health, psychology, environment, and social relationships. However, the physical character sub-variable (X1) does not significantly affect the psychological,

environmental, and social relationship domains, while land status (X3) significantly influences the quality of life in environmental, physical health, and psychological health aspects. This suggests that land ownership has the most substantial impact on residents' quality of life. Consideration should also be given to the physical aspects of buildings, employment, income, education, and the community's social assets to enhance overall quality of life. Collaborative efforts between citizens and government interventions to revitalize cultural heritage buildings are crucial for preserving historical sites in the area. The Kalimas area holds significant tourist potential due to its proximity to Jembatan Merah, Kembang Jepun, Sunan Ampel, and Pabean Market. However, realizing this potential requires place branding and collaboration. The diverse population of the area poses challenges in unity and cooperation. Currently, the area is primarily known for the Pabean Market, Surabaya's largest fish market. The City Government should collaborate with NGOs and related communities to enhance the physical condition of the settlement and improve the quality of life for its residents.

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