

Quality of Life of Community Groups Living Along Railway Tracks: A Quantitative Study Descriptive

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Abstract

Settlement along railway tracks is a form of informal settlement that emerges due to limited access to adequate housing. Environmental hazards, limited land legality, as well as social and economic pressures can potentially affect the quality of life of residents in these areas. This study aims to describe the quality of life of residents living along railway tracks in Tegalkojo Village, Jebres District, Surakarta City. This research employs a quantitative approach with a descriptive method. Fifty participants were selected using incidental sampling technique, with the criteria of being at least 18 years old, married, and living along railway tracks for a minimum of one year. Data collection was conducted using the WHOQOL-BREF instrument, which measures four dominant aspects of quality of life: physical health, psychological health, social relationships, and environment. Data analysis employed univariate analysis with descriptive statistics presentation. The results showed that the average total quality of life score of residents was in the medium category, with a mean value of 57.34. In general, most participants fell into the medium to good category in both environmental and social relationship domains. However, some small communities remain in the poor category. These findings indicate that communities along railway tracks have relatively good adaptability to constrained environmental conditions, supported by social relationships and community solidarity. The implications of this study emphasize the importance of community-based policies and interventions that do not only focus on the physical aspects of organizations but also on strengthening the psychological and social well-being of marginalized communities.

Keywords: Railway Tracks, Quality of Life, Marginalized Communities, Informal Settlements

1 INTRODUCTION

Residential area is component environment live outside area protected, good urban and rural areas, which function as place stay or place residence as well as place supporting activities life and livelihood according to Law no. 1 of 2011 concerning housing and areas settlements. Settlement is Wrong One from results activity human beings who change condition the environment that was originally nature become artificial [1]. Settlement defined as buildings, whether made by humans or those formed in a way natural, along with its attributes, which are utilized by humans as place stay, okay in a way temporary and permanent. Limitation ability financial cause part public difficulty in get access to formal housing that worthy and legal, so that cause various problem settlements. Matter this in line with statement [2] where one of its shapes is emergence area informal settlements around track rail train fire, which is generally occupied by the community with background behind social diverse

economy. Phenomenon housing on the banks rail This reflect complexity problem settlement cities in Indonesia, where the need will place stay No always can filled through formal [3] channels Empty land around rail train fire often considered as " land" free " by the community with limitations economy for build place stay. However, existence they face to face with risk security, comfort, and law. Because land in general is owned by PT Kereta Api Indonesia (KAI). This is also reinforced by results study Which show that the rise informal settlements around rail happen consequence its inaccessibility formal housing by the community earning low.

The existence of settlements on the banks of the railway tracks reflects the imbalance in access to decent housing and gives rise to various challenges, especially in aspect security, health, And legality. Inhabitant life side by side direct with track active train fire, so that public in railroad tracks are often exposed to air pollution from trains, as well as noise that can harm physical and mental health. Semi-permanent



buildings that are close together also increase the risk of fire and complicate evacuation [4]. From a legal perspective, this settlement violates Law Article 178 No. 23 of 2007, but as mentioned by Susilowati, weak law enforcement and the lack of alternative housing cause residents to remain, despite being in uncertainty and the risk of eviction at any time [5].

In addition, settlements along railway lines are usually formed without planning. Which clear, cause impact social and environment which significant. The environment often seen slum, narrow, and lack facility general such as water channels, trash cans, or open spaces. This condition makes the lives of residents increasingly difficult, especially for those who are already in a weak economic condition [6]. From a social perspective, living near rail trains can also bother relationship between residents. Dense environment and noisy make person seldom interact or follow activity together such as religious studies, mutual cooperation, or religious events, as expressed by Prasetyanto, as a result, the sense of togetherness and concern among residents can decrease [7]. Meanwhile, according to Arinkunto, from an environmental perspective, the problem of accumulating waste can cause pollution and harm the health of the surrounding community [8]. The condition of clogged water channels increases risk flood and distribution disease-based environment [9]. Besides That, location House Which too near with rail train fire increase the potential for fire or accidents, as revealed by [10] the fact that substandard residential layout poses a safety risk to residents. Noise is also a serious issue. The loud sound of trains and their vibrations can be detrimental to health, for example, causing stress, disturbance Sleep, even problem hearing [11]. This matter show that stay in riverbank rail train fire impact big No only on the physical condition of the environment, but also on the quality of social life and overall health of the community.

For deepen phenomenon, researchers do interview to the head of the RT along the railway tracks of Tegalharjo Village, Jebres District, Surakarta City on Saturday, April 26, 2025. From the results of the interview with the RT head, it was known that that life public Which stay in riverbank rail train fire marked by condition social and the environment that Good. Majority inhabitant is old residents Which has settled during for years, even a number of in among them They have lived there for generations. The presence of active railway lines has become part of their daily lives, so the noise from trains is no longer considered a significant disturbance. They have become accustomed to the rhythm and the noise. the. However, matter This different for newcomers new one stay during one to two months, they tend feel disturbed and not yet capable fully phenomize self with condition

environment which noisy. However along as time goes by, they can adapt.

In addition to interviewing the neighborhood association (RT) head, the researcher also interviewed several residents along the railway tracks in Tegalharjo Village, Jebres District, Surakarta City. During the field survey, the researcher encountered diverse socioeconomic backgrounds, consistent with Djundi's statement. [2]. It was also discovered that after conducting interviews with five residents, researchers found that the quality of life of those living along the railway tracks differed. Although, in general, their perspectives were considered quite good, living in the area was considered good. Which full limitations. From side physique, inhabitant No experience Difficulties in accessing clean water, electricity, and healthcare. The sound and vibration of trains are no longer disturbing because they have become accustomed to and adapted. Psychologically, residents feel comfortable, are not stressed, and do not experience discrimination from the surrounding community. Social relations among residents are well-established, marked by mutual cooperation and participation in activities such as the Family Welfare Movement (PKK). lottery club, And Work devotion. According to their environment place stay assessed Clean and well-organized. Despite living on land owned by the Public Works and Housing Authority (PJKA), the community remains open to the possibility of moving, hoping for more suitable housing. This demonstrates the community's ability to accept risks and maintain a stable lifestyle despite living in informal settlements.

Based on results interview which has done, It was found that the actual conditions were inversely proportional to the actual conditions, therefore this study was conducted to find out more clearly how the quality of life of the people living in the railway embankment area using WHOQOL – BREF. In addition, it was also found that Quality of life is an important indicator that describes how individuals or groups assess their well-being in the context of everyday life, according to WHOQOL, quality of life is an individual's perception of their position. in life in context culture, system mark, objective, hope, standards, and personal concerns [11]. This is in line with the concept of quality of life according to WHOQOL – BREF which covering dimensions physical, psychological, connection social and environmental. Residents stated that they did not experience any difficulties in accessing clean water, electricity, and service Health. They Also feel comfortable in a way psychological and own connection social which tightly. [11] This phenomenon also supported by research Dinda, who found that

community solidarity can strengthen the quality of life in marginalized environments [12].

According to him, [11] individual quality of life is an important thing to pay attention to. By paying attention to quality of life, individuals can achieve greater well-being and live a more meaningful life. Because according to him, [13] if someone can achieve quality of life Which tall, so life individual the leading on condition well-being, on the other hand, if someone achieves a low quality of life, then life individual the leading on condition no prosperous (*ill-being*). Besides that, quality life Which Good impact positive on health physique, mental, and a person's social well-being, and can improve overall well-being. This is emphasized by [14], that quality life Also contribute on increasing productivity, happiness, and the ability to face life's challenges. Paying attention to quality of life also contributes to increased productivity, happiness, and the ability to face life's challenges. Happiness is the degree to which a person perceives a pleasant quality of life.

Study previously, like which done by [15] in Yogyakarta only emphasizes social adaptation strategies. The research that done [16] in Stab, only focus on effect noise on psychology, as well as studies conducted [12] on solidarity community in increase quality life. Study this offering novelty with integrate all over dimensions quality life use instrument WHOQOL – BREF Which has proven valid and reliable [17] this approach has not been widely applied in the context of Indonesia's marginal communities, so that expected can give contribution to development of more inclusive social policies.

This study use approach quantitative descriptive, aim to describe in a way objective and systematic perception public to their quality of life. Researchers determined the criteria for married participants, because one of the items in the WHOQOL-BREF instrument measures satisfaction with life. sexual. Aspect the in a way normative and cultural more relevant answered by married individuals, so the establishment of this criterion aims to ensure the suitability of respondents with the measured indicators and increase the validity and ethics of research data collection. According to Sugiyono, this approach allows researchers to measure the dimensions of quality of life in a standardized manner using the WHOQOL-BREF instrument, and present data in the form of numbers and categories that can be interpreted broadly and applied. In addition, the quantitative approach provides a strong foundation for data-driven social policy analysis [18].

2 LITERATURE REVIEW

2.1 Quality of Life

According to [11] quality of life is an individual's perception of position they in life in context culture and system the values of the place where they live and in relation to their goals, expectations, standards, and attention they. This is draft Which wide Which combine a complex mix of a person's physical health, psychological state, level of independence, social relationships, personal beliefs, and their relationship with important parts of the environment.

2.2 Settlements around the railway tracks

The Jebres railway, Tegalharjo sub-district, is form settlement informal which has long develop. Although The land legally belongs to the PJKA, and the residents are merely tenants. Residents have lived there for years, forming a strong community. Residents' social life is generally good and harmonious. Interviews indicate that residents help each other in their daily lives and are active in social activities such as social gatherings (*arisan*), community service, the Family Welfare Movement (PKK), and weekend mutual cooperation (*gotong royong*). There is no discrimination against residents living along the railway; instead, residents feel they are treated equally with others.

The majority of the population works in the informal sector such as factory workers, small businesses, trading, And self-employed. Place stay they No influence access to work in a way significant. In a way physique, environment in riverbank rail train the fire was relatively clean and well-organized. Residents have adapted to the existing conditions, including the noise and vibrations from the trains. Although some new residents initially felt disturbed, this reduced over time through the adaptation process and guidance from the PJKA.

Regarding comfort, residents stated that they felt comfortable living in that location. They No experience difficulty in access service base like Clean water, electricity, and healthcare are available. Garbage is collected regularly by sanitation workers, and no serious problems with household waste management have been identified. Residents also continue to receive government assistance, albeit at varying frequencies.

Psychologically, despite the pressures felt, particularly due to legal uncertainty surrounding the land they occupy, most residents are able to maintain mental and emotional stability with social support from the community. show existence capital social strong, as explained by [19]in where network social,

trust between residents, and norms lead Returning to the land is a crucial foundation for building social resilience amidst limitations. However, the threat of relocation remains a looming threat. Communities are aware that they occupy land owned by the Public Works and Housing Authority (PJKA) and could be evicted at any time. Some residents have expressed readiness for relocation, and they hope to be provided with replacement housing. This demonstrates that legal awareness and social realities have been sufficiently established.

2.3 Quality of Life of Communities Living in Informal Settlements Along Railway Tracks

The quality of life of people living in settlements along the railway tracks in this study was analyzed using the WHOQOL-BREF framework. [11]Theoretically, it defines quality of life as an individual's perception of their position in life within the context of their culture and prevailing value systems, and its relationship to their goals, expectations, standards, and concerns. Quality of life is multidimensional, encompassing four main domains: physical health, psychological well-being, social relationships, and the environment.

The physical environment of a residential area, such as noise levels, air quality, the availability of basic infrastructure, and security, are factors that can influence people's perceptions of their quality of life. Noise in areas near railway lines can reduce comfort. And increase stress psychological [20]. Findings This strengthened by Handayani et al. (2023), who measured noise levels in residential areas near the railway line reached more than 90 dB, far above the threshold of 55 dB, thus risking a decline in physical and mental health.

In addition, the socio-economic conditions of the community in k [4]This insight is also an important factor. Prihatiningsih and Swasto noted that people in marginal settlements tend to have limited economic access and land legality, but demonstrate social adaptation through community solidarity [21]. Research [4]confirms that social support and community cohesion can strengthen dimensions connection social on quality life. However, adaptation social strong has not fully addressed limitations in environmental dimensions, such as sanitation, waste management, and access to public facilities.

With thus, study This focus measurement on quality community life in settlement riverbank rail train fire through fourth domain WHOQOL- BREF. Approach This give description comprehensive which can used as base *evidence-based* for formulation policy arrangement sustainable informal settlements.

2.4 Community resilience theory

Community Resilience Theory is a conceptual framework that explains the capacity of communities to withstand, adapt, and recover from various crises or disasters, while simultaneously learning and growing from such experiences.

The key components of community resilience include social capital (trust, mutual cooperation, and citizen participation), infrastructure resilience (physical facilities, early warning systems, and resource access), economic capabilities (income diversification and resource reserves), institutional capacity (leadership, mitigation, and coordination), as well as knowledge and learning (risk understanding, experience evaluation, and innovation).

The fundamental principles encompass proactive, flexible, inclusive, participatory, and sustainable approaches. This theory is widely applied in disaster mitigation planning, community empowerment, development of disaster-prone areas, as well as assessing community preparedness for facing crises.

2.5 Environmental stress theory

Environmental stress theory is a conceptual framework that explains the impact of physical, social, and economic environmental pressures on the well-being, behavior, and social life of individuals and communities. Environmental stressors such as pollution, natural disasters, climate change, population density, noise pollution, and resource scarcity can produce various adverse effects that are addressed through individual adaptation strategies, community responses, and institutional interventions. The impacts encompass psychological distress, behavioral changes, and social transformation. This theory is supported by ecological, biophilia, and environmental justice perspectives.

2.6 Ecological systems theory

Bronfenbrenner's Ecological Systems Theory explains that individual development is influenced by ongoing interactions with various layers of the environment. Development is viewed as the result of reciprocal relationships between the individual and the surrounding social context. This theory encompasses five environmental systems: the microsystem (family, school, and peers), the mesosystem (relationships within the immediate environment), the exosystem (indirect influences such as work policies and community services), the macrosystem (cultural, economic, and political values), and the chronosystem (changes and events that occur over time).

Its core principles include the reciprocal influence of the individual and the environment, the interaction between process and context, and the importance of understanding behavior in real-world settings. This theory is widely used in child development research, educational psychology, social work, community psychology, public policy, and organizational behavior studies.

2.7 Social Capital Theory

Social Capital Theory explains that social networks, trust, norms, and cooperation are important resources that help individuals or groups achieve their goals and improve societal well-being. The main elements of social capital include trust, social networks, social norms, and cooperation. Social capital is divided into bonding (bonds within groups), bridging (relationships between groups), and linking (relationships with institutions or authorities).

Its application is evident in mutual cooperation (gotong royong), farmer groups, youth organizations, and alumni networks. This theory helps explain the role of social relations in development and well-being, but it is difficult to measure quantitatively and has the potential to lead to exclusion from other groups.

3 RESEARCH METHODS

This study uses a qualitative approach with descriptive methods. This approach was chosen because the study aims to provide an objective, systematic, and factual picture of the quality of life of residents living along the railway tracks in Tegalharjo Village, Jebres District, Surakarta City.

3.1 Population, Sample and Sampling Techniques

The population in this study was residents of Tegalharjo Village, Jebres District, Surakarta City. The sample was selected based on specific predetermined criteria. The criteria are as follows:

1. Already Marry
2. Age minimum 18 years
3. Stay in region riverbank rail train fire minimum during 1 year

The sampling technique used in this study is *incidental sampling*, that is technique taking sample based on Who just Which in a way as it happens or incidental meet with researchers can used as sample, if it is seen that the person who was met by chance is suitable as a data source. The reason the researcher chose this technique was to obtain the maximum number of samples, without set aside the criteria that have been determined by the researcher.

3.2 Data Analysis Methods

The research results from the questions in WHOQOL – BREF, the data will be processed manually using the manual individual score calculation box which is already in the WHOQOL – BREF measuring tool attachment.

After obtaining the raw score for each domain, then the researcher transforms the scores or changes them according to the transformation table. is in the WHOQOL measurement tool guide – BREF is *transformed score* 4 - 20 and *transformed score* 0 – 100. Researchers use *transformed score* 0 – 100, because it is easier to understand for lay readers and the public. [11]After transforming the scores in each domain, it will then be calculated using the following formula:

$$\text{WHOQOL – BREF} = \frac{\text{Total score from all four domains}}{\text{Total score (400)}} \times 100$$

Then the scores were categorized. Because the WHOQOL-BREF does not have a specific categorization, the researchers used the categorization. Analysis data Which used in study This is analysis Univariate which aims to explain or describe the characteristics of each research variable. [21] Univariate analysis is an analysis conducted by analyzing each variable from the research results. The goal is to determine the distribution percentage and value from score quality life, in a way overall. Results Univariate analysis is presented in the form of tables and narrative descriptions.

4 RESULTS AND DISCUSSION

4.1 Orientation Kuancah Research and Data Collection

Tegalharjo Village, Jebres District, Surakarta City, specifically in residential areas located on the banks of the railway. train fire. Location This chosen Because represent area settlement Densely populated areas with physical, social, and economic limitations that could potentially impact the community's quality of life. Data collection was conducted on December 13, 2025, January 14, 2026, and January 20, 2026, and lasted for approximately three days. These dates were determined by adjusting the researcher's time availability with the neighborhood association (RT/RW) officials at the research location.

Process collection data done through a number of the stages that Systematic. The initial stage began with coordination and obtaining permission from the local sub-district, followed by scheduling data collection with the neighborhood association (RT) and

community association (RW) in the research area. After obtaining permission and assistance, the researcher visited each resident's home one by one to collect respondent data according to the research criteria. During each visit, the researcher introduced herself, explained the purpose of the research, and provided a brief explanation as an introduction. Next, the researcher requested that the respondents sign a consent form as a form of *informed consent*. After obtaining consent, the researcher conducted interviews and recorded the respondents' demographic data, then collected the respondents' data using the WHOQOL-BREF questionnaire, namely by reading each question to ensure the respondents understood the contents of the instrument.

During implementation collection data, researchers face a number of constraints that affect the research process. One of the main constraints is the difficulty in adapt time with party RT and RW, remember process Data collection must be carried out with assistance from local officials. Furthermore, time constraints, differences in respondents' understanding of the questionnaire items, unfavorable weather conditions, and the reluctance of residents to participate are factors. become respondents participate become obstacle in process collection data.

Researchers also find a number of house inhabitant in condition empty moment visits were conducted. These constraints impacted the number of samples obtained and potentially affected the accuracy of the questionnaire. Therefore, researchers provided additional explanations and direct guidance to respondents during the questionnaire completion to minimize bias and maintain the quality of the data obtained.

4.2 Participants Study

The 50 participants in this study were residents living along the railway line in Tegalharjo Village, Jebres District, Surakarta City. Furthermore, these residents reside directly across from or closest to the railway line. With the following characteristics:

Table 1 Participation Results Based on Respondent Characteristics

Variables	Category	Frequency	Percentage
Type	Man – man	21	42%
Sex	Woman	29	58%
	Total	50	100%
Age	< 30 years	2	4%
	31 - 40 years	4	8%
	41 - 50 years	13	26%
	51 - 60 years	15	30%
	> 60 years	16	32%
	Total	50	100%

Education	No school	0	0%
	Final	7	14%
	Elementary school/equivalent		
	Junior high school/equivalent	16	32%
	High school/equivalent	23	46%
	Diploma	1	2%
	Bachelor	3	6%
	Total	50	100%
Status	Marry	40	80%
Wedding	Widower	1	2%
	Widow	9	18%
	Total	50	100%
Long Stay	> 1 year	50	100%
	Total	50	100%
Work	No Work	21	42%
	Laborer	9	18%
	Trader	6	12%
	Self-employed	8	16%
	Worker Service	6	12%
	Total	50	100%
Member	< 3 people	19	38%
Family	> 3 people	31	62%
	Total	50	100%

The table above explains that the characteristics in this study consist of the following types: sex, age, education final, status wedding, long stay, work, and the number of family members. In terms of gender characteristics, there are 21 males, while type sex Woman There is 29 people. On characteristics age, <30 year there is 2 persons, age 31 - 40 year There is 4 persons, age 41 - 50 There is 13 persons, age 51 – 61 years there are 15 people, and age >60 years there are 16 people. In the characteristics of the last education, there were no people who did not attend school, there were 7 people who attended elementary school/equivalent, there were 16 people who attended junior high school/equivalent, High school/equivalent There is 23 persons, diploma There is 1 person, and bachelor There is 3 persons. On the characteristic status wedding, Marry There is 40 persons, widower There is 1 person, And Widow There are 9 people. In terms of length of stay, there are 50 people. In terms of occupation, there are 21 people unemployed, 9 laborers, 6 traders, 8 self-

employed, and 6 service workers. In terms of the number of family members, there are 19 people with <3 and 31 people with >3.

4.3 Descriptive Results Statistics

The descriptive statistical data is illustrated by the average, standard deviation, maximum, and minimum values. The results of the descriptive statistical test are presented in a table as follows:

Table 2. Statistics Descriptive

	N	Minimum	Maximum	Mean	Standard Deviation
Quality of Life	50	40.75	78	57.34	9.24
Domain 1	50	31	88	58.02	10.88
Domain 2	50	38	81	61.02	10.23
Domain 3	50	31	100	55.32	13.05
Domain 4	50	31	81	55.02	12.72

Mark N or number of samples of 50. The lowest value of the quality of life variable is 40.75 and the lowest value for each domain, the first domain 1 is 31, domain 2 is 38, domain 3 is 31 and domain 4 is 31. In the highest value column for the quality of life variable is 78, and the highest value for each domain, the first domain 1 is 88, domain 2 is 81, domain 3 is 100, and domain 4 is 81. The mean column means the average data. The mean for the quality of life variable is 57.34 and the mean for each each domain, the first domain 1 is 58.02 domain 2 is 61.02 domain 3 is 55.32 and domain 4 is 55.02. Furthermore, the standard deviation value for the quality of life variable is 9.24 and for the standard deviation value of each domain, the first domain 1 is 10.88 domain 2 is 10.23 domain 3 is 13.05 and domain 4 is 12.72. Based on the data above the average value of the variable is greater than the standard deviation value, so it can be concluded that all data are able to describe the variable.

Table 4.3 General Score Quality Life and Quality of Life Domain Scores

	Categorization										Total	
	Very bad		Bad		Currently		Good		Very good			
	F	P	F	P	F	P	F	P	F	P	F	P
Quality of Life	0	0	1	2	3	62	1	36	0	0	5	10
		%		%	1	%	8	%		%	0	0
												%

Domain 1	0	0	4	8	2	44	2	46	1	2	5	10
		%		%	2	%	3	%		%	0	0
												%
Domain 2	0	0	1	2	2	52	2	40	3	6	5	10
		%		%	6	%	0	%		%	0	0
												%
Domain 3	0	0	3	6	3	74	7	14	3	6	5	10
		%		%	7	%		%		%	0	0
												%
Domain 4	0	0	5	10	2	50	1	36	2	4	5	10
		%		%	5	%	8	%		%	0	0
												%

Based on the research results, most respondents have a quality of life in the moderate category (currently) as many as 31 people (62%), followed by a good category as many as 18 people (36%), and only 1 person (2%) is in the bad category, while there are no respondents in the very bad or very good category. These results indicate that in general the respondents' quality of life is at a moderate level towards good. In Domain 1, the majority of respondents are in the good category as many as 23 people (46%) and the moderate category as many as 22 people (44%), while 4 people (8%) are in the bad category and 1 person (2%) is in the very good category, so it can be concluded that the condition of respondents in Domain 1 tends to be good. In Domain 2, most respondents are in the moderate category as many as 26 people (52%), followed by a good category as many as 20 people (40%), a very good category as many as 3 people (6%), and a bad category as many as 1 person (2%), which indicates that Domain 2 is at a moderate level with a good tendency. Meanwhile, Domain 3 is dominated by the moderate category of 37 people (74%), followed by the good category of 7 people (14%), and 3 people each (6%) in the bad and very good categories, thus illustrating that the condition of respondents in Domain 3 is generally still at a moderate level. In Domain 4, the majority of respondents are in the moderate category of 25 people (50%), followed by the good category of 18 people (36%), the bad category of 5 people (10%), and the very good category of 2 people (4%), with no respondents in the very bad category. This finding indicates that Domain 4 is also at a moderate level with a good tendency. Overall, all domains of respondents' quality of life are dominated by the moderate and good categories, which indicates that the respondents' quality of life is relatively good although there are still several aspects that need to be improved.

4.4 Discussion

This study aims to describe the level of quality of life of the community. Which stay in riverbank rail train fire in Ward Tegalharjo, Jebres District, Surakarta City, using a descriptive quantitative approach and the WHOQOL-BREF instrument. Based on the results of descriptive statistical analysis, this study shows that the average total score of the quality of life of the community living on the banks of the Jebres River is 1.5%. rail train fire Ward Tegalharjo, Subdistrict Jebres, Surakarta is at in the moderate category, with an average value of 57.34. This finding indicates that in a way general public own perception Which Enough adaptive to their living conditions, despite living in informal settlements with various physical and social limitations and uncertain land legality. This aligns with research [22] explaining that communities in informal settlements often develop "spatial adaptation schemes," where they normalize environmental disturbances to maintain economic stability and residency in strategic locations. However, this moderate category does not necessarily indicate that all aspects of quality of life are in good condition, as the results of the analysis per domain show that there are still domains that scored in the poor category. Theoretically, these results align with the concept of quality of life according to which quality of life [11] emphasizes that quality of life is an individual's subjective perception of their life, not solely the objective conditions of the environment. This means that individuals can assess their lives as quite good even in situations that are normatively risky. As stated, [23] the community along the railway line was able to develop a self-adjustment mechanism so that quality life in a way overall still is at level currently, although some aspects of life are still not optimally fulfilled.

When reviewed based on the WHOQOL-BREF domain, the physical health domain (*physical health*) in a way general is at on category currently until very Good. In the moderate category, there were 22 (44%) participants, meaning that almost half of the community felt their physical function was adequate but not optimal. They were able to carry out activities, but were sometimes still hampered by fatigue or less than supportive environmental conditions. In the good category, there were 23 (46%) participants, meaning that most people felt healthy, had enough energy to work, and were able to move or have good mobility without obstacles even though they lived in the area along the railway tracks. Furthermore, there was also 1 (2%) participant in the very good category, meaning that the community had a prime level of fitness where physical function and energy were at optimal levels without any complaints at all. This finding indicates that the community had a competent physical quality

of life, indicating the existence of environmental adaptation mechanisms. Residents along the railway tracks generally did not experience pain or discomfort that hindered vital activities. They were still able to carry out their work roles relatively optimally despite having minor physical limitations. This is in line with research [24] that found that residents in densely populated areas tend to have a high tolerance threshold for physical environmental disturbances due to the process of habituation to noise and pollution, so that their physical function remained at a functional level. This is also supported by the WHOQOL (1998) view which states that quality life on domain health physique influenced No only by condition health objective, but Also by perception individual to physical ability to carry out daily activities.

Furthermore, although the majority of the community demonstrated a quality of life that was considered adaptive, there was still a group of people who scored in the poor category, namely 4 (8%) participants. This means that this group had complaints about... complaint flavor painful, discomfort physique, fatigue more dominant, energy limitations, and obstacles in mobility, daily activities, and working conditions. These conditions are thought to be related to environmental factors in residential areas along the railway, such as dense housing and demanding work. Therefore, the presence of participants with poor scores indicates that impact environment Still become challenge for group certain and need attention in efforts to improve the quality of life.

In the psychological domain, conditions are relatively stable and positive. In general, the majority of the community is in the moderate to very good category. In the moderate category, there are 26 (52%) participants, meaning that more than half of the community has a stable psychological condition but still fluctuates. They have a balance between positive and negative feelings, and are able to perform cognitive functions quite well, although sometimes overshadowed by environmental pressures. In the good category, there are 20 (40%) participants, meaning that people in this category have a high level of self-satisfaction, a positive self-presentation, and are able to manage emotions effectively. This group has a strong sense of meaning in life. In the very good category, there are 3 (6%) participants, meaning that people in this category have very strong resilience, high optimism, and are almost undisturbed by environmental stressors in carrying out daily activities. Despite living in informal settlements with uncertain status, they are still able to maintain cognitive function and positive feelings. This relatively stable psychological condition is inseparable from the role of social support in the

environment. Support from family and the surrounding community acts as a protective factor that strengthens the sense of meaning and reduces stress.

However, there was still 1 (2%) participant with a bad score in the psychological domain, which indicates negative feelings, low, the existence of a bad category shows that the psychological domain is still a vulnerable aspect and needs special attention in improving the quality of life of the community.

Next is the domain of social relations (*social relationships*), the majority of society is at in the category medium to very Good. In the moderate category, there were 37 (74%) participants, meaning the community has fairly functional social relationships. Interactions occur regularly, but there may still be changes in emotional depth or practical support. In the good category, there were 7 (14%) participants, meaning the community experiences stable and positive relationships with family and neighbors without significant communication barriers. In the very good category, there were 3 (6%) participants, meaning the community has very strong social support, high satisfaction with their sexual lives, and very harmonious interpersonal relationships.

Next in the domain of social relations (*social relationships*) there were still scores in the bad category, namely 3 (6%) participants, meaning that people have limitations in establishing relationships with other people, low support social Which felt, as well as dissatisfaction on aspect sexual life. This condition shows that although the community is generally quite embracing, not all individuals receive the same social benefits. Theoretically, findings This in line with WHOQOL (1998) Which confirm that the quality of social relationships is an important determinant of quality of life. Low social support and inadequate [25]interpersonal relationships can impact psychological well-being and weaken an individual's ability to cope with the pressures of daily life. This finding is reinforced by research that confirms that for people in informal settlements, social support is not just a casual interaction, but rather a survival instrument. Loss of access to this support network is directly correlated with an increased risk of depression and an inability to cope with sudden economic crises. Therefore, the domain of social relationships still requires attention.

In the environmental domain, the majority of the population falls into the moderate to excellent category. Twenty-five (50%) participants fell into the moderate category, meaning the majority of the population believes their living environment is sufficiently supportive for carrying out daily activities. In addition, they have sufficient financial resources for basic needs, although they believe they

are not yet stable, and access to information and recreation is available, although limited. In the good category, there were 18 (36%) participants, meaning that people consider their environment supportive, health facilities or transportation are easily accessible, and they feel safe living there. In the very good category, there were 2 (4%) participants, meaning that people feel very safe, have strong financial stability, and very satisfactory access to information and public facilities. These findings indicate that the majority of people view environment place where he lives Enough worthy and safe, as well as own access to basic services such as health care, education, transportation, and other supporting facilities. This finding is supported by [26], which states that despite the legal issues surrounding the land, the geographical location of the railway embankment in downtown Surakarta provides strategic advantages in the form of close access to markets and government health facilities, which contributes to the perception of a "sufficient" environment for residents.

However, in the environmental domain, 5 (10%) participants were still found with a poor score category, which indicates limited financial resources, minimal access to information, low recreational opportunities, and environmental conditions that are perceived as less safe and less suitable, including limited access to health facilities and transportation. Theoretically, this finding is in line with research [21] which states that the environmental dimension is often the weakest aspect in the quality of life of people living in informal settlements, because it is influenced by economic limitations, physical conditions of the environment, and access to public facilities. Therefore, although in general the environmental domain is in the moderate to good category, this aspect still requires special attention in efforts to improve the quality of life of people living along the railway lines.

In a way empirical, quality life in a way overall is at on category While the quality of life is moderate, there are still domains in the poor category, indicating disparities between dimensions of quality of life. The community is able to maintain quality of life through psychosocial adaptation and community support, but this adaptation has not fully overcome structural limitations.

Thus, the results of this study answer the problem formulation that the level of quality life public riverbank rail train fire is at category moderate, but Still found problem on domain Which own score on bad category. This finding shows that the quality of life of people living along the railway tracks cannot be generalized, because each individual and group experience condition Which different. Difference the influenced by the individual's ability to adapt, the social support received, and limitations environment

place stay. So, effort improvement Quality of life is not enough to be done in general, but it requires targeted and specific interventions on aspects that are still weak in each domain, so that community welfare can be improved more effectively, comprehensively and sustainably.

However, this study has limitations, namely the relatively small sample size and the choice of *incidental sampling technique*. This study used this sampling technique because it was adapted to existing conditions. This causes the results of the study to not be able to represent the conditions of the entire community at large, so they cannot be generalized in general or the results of the study may not necessarily apply to everyone or all conditions in the railway embankment area, because the data used is still limited. Therefore, the results of this study need to be understood according to the research context. Future research is recommended to use a larger sample size and the selection of more relevant sampling techniques so that the results obtained are more representative and accurate.

Overall, the research results indicate that the quality of life of residents living along the railway tracks is moderate with a tendency toward good. Despite facing various environmental and socioeconomic constraints, residents are able to maintain a relatively good level of physical, psychological, social, and environmental well-being. However, efforts are still needed to improve the quality of the residential environment, access to health services, and strengthen social and economic support for the community so that quality of life can improve towards the good and very good categories.

5 CONCLUSION

Based on the results of research and discussion regarding the quality of life of the community Which stay in riverbank rail train fire in Ward Tegalharjo, Using the WHOQOL-BREF instrument in Jebres District, Surakarta City, it can be concluded that the quality of life of the community participating in this study is in the moderate category. This finding indicates that the community generally has high adaptability and positive subjective perceptions despite living in an informal environment full of limitations. specific, health domain physical, psychological, relationship social and environmental majority be in range currently to very good. However, still there is part small people who are in the category bad in every domain. Therefore that, is necessary intervention more policies specific and precise targets on aspects that are still weak.

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