



## Local Wisdom, Environmental Sensitivity and Disaster Anticipation in Improving Social Balance of Students in Junior High Schools

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### Abstract

This study aims to analyze the influence of local wisdom, environmental sensitivity, and disaster anticipation on social balance in Jember Regency. This study uses a social theory that underlies that local wisdom, environmental sensitivity, and disaster anticipation can affect social balance. The research method used is a survey with cluster and stratified random sampling techniques on 50 respondents in Panti District, Jember Regency. The collected data were analyzed using SEM PLS by calculating the multiple linear regression values of three independent variables (local wisdom, environmental sensitivity, and disaster anticipation) and one dependent variable (social balance). The results of the analysis show that local wisdom, environmental sensitivity, and disaster anticipation have a significant positive effect on social balance in Panti District, Jember Regency. The novelty in this study is that it can integrate three important elements of local wisdom, environmental sensitivity and disaster anticipation in one complete framework to improve the social balance of junior high school students in disaster-prone areas. The findings of this study enrich the theory of contextual learning based on local culture and broaden the understanding of disaster mitigation education at the junior high school level. The theoretical implications of this study are to provide a positive contribution to the development of social theory on the influence of local wisdom, environmental sensitivity, and disaster anticipation on social balance. While the practical implications are recommendations to improve local wisdom, environmental sensitivity, and disaster anticipation in order to improve social balance in Panti District, Jember Regency, East Java Province, Indonesia.

### Keywords:

Local Wisdom, Environmental Sensitivity, Disaster Anticipation, Social Balance

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## INTRODUCTION

Panti District in Jember Regency is an area known to have the potential for natural disasters such as landslides and flash floods. The geographical conditions dominated by hills and high rainfall intensity are the main factors triggering disasters in this area (Wibowo, Setyawati, et al., 2021). Repeated disaster events not only cause physical losses, but also have an impact on social aspects, including social balance among junior high school students. Unpreparedness to face disasters, lack of mitigation knowledge, and lack of social empathy can affect the psychological condition and social relationships of students in the school environment and the community (Hutagalung & Indrajat, 2020). A study conducted by Istafiani Ika Hasati (2013) showed that disaster psychoeducation has a



positive influence on students' disaster preparedness. Likewise, research by Siska Laura Sandrina Pereira (2023) emphasized the importance of social resilience as the main foundation of community preparedness for flood disasters. However, these studies have not explicitly linked disaster preparedness to students' social balance, especially in the context of integrating local wisdom values and environmental sensitivity.

The people in Panti District have local wisdom that has been passed down from generation to generation as part of their efforts to adapt to the natural conditions around them (Kusumasari, 2019). This local wisdom includes traditional ways of managing the environment, recognizing natural signs that indicate potential disasters, and forms of mutual cooperation in dealing with emergency situations (Hariyanto et al., 2022). However, as time goes by, the flow of modernization and changes in people's lifestyles often shift the role of local wisdom in everyday life (Wibowo, Setyawati, et al., 2021). On the other hand, community sensitivity to the environment and readiness to anticipate disasters are increasingly pressing challenges, considering the increasing frequency of disasters (Khazai et al., 2018).

Social balance in Panti District is greatly influenced by the extent to which the community understands and utilizes local wisdom, sensitivity to the environment, and disaster anticipation efforts. In this context, social balance includes stability in community life, where solidarity, mutual cooperation, and collective adaptation are important elements (Syuryansyah & Habibi, 2024). The imbalance that arises due to natural disasters can trigger various social problems, such as division, resource conflicts, and a decline in the quality of life (Syahiffah et al., 2024).

Local wisdom is knowledge and practices developed by communities in managing natural resources and the surrounding environment (Asadzadeh et al., 2017). Local wisdom can be a solution to overcome environmental problems and create social balance (Albantani & Madkur, 2018). However, local wisdom in Panti District, Jember Regency has not been optimally applied, and there are even some practices that are starting to be abandoned by the local community. Environmental sensitivity is the ability to understand and respond to environmental changes (Machado et al., 2017). Environmental sensitivity can help communities maintain a healthy and sustainable environment (Khazai et al., 2018). However, in Panti District, Jember Regency, there are still many people who do not understand the importance of protecting the environment. Natural disasters are threats that can disrupt social balance. In Panti District, Jember Regency, several types of disasters such as flash floods, landslides, and earthquakes often occur. Therefore, disaster anticipation and preparedness in facing disasters are very important in maintaining social balance. However, there are still many people in Panti District, Jember Regency who do not understand the importance of disaster anticipation.

The hope that arises from the research on the influence of local wisdom, environmental sensitivity, and disaster anticipation on social balance in Panti District, Jember Regency is an increase in public awareness of the importance of maintaining local wisdom and environmental sensitivity in managing natural resources in the area. Better coordination between the government, community, and related stakeholders in maintaining social balance in Panti District, Jember Regency is an urgent need that can be done. The realization of more optimal and sustainable natural resource management, so that it not only provides economic benefits but also maintains environmental balance. Increased readiness and anticipation in facing natural disasters in the area, so that it can minimize the negative impacts of disasters and accelerate recovery.

A better understanding of the factors that influence social balance in Panti District, Jember Regency, so that it can help in making better decisions and formulating policies in the future. With this research, it is expected to provide a significant contribution in maintaining social balance in Panti District, Jember Regency and can be used as a reference

for other regions in managing natural resources and anticipating disasters. Although there are hopes that arise from research on the influence of local wisdom, environmental sensitivity, and disaster anticipation on social balance in Panti District, Jember Regency, there is also a distance between reality and these expectations.

Some of the distances that can be identified are the lack of public awareness of the importance of local wisdom and environmental sensitivity in the management of natural resources is still a challenge that needs to be overcome. More intensive and comprehensive efforts are needed to increase public awareness of the importance of protecting the environment and local wisdom. The management of natural resources that is not optimal and environmental damage is still occurring in Panti District, Jember Regency, shows that there is a distance between the hope for the realization of more optimal and sustainable natural resource management and the current reality.

Previous research has shown that the use of green technology in agriculture can increase productivity and reduce negative environmental impacts Adedoyin et al., (2020) found that the use of green technology in agriculture in Africa has not had a significant impact on increasing productivity and reducing negative environmental impacts. However, there are also studies that show that the use of green technology can actually worsen soil and water quality (Li et al., 2023). This research at least underlies the environmental sensitivity factor as a prerequisite for creating social balance in a region.

Previous research on the impact of climate change on the economy was only conducted in developed countries. Adger (2006) discusses the vulnerability of developing countries to climate change and argues that information on the impact of climate change on developing countries is still limited. Sweet (2022) discusses the impact of climate change on developing countries and shows that information on the impact of climate change on developing countries is still very limited. Alessa et al., (2016) found that the use of green technology in rural environments has a different impact than in urban environments in achieving sustainable development. Rahim & Puay (2017) discusses the impact of climate change on economic development in Malaysia and shows that information on the impact of climate change on developing countries is still very limited.

Local wisdom is increasingly recognized as an important asset in disaster management and environmental conservation. Recent studies have highlighted how communities that rely on local knowledge are better able to cope with environmental change and disasters. Based on the study Lechleitner et al., (2021) underlines the importance of local wisdom in dealing with climate change and emphasizes how local traditions can help minimize the risk of natural disasters. Another study by Rumilah et al., (2020) in Indonesia shows that local wisdom, such as traditional knowledge about weather and wind patterns, can provide an early warning system for communities living in disaster-prone areas. The study Rasool et al., (2022) also found that the integration of local wisdom in disaster mitigation policies strengthens social resilience in vulnerable rural communities. Local wisdom not only plays a role in disaster management, but also in maintaining social balance because it strengthens solidarity and trust between residents.

Environmental sensitivity, especially among communities living in disaster-prone areas, is increasingly becoming a focus in social ecology and disaster mitigation studies. Recent research shows that environmental sensitivity plays an important role in shaping community preparedness for natural disasters. Based on research Abas et al., (2022) emphasized the importance of increasing environmental sensitivity in the community through education and strengthening ecological knowledge. They found that communities who are more sensitive to their environmental conditions are better prepared to face disaster risks. Another study by Rus et al., (2018) shows that increasing environmental sensitivity is directly related to increasing community capacity to adapt to climate change and disaster mitigation. Communities that are more environmentally aware have a better ability to

utilize local resources to reduce disaster risks. In addition, Luo et al., (2022) emphasized that environmental sensitivity is also closely related to social resilience. They found that more environmentally conscious communities have stronger social ties and are better able to work together in emergency situations.

Disaster anticipation is a proactive step that is increasingly highlighted in natural disaster mitigation efforts. The focus on physical, social, and institutional preparedness has become a major theme in recent literature on disaster risk management. Based on research by Morimoto et al., (2021) Disaster anticipation involving local community participation and utilizing local knowledge has proven to be more effective. This study highlights the importance of building a community-based early warning system and training communities in disaster preparedness. Takakura et al., (2021) found that areas with better disaster anticipation tend to have lower levels of social and economic damage when disasters occur. They also highlighted the important role of technology in supporting disaster anticipation, especially by using real-time data to predict disaster risk. Another study by Kochaksarai et al., (2024) emphasizes the need for an inclusion-based approach to disaster anticipation, where all levels of society are involved in developing mitigation strategies. This approach increases the social and economic resilience of communities, and strengthens social ties.

Social balance has been a focus in studies on the impact of natural disasters, especially in the context of how social inequality can affect a society's ability to recover from disasters. Recent research highlights the relationship between social balance and community resilience to disasters. Research Pelling et al., (2022) emphasize that social balance is a key factor in creating disaster-resilient communities. They found that communities with high levels of social solidarity and more equitable distribution of resources tend to have better resilience to natural disasters. Sanyal & Routray (2016) highlight that social inequalities can exacerbate the impacts of disasters, especially in vulnerable communities. They propose that disaster mitigation policies incorporate efforts to strengthen social balance as a means of enhancing overall societal resilience. In addition, Wu et al., (2020) found that social balance is not only related to distributional justice, but also to active community participation in the decision-making process related to disaster management. This study shows that communities with greater social involvement tend to be more adaptive in facing disaster challenges.

Research from (Hariyanto et al., 2022) shows that the level of social vulnerability of the community in Panti District to landslides is relatively high, which is influenced by several main factors, namely high population density, low levels of education, limited access to disaster information, and minimal community involvement in mitigation activities. Residential areas located on hilly slopes with unstable soil structures exacerbate the potential impact of landslides, especially with development patterns that do not pay attention to risk zoning. In addition, weak collective awareness and lack of integration of local wisdom values in environmental management also contribute to high social vulnerability. These findings emphasize the importance of developing participatory-based mitigation strategies that not only focus on physical aspects, but also on strengthening the social capacity of the community, especially through disaster education and empowerment of local values as an adaptive approach.

Furthermore, research from Takakura et al., (2021) shows that the existence of Disaster Resilient Village (DESTANA) in Suci Village has made a significant contribution to increasing community preparedness in facing flash flood disasters. Through disaster training programs, evacuation simulations, and the preparation of participatory disaster-prone maps, the community has become more aware of the risks and is better trained in responding to emergencies. Educational activities carried out periodically, including counseling in schools and socialization to vulnerable groups, have also increased disaster literacy across all age groups. This study also noted that the involvement of community

leaders and the integration of local wisdom, such as traditional natural signs, strengthen community-based mitigation strategies. These findings confirm that DESTANA is not only an institutional instrument, but also an effective vehicle for social empowerment in creating a disaster-resilient community.

Therefore, this study aims to determine the factors of local wisdom, environmental sensitivity and disaster anticipation affecting social balance in Panti District, Jember Regency. This study is expected to provide a deeper understanding of how local communities can utilize local potential and improve disaster preparedness in order to maintain social harmony and reduce the negative impacts caused by disasters.

## **METHODS**

Panti District is located in Jember Regency, East Java Province, Indonesia. This district is located at the foot of Mount Raung which is an active volcano. Because of its location close to the mountain slopes, this district has a hilly and mountainous topography. As a district located on the mountain slopes, Panti District has quite large natural potential.

The natural potential can be utilized as a source of clean water, forest resources, and agricultural resources. However, this potential also has a fairly high risk of disaster, such as landslides, floods, and erosion (de Silva et al., 2021). Therefore, local wisdom, environmental sensitivity, and disaster anticipation are needed to maintain social balance in Panti sub-district. Local wisdom can help the community understand the right ways to utilize natural resources while maintaining the balance of the ecosystem (Susanto et al., 2022). Environmental sensitivity is also important to maintain good environmental sustainability (Yang & Geng, 2022). While disaster anticipation is very necessary to reduce the risk of disaster and minimize the losses incurred.

The research method used is an associative quantitative research method by looking for relationships between variables (Ghozali & Latan, 2017), data collection was carried out using survey techniques using questionnaires distributed to respondents (Hair et al., 2017). The technique for this research which involves social and environmental factors, the most appropriate sampling technique is the cluster random sampling technique or multistage sampling (Sugiyono, 2017). The inclusion criteria in this study were active junior high school students from grades VII to IX in Panti District, Jember Regency and students who live in disaster-prone areas such as landslides or flash floods in Panti District. While the exclusion criteria in this study were students who were absent during the data collection period. The data collection period in this study was 3 months. The research method used was observation and distribution of questionnaires to 50 respondents who were selected randomly. In this case, the area selected was a village or sub-district in Panti District, Jember Regency.

In this study, regression analysis was conducted using the Partial Least Squares (PLS) approach through two main stages, namely measuring the outer model and inner model. Outer model testing is used to measure the validity and reliability of the construct through evaluation of indicators such as loading factors, AVE, and composite reliability. Furthermore, inner model testing is conducted to analyze the relationship between latent variables through the calculation of path coefficients, t-statistic values, and p-values, in order to determine the strength and significance of the influence between constructs in the research model (Hair & Brunsveld, 2019). The software used in this study is SmartPLS version 3.0, which is specifically designed to perform Partial Least Squares Structural Equation Modeling (PLS-SEM) analysis. SmartPLS was chosen because it is able to handle complex models with a relatively small number of samples and can test the relationship

between latent variables simultaneously, both in reflective and formative forms (Hair et al., 2017). The outline of this research instrument is as follows:

**Table 1. Research Instruments**

No	Variable	Indicator	Item No.
1	Local Wisdom is the knowledge and practices developed by a local community to face challenges and changes in their social, cultural and ecological environment (Albantani & Madkur, 2018; Lestari et al., 2023; Susanto et al., 2022)	Traditional Knowledge	LW1
		Social Values	LW2
		Culture and Rituals	LW3
		Environmental Adaptation	LW4
		Ecological Sustainability	LW5
2	Environmental Sensitivity is the extent to which a particular ecosystem or area is vulnerable to disturbances, whether caused by natural or human factors (Chen et al., 2024; Liu et al., 2024)	Biodiversity	ES1
		Habitat fragmentation	ES2
		Changes in land use patterns	ES3
		Analysis of landscape fragmentation patterns	ES4
		Distribution of zones that are very sensitive to environmental changes	ES5
3	Disaster Anticipation is a proactive action to reduce risk before a disaster occurs, often through early warning systems and other preventive measures (Graveline & Germain, 2022; UNDRR, 2023).	Early Warning	DA1
		Resilient Infrastructure	DA2
		Socio-Economic Risk Management	DA3
4	Social Balance is a condition in which various components of society, such as economic, political, social and cultural, run in harmony, thus creating stability in social interactions (OECD, 2024; Yang & Geng, 2022).	Level of Welfare	SB1
		Education	SB2
		Economic Equality	SB3
		Good Social Governance	SB4
		Social Participation	SB5

**Table 2. Instrument Validity Test**

		Amount	Conclusion (valid if less than 0.05)
LW1	Pearson Correlation	.953**	Valid
	Sig. (2-tailed)	.000	
	N	50	
LW2	Pearson Correlation	.891**	Valid
	Sig. (2-tailed)	.000	
	N	50	
LW3	Pearson Correlation	.935**	Valid
	Sig. (2-tailed)	.000	
	N	50	
LW4	Pearson Correlation	.888**	Valid
	Sig. (2-tailed)	.000	
	N	50	
LW5	Pearson Correlation	.944**	Valid
	Sig. (2-tailed)	.000	
	N	50	
ES1	Pearson Correlation	.928**	Valid
	Sig. (2-tailed)	.000	
	N	50	
ES2	Pearson Correlation	.925**	Valid
	Sig. (2-tailed)	.000	
	N	50	
ES3	Pearson Correlation	.907**	Valid
	Sig. (2-tailed)	.000	
	N	50	
ES4	Pearson Correlation	.925**	

	Sig. (2-tailed)	.000	Valid
	N	50	
ES5	Pearson Correlation	.932**	
	Sig. (2-tailed)	.000	Valid
	N	50	
DA1	Pearson Correlation	.879**	
	Sig. (2-tailed)	.000	Valid
	N	50	
DA2	Pearson Correlation	.877**	
	Sig. (2-tailed)	.000	Valid
	N	50	
DA3	Pearson Correlation	.816**	
	Sig. (2-tailed)	.000	Valid
	N	50	
SB1	Pearson Correlation	.821**	
	Sig. (2-tailed)	.000	Valid
	N	50	
SB2	Pearson Correlation	.816**	
	Sig. (2-tailed)	.000	Valid
	N	50	
SB3	Pearson Correlation	.837**	
	Sig. (2-tailed)	.000	Valid
	N	50	
SB4	Pearson Correlation	.812**	
	Sig. (2-tailed)	.000	Valid
	N	50	
SB5	Pearson Correlation	.770**	
	Sig. (2-tailed)	.000	Valid
	N	50	
Amount	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	50	

Based on the results of the validity test on all the research instruments above, it can be concluded that all instruments have a value below 0.05, which means that all instruments are declared valid.

**Table 3. Instrument Reliability Test**

<b>Cronbach's Alpha</b>	<b>of Items</b>
.983	18

Based on the results of the reliability test with Cronbach's alpha, a coefficient of 0.398 was obtained, which is greater than 0.5, so it is declared reliable.

## RESULTS & DISCUSSION

### Outer Model Testing

PLS analysis begins by testing the Outer Model which measures validity through loading factors (Hair & Brunsveld, 2019). Indicators that have a loading factor value of less than 0.6 will be removed from the model (Hair et al., 2014). The results of the convergent validity test after the invalid indicators were removed can be seen in the following table:

The PLS analysis conducted begins with the Outer Model which measures the validity test with the loading factor. For indicators of each variable that are less than 0.6, the loading factor value will be dropped from the model. The results of the convergent

validity test after invalid indicators are dropped from the model are in full in the following table:

**Table 4. Outer Model**

	<b>Disaster Anticipation</b>	<b>Environmental Sensitivity</b>	<b>Local Wisdom</b>	<b>Social Balance</b>
DA1	0.973			
DA2	0.895			
DA3	0.965			
ES1		0.732		
ES2		0.738		
ES3		0.884		
ES4		0.864		
ES5		0.760		
LW1			0.758	
LW2			0.752	
LW3			0.816	
LW4			0.900	
LW5			0.742	
SB1				0.783
SB2				0.860
SB3				0.789
SB4				0.865
SB5				0.860

Source: Processed data, 2024.

Then a discriminant validity test was conducted. The Disaster Anticipation value was obtained at 0.941, Environmental Sensitivity at 0.831, Local Wisdom at 0.811, and Social Balance at 0.898. So it can be concluded that the model has met discriminant validity.

**Table 5. Construct Validity and Reliability**

	<b>Cronbach's Alpha</b>	<b>rho_A</b>	<b>Composite Reliability</b>	<b>AVE</b>
Disaster Anticipation	0.939	0.941	0.961	0.893
Environmental Sensitivity	0.818	0.831	0.872	0.581
Local Wisdom	0.789	0.811	0.860	0.560
Social Balance	0.889	0.898	0.918	0.692

Source: Processed data, 2024.

Based on the table, it can be seen that the Cronbach's Alpha value of all constructs is > 0.6, where the acceptable limit value of Cronbach's alpha is greater than 0.6 (Hair et al, 2011). Thus, all constructs have met construct reliability.

**Inner Model Testing**

The inner model describes the relationship between latent variables based on substantive theory. In evaluating the model using PLS, the first step is to look at the R-square value for each dependent latent variable. The results of the inner model test can be used to analyze the relationship between constructs by comparing the significance and R-square values of the research model (Ghozali & Latan, 2017).

**Table 6. R-Squares Values**

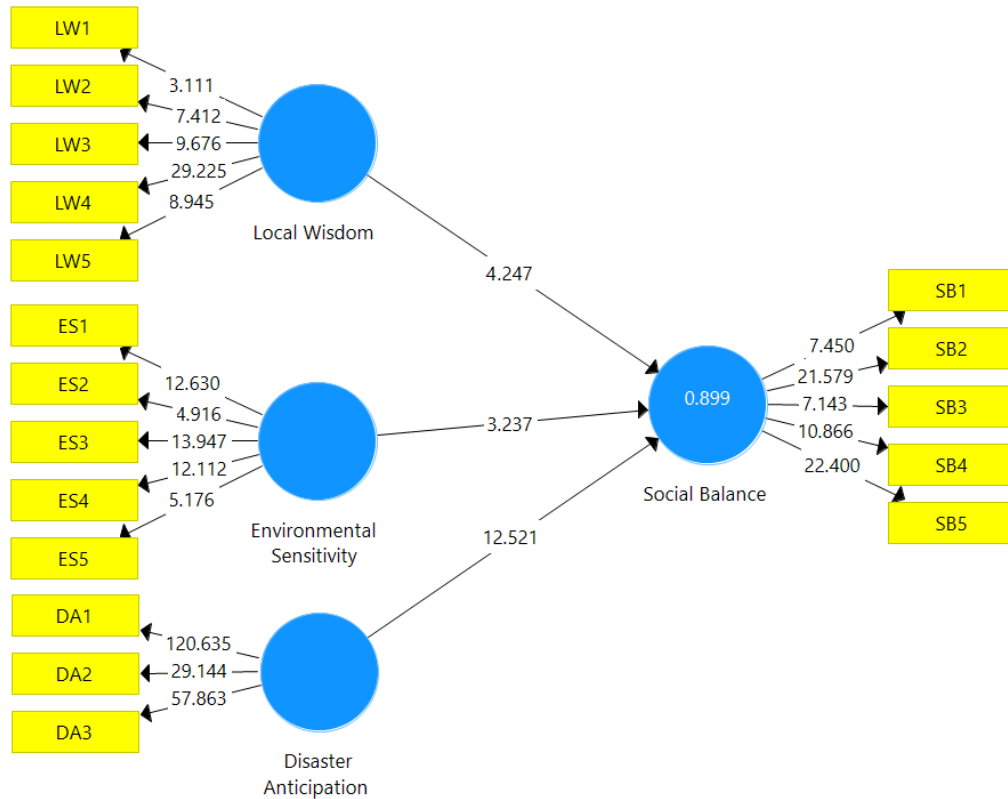
	<b>R Square</b>	<b>Adjusted R Square</b>
Social Balance	0.899	0.892

Source: Processed data, 2024.

The Adjusted R Square value of the Social Balance variable of 0.892 in Table 4 shows that 89.2 percent of the Social Balance variable is explained by the Disaster Anticipation, Environmental Sensitivity, and Local Wisdom variables, while 10.8 percent is explained by variables outside the model.

**Direct Effect Testing**

Hypothesis testing on the influence of the variables of Social Media Utilization, Big Data, Networking, Decision Quality is presented in Figure 1.



**Figure 1.** t-Statistic Value of Path Analysis Model (Source: Processed data, 2024)

Hypothesis testing in the PLS method is carried out using simulations of each hypothesized relationship, in this case the bootstrap method is carried out on the sample. The bootstrap method also functions to minimize the problem of abnormality of the research data used. In this study, the T-table value with a significance of 5% has been previously determined, which is 1.679. All path coefficients have a statistical t value above 1.679.

**Table 7.** Direct Influence

	T Statistics	T Table	P Values	Information
Disaster Anticipation -> Social Balance	12,521	1,679	0,000	Positive and Significant
Environmental Sensitivity -> Social Balance	3,237	1,679	0.008	Positive and Significant
Local Wisdom -> Social Balance	4,247	1,679	0.002	Positive and Significant

Source: Processed data, 2024.

The results of the path coefficient obtained in the first hypothesis between Local Social Wisdom and Social Balance obtained a T value of *Statistics* As big as  $4.247 \geq 1.679$  with a P-Value of  $0.002 \leq 0.05$  significant, it is concluded that there is a significant influence between Local Wisdom and Social Balance. A positive value on the coefficient means that the better the Local Wisdom, the better the Social Balance.

The results of the path coefficient obtained in the second hypothesis between Environmental Sensitivity and Social Balance obtained a T value of  $3.237 \geq 1.679$  with a P-Value of  $0.000 \leq 0.05$  significant, it is concluded that there is a significant influence between Environmental Sensitivity and Social Balance. A positive value on the coefficient means that the better the Environmental Sensitivity, the better the Social Balance.

The results of the path coefficient obtained in the third hypothesis between Disaster Anticipation on Social Balance obtained a T statistics Value of  $12.521 \geq 1.679$  with a P-Value of  $0.010 \leq 0.05$  significant, it is concluded that there is a significant influence between Disaster Anticipation on Social Balance. A positive value on the coefficient means that the better the Disaster Anticipation, the better the Social Balance.

## Discussion

### Local Wisdom on Social Balance

Based on the findings of the research results, the first hypothesis can be interpreted that Local Wisdom can have a positive and significant influence on Social Balance in Panti District, Jember Regency, East Java Province. This means that the increasing Local Wisdom will increase Social Balance in Panti District, Jember Regency, East Java Province. This research is confirmed by research conducted by Moeis et al., (2022) and Ramadhan et al., (2018) which states that Local Wisdom can have a significant influence on Social Balance.

Local wisdom plays an important role in maintaining social balance through the application of traditional values that encourage togetherness, equality and solidarity in society (Setyaningrum, 2018). For example, local wisdom teaches the importance of mutual cooperation, social awareness, and justice in the distribution of resources, which serve as social bonds and prevent inequality (Nuryanto et al., 2024). In addition, local wisdom is able to maintain cultural identity that provides a sense of belonging and social stability amidst the changes of globalization (Nawas et al., 2022). This makes local wisdom an important foundation in maintaining social harmony.

Local wisdom tends to emphasize the values and traditions that exist within the community (Sumartias et al., 2020). This creates a strong sense of pride and identity among community members. When people feel connected to their culture, they tend to value their community more, which can increase social solidarity (Aura et al., 2023). Many local traditions emphasize the importance of mutual cooperation and helping each other. These collective activities form strong bonds between members of a community, which is important for creating social balance. When people work together to achieve a common goal, relationships between individuals grow stronger (Sriartha et al., 2017).

Local wisdom often functions as an educational medium for the younger generation (Wibowo, Sugihardjo, et al., 2021). Through the practices and values taught, communities can transfer important knowledge about the environment, agriculture, and society. This education helps build sustainable character and leadership (Arsal et al., 2022). Local wisdom provides a conflict resolution mechanism that is more based on mediation and dialogue (Saeri et al., 2024). By using this approach, communities can reduce tensions and maintain social stability. This is important for balance, because unresolved conflict can disrupt harmony (Feriadin et al., 2024).

Practices adopted based on local wisdom often focus on environmental sustainability and wise use of resources (Kartikawangi, 2017). By prioritizing sustainability, communities can ensure that future generations can also enjoy the same resources, which supports collective well-being (Ramadhan et al., 2018). Local wisdom encourages active participation from all community members in the decision-making process. By involving

all voices, the community feels responsible and involved in the results of the decisions taken, which creates a sense of ownership and mutual respect (Marfai, 2019).

Local wisdom provides guidance and strategies for communities to adapt to changes, both social and environmental (Gelgel, 2017). This knowledge enables society to better face challenges, maintaining stability and harmony amidst possible shifts (Kartikawangi, 2017). Economic practices rooted in local wisdom, such as traditional handicrafts and agricultural products, help fuel local economic growth. This promotes community well-being while maintaining cultural values, further strengthening social ties (Towoliu et al., 2023).

Overall, local wisdom empowers communities in profound ways. By emphasizing community values, strengthening social connections, and encouraging sustainable practices, local wisdom plays a central role in creating a stable and harmonious social balance. This study provides the meaning that in an effort to improve Social Balance, it is also necessary to improve Local Wisdom in Panti District, Jember Regency, East Java Province. If Local Wisdom in the community can be improved, it will have a significant impact on Social Balance in the community.

### **Environmental Sensitivity to Social Balance**

Based on the findings of the research results, the second hypothesis can be interpreted that Environmental Sensitivity can have a positive and significant influence on Social Balance in Panti District, Jember Regency, East Java Province. This means that the increasing Environmental Sensitivity will increase Social Balance in Panti District, Jember Regency, East Java Province. This research is confirmed by research conducted by Enoguanbhor et al., (2024) and Machado et al., (2017) which states that Environmental Sensitivity can significantly influence Social Balance.

The relationship between environmental sensitivity and social balance can be seen from a psychological perspective, where individuals who are more sensitive to their environment tend to be more influenced by external factors that can affect their social relationships and well-being (Wang et al., 2024). Environmental sensitivity describes a person's ability to respond more intensely to environmental stimuli, both positive and negative. This has a direct impact on social balance, especially in the context of adaptation to social change or pressure (McCoy et al., 2013).

Research shows that individuals with high environmental sensitivity are more susceptible to emotional and social disorders when faced with stressful situations, such as the COVID-19 pandemic (Greven et al., 2019). On the other hand, they may also benefit more from a supportive social environment, which helps maintain their social balance better than individuals with lower levels of sensitivity (Yusuf et al., 2024). That is, environmental sensitivity plays a moderating role in how individuals balance their social relationships and well-being (Melo et al., 2018).

Environmental sensitivity encourages people to be more aware of environmental issues that affect their lives (Dias-Sardinha & Reijnders, 2005). This awareness can create a sense of shared responsibility, where individuals feel involved and care about the state of the surrounding environment (McCoy et al., 2013). When communities come together to carry out environmental conservation activities, such as planting trees or cleaning public areas, it creates opportunities for social interaction and strengthens relationships between members. Shared activities can increase solidarity and a sense of ownership of the environment (Karacaoğlu & Özkaya, 2023).

By raising awareness of environmental issues, communities also invest in education that helps the younger generation understand the importance of protecting the environment (Oteleş & Demir, 2023). This education forms positive characters and values that support social balance. Environmental sensitivity can provide a platform for constructive

discussions on resource use (Dias-Sardinha & Reijnders, 2005). When communities understand the negative impacts of resource exploitation, they are more likely to engage in peaceful dialogue to find mutually beneficial solutions, reducing the potential for conflict (Dias-Sardinha & Reijnders, 2005).

Environmental sensitivity encourages people to adopt sustainable practices in their daily lives (Yano & Oishi, 2024). These practices, such as efficient use of resources and waste reduction, help create a healthier environment. A healthy environment supports the well-being of individuals and the community as a whole (McCoy et al., 2013). Environmentally sensitive communities are often better able to use natural resources sustainably. This can open up new economic opportunities, such as ecotourism or organic farming, that not only support local economies but also strengthen communities (Dragone et al., 2024).

Environmental sensitivity makes society more adaptive to changes caused by environmental crises, such as climate change (Oteleş & Demir, 2023). Communities that understand and value their environment can develop resilience strategies that maintain social balance. Environmental sensitivity often encourages communities to participate in decision-making related to their environment (Yano & Oishi, 2024). By involving various parties, the decision will be more inclusive and reflect the aspirations of the community, which in turn supports social harmony.

Environmental sensitivity encourages people to value biodiversity and culture (Wei et al., 2024). Awareness of how diversity supports healthy ecosystems can strengthen mutual respect and understanding between cultures, strengthening social relationships within communities (Dragone et al., 2024). Thus, environmental sensitivity not only contributes to the preservation of nature, but also to sustainable social development. Communities that are sensitive to the environment tend to be more cohesive, strong, and prosperous, creating a better social balance. This study provides the meaning that in an effort to improve Social Balance, it is also necessary to improve Environmental Sensitivity in Panti District, Jember Regency, East Java Province. If Environmental Sensitivity in the community can be improved, it will have a significant impact on Social Balance in the community.

### **Disaster Anticipation for Social Balance**

Based on the findings of the research results, the third hypothesis can be interpreted that Disaster Anticipation can have a positive and significant effect on Social Balance in Panti District, Jember Regency, East Java Province. This means that the increasing Disaster Anticipation will increase Social Balance in Panti District, Jember Regency, East Java Province. This research is confirmed by research conducted by Lutoff et al., (2016) and Sain (2023) which states that Disaster Anticipation can have a significant influence on Social Balance

Disaster anticipation, such as through mitigation and preparedness, directly impacts social balance by reducing the vulnerability of vulnerable community groups and minimizing social inequality (Yang & Geng, 2022). These strategies involve efforts to strengthen community capacity, reduce disaster risks, and improve socio-economic frameworks, all of which contribute to post-disaster social stability (Niekerk & Terblanché-Greeff, 2020). Disaster anticipation encourages community education and awareness of the risks they may face. Through training and simulations, communities learn how to reduce the impact of disasters, which increases their knowledge and skills (Hosseini & Sobhanardakani, 2022). The process of planning and implementing disaster anticipation usually involves collaboration between community members. Activities such as the formation of volunteer groups and community meetings to plan mitigation measures allow for stronger social ties (Lestari et al., 2023).

By having a disaster anticipation plan, the uncertainty that often accompanies disasters can be minimized. Communities that are aware and prepared will experience less anxiety, which helps create a more stable social environment (Fahmi & Hizbaron, 2023). Disaster anticipation encourages inclusion in planning, so that all levels of society can contribute and have equal access to resources and information. This reduces social inequality, thereby creating balance (Susanto et al., 2022). By planning for disaster anticipation, communities can protect their assets and livelihoods, minimizing economic losses when disasters occur (McWilliam et al., 2020). A more stable economy supports social well-being and creates resilience in communities (Hizbaron et al., 2018).

Disaster anticipation often involves improving infrastructure, such as drainage channels or disaster-resistant buildings. Good infrastructure not only protects communities from disasters but also improves the overall quality of life (Kochaksaraei et al., 2024). Disaster anticipation opens up opportunities for community resource mobilization, such as support through donations or volunteers (Comes et al., 2019). This mobilization helps ensure that all community members receive the necessary assistance, creating social solidarity. One aspect of disaster anticipation is involving the community in decision-making regarding mitigation and response. This creates a sense of ownership and responsibility among community members, which in turn strengthens social interaction (Voisard et al., 2023).

Disaster anticipation creates opportunities for collaboration between various parties: government, non-governmental organizations, and local communities (Widiastuti et al., 2020). Positive and harmonious relationships between stakeholders strengthen social networks and facilitate future cooperation (Albantani & Madkur, 2018). When a disaster occurs, good preparedness allows for a faster and more organized recovery. Effective recovery ensures a return to normalcy, supports social stability, and builds trust among community members (Swee, 2022). Thus, disaster anticipation does not only focus on technical and physical aspects, but also on strengthening social ties and improving the quality of life of the community, which is very important in achieving social balance. This study provides meaning that in an effort to improve Social Balance, it is also necessary to improve Disaster Anticipation in Panti District, Jember Regency, East Java Province. If Disaster Anticipation in the community can be improved, it will have a significant impact on Social Balance in the community.

## **CONCLUSION**

Based on the results of data analysis it can be concluded that there are positive and significant influences on local wisdom, environmental sensitivity, and disaster anticipation of social balance in Panti District, Jember Regency. This shows that people who have high local wisdom, good level of environmental sensitivity, and the ability to anticipate disasters both tend to have a better social balance. These results are in line with social theory which states that social and environmental factors can affect the social balance of society. Therefore, efforts are needed to increase local wisdom, environmental sensitivity, and disaster anticipation capabilities in Panti District, Jember Regency to strengthen social balance in the community.

The novelty in this study can integrate three important elements of local wisdom, environmental sensitivity, and disaster anticipation in a full framework to improve the social balance of junior high school students in disaster -prone areas. Different from previous studies that generally focus on aspects of preparedness or disaster impacts separately, this research places students as key subjects in the development of tough social character to disaster risk.

The findings of this study enrich the theory of contextual learning based on local culture and expand an understanding of disaster mitigation education at the junior high school level. By linking the values of local wisdom such as mutual cooperation, understanding of natural signs, as well as environmental care attitudes, this study shows that disaster education that is rooted in local culture can increase empathy, solidarity, and social balance of students. Therefore, subsequent research can be done by expanding the sample and involving a wider community group in order to obtain more representative results and stronger generalizations.

The results of this study also contributed to the development of adaptive and holistic educational models, which not only focused on cognitive aspects, but also to strengthening social character and student ecological care.

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