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Assessing Community Resilience to Flood Disasters: A Case Study of Temerloh, Pahang

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Abstract: Rapid urbanization and development have led to a significant number of Malaysians living in flood-prone areas, exacerbating the impact of natural disasters such as floods. This study aims to identify the factors influencing community resilience both before and after flood events in Temerloh, Pahang. Data were collected via questionnaires distributed to 350 flood victims. Key findings reveal that long-term residents exhibit higher resilience due to local knowledge and preparedness strategies. The study highlights the importance of integrating local experiences into flood management policies to enhance community resilience. The results reveal that large flood-prone areas experience frequent flooding, contributing to considerable community distress. This distress is somewhat alleviated by the support provided by government agencies and NGOs, which includes relief efforts, emergency services, and flood defense construction. Additionally, community involvement in flood management was found to have a statistically significant impact ($p < 0.05$). The study highlights the need for enhanced flood management strategies that address psychological aspects to reduce negative impacts on the community.

Keywords: psychological impact; community resilience; flood management; urbanization; disaster response

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1. Introduction

Floods are a persistent threat to communities worldwide, causing devastating damage to infrastructure, property, and livelihoods. Mitigating the impact of these disasters requires a focus on building community resilience to foster the ability of a community to withstand, prepare for, and recover from disruptions. Human activity significantly influences basin and drainage ecosystems, acting as agents of change in the physical environment. The interaction between natural systems and human interventions often disrupts environmental quality, leading to natural disasters such as floods [1]. Development processes typically deteriorate the physical environment, with large-scale land use changes in drainage basin systems causing imbalances in natural cycles, such as water and soil balance. These imbalances alter the quality and quantity within the basin system, contributing to catastrophic floods [2,3].

Malaysia, known for its beautiful landscapes and diverse ecosystems, faces a recurring challenge: devastating floods. These events cause significant damage to infrastructure, disrupt lives, and displace communities. Understanding past flood events and their impacts is crucial for Malaysia to move forward and build resilience against this ever-present threat. In December 2021, a tropical depression made landfall on the east coast of Peninsular Malaysia, triggering several days of torrential downpours [4]. The resulting floods wreaked havoc across eight states, with Kelantan, Terengganu, Pahang, and Perak experiencing the most severe impacts. The floodwaters claimed at least 54 lives and displaced thousands of residents from their homes [5]. This event highlighted the urgent need for improved flood management strategies and infrastructure development in flood-prone areas.

While not as widespread as the 2021–2022 floods, December 2022 saw flash floods strike several states, particularly Kelantan [6]. Heavy rainfall caused significant damage to infrastructure and displaced thousands of residents. Just a few months later, in March 2023, heavy rainfall triggered another round of flash floods, with Johor bearing the brunt of the disaster [7]. The floods were declared a state of disaster in Johor, causing widespread damage and displacing over 42,000 people. Notably, the extent of the flooding in Johor exceeded historical averages, marking an unprecedented situation for the state [5].

These are just a few recent examples, but Malaysia has a long history of grappling with floods. The northeast monsoon season (November to March) brings heavy rainfall, making these months particularly flood-prone [7]. Looking ahead, climate change poses a significant concern. Experts warn that it could lead to more frequent and intense extreme weather events, including floods [8]. In recent years, natural disasters like floods have become increasingly severe, exemplified by the major floods in Malaysia in 2014. These incidents have had detrimental effects on both the population and the government. The increasing frequency of intense rainfall, exacerbated by land development along riverbanks, has led to worsening floods annually. Consequently, improving land use practices can enhance the resilience of communities to various disaster risks, ultimately affecting the quality of life for residents in affected areas [9].

Despite existing flood management strategies, the psychological impact of frequent flooding on communities and the role of community involvement in enhancing resilience requires further investigation. This study aims to achieve several key objectives to enhance understanding and resilience in flood-prone areas. First, it seeks to identify the primary factors affecting community resilience in such regions, providing a comprehensive understanding of the elements that contribute to a community's ability to withstand and recover from flood events. Second, the study will evaluate the role of government and NGO support in mitigating the impact of floods, examining how these organizations contribute to relief efforts and infrastructure development. Third, the significance of community involvement in flood management will be assessed, exploring how local participation influences the effectiveness of flood response and preparedness strategies. Finally, the study will propose enhanced flood management strategies that incorporate psychological aspects, aiming to address both the physical and mental impacts of flooding on communities and to improve overall resilience [10].

Flood disasters are among the most common and devastating natural hazards worldwide. They cause significant damage to infrastructure, displace populations, and disrupt livelihoods [11]. The contemporary literature on disaster resilience emphasizes the ability of communities to anticipate, cope with, and recover from adverse events [12]. Theories such as the Disaster Resilience of Place (DROP) model and the Community Resilience Framework provide a basis for understanding the factors that contribute to resilience [12]. Developing nations face unique challenges in managing flood risks due to limited resources, inadequate infrastructure, and high population densities in vulnerable areas. Recent studies highlight the importance of integrating local knowledge and community participation in flood management strategies [13]. For instance, a study on flood resilience in Bangladesh demonstrates how community-based approaches can enhance preparedness and response efforts [14]. Updated citations from 2024 and beyond further underscore the evolving nature of flood risks and the need for adaptive strategies [15].

Malaysia, with its tropical climate and diverse topography, is particularly susceptible to flood events. The northeast monsoon season brings heavy rainfall, leading to frequent and severe flooding in various regions, including Temerloh, Pahang [16]. Previous research has documented the impacts of major flood events, such as the 2014 floods, on communities and infrastructure [17]. Studies also highlight the role of government agencies and NGOs in providing relief and support during flood events [18]. However, there is a lack of research on the psychological impacts of floods and the effectiveness of community involvement in enhancing resilience. The increasing frequency of flood disasters in Malaysia, particularly in Temerloh, Pahang, has raised concerns about community resilience. Studies have shown

that effective flood management involves understanding local community dynamics [19]. This study aims to identify the factors that enhance community resilience during and after flood events, contributing to the broader literature on disaster risk reduction.

Floods are a persistent challenge for Pahang, a state on the east coast of Peninsular Malaysia. The state's susceptibility to flooding is driven by a combination of geographical and human-induced factors. Monsoonal rains and riverine overflow, the primary drivers of floods in Pahang, are the heavy rainfall associated with the northeast monsoon season, typically occurring from November to March [10]. This intense precipitation overwhelms the capacity of rivers and drainage systems, leading to overflows and subsequent flooding of surrounding low-lying areas [20]. The Pahang River, the state's main drainage system, plays a crucial role in this process. During heavy rainfall events, the river's capacity can be exceeded, causing its banks to overflow and inundate nearby areas [7].

Despite extensive research on flood management and resilience, several gaps remain. Notably, there is limited understanding of the psychological effects of frequent flooding on communities and how these impacts can be mitigated through targeted interventions. Additionally, the role of community involvement in flood management and its potential to enhance resilience is underexplored. This study aims to address these gaps by investigating the factors influencing community resilience before and after flood events in Temerloh, Pahang.

2. Study Area and Methods

2.1. Study Area

This study focuses on the Temerloh District in Pahang, Malaysia, a key area due to its central location at the confluence of Sungai Semantan and Sungai Pahang (Figure 1). Temerloh, often referred to as the "Middle Point Peninsula" due to its central position on the peninsula, is comprised of ten sub-districts: Mukim Sanggang, Mukim Jenderak, Mukim Perak, Mukim Lebak, Mukim Lebak II, Mukim Lipat Kajang, Mukim Mentakab, Mukim Perak II, and Mukim Kerdau, which is derived from Temerloh Land and District Office. Sungai Pahang, the main river, extends 320 km from Kuala Tahan to Kuala Pahang, with Sungai Semantan serving as a significant tributary. The Kuala Tahan area, located within the Pahang National Park Forest Reserve, contributes to a substantial catchment area with an elevation of 2000 m.

The study examines flood occurrences in Pahang from 1954 to 2015, categorizing them into four levels: risk, danger, disaster, and severe disaster. This historical analysis provides a context for understanding the flood patterns and their impact on the community. Temerloh, a district in Pahang, Malaysia, has a population of approximately 190,500 people. Major economic activities include agriculture and small businesses. The district has experienced several significant flooding events over the past two decades, resulting in substantial damage to infrastructure and residents' lives.

Flood disasters are one of the most vulnerable aspects of Malaysia. The focus of the case is on the occurrence of monsoon floods such as the flood trend in Malaysia shown in Figure 2. Throughout the period of 61 years (1954–2015), almost 61 flood events were recorded according to their respective localities in various scales and levels. Empirical data obtained from various sources show that this country has never been spared from floods. In addition, based on the result obtained from the flood diagram, which varies according to the level magnitude and scale each year. The rates of death, injury and loss are also interpreted as being specific to certain localities. During the 130 years of this flood event, it was divided into four different levels and scales. Scale 1 indicates risk, scale 2 indicates danger, scale 3 indicates disaster, and scale 4 indicates catastrophe. However, from the results of this data analysis, Malaysia has not yet reached level four on the highest scale [21].

The study focuses on the social context, which is the resilience aspect of flood victims in facing flood disasters. The scope of emotional and physical resilience of victims is emphasized to produce resilience indicators for a person or community for them to bounce

back after changes that have a negative impact on daily life. Community resilience refers to the ability of a community to withstand and recover from disaster events. In the context of flooding, it involves robust infrastructure, social support, and effective recovery strategies. This study is significant as it provides current data on community resilience to flooding in Temerloh, which can be used to develop better disaster management strategies and minimize future impacts.

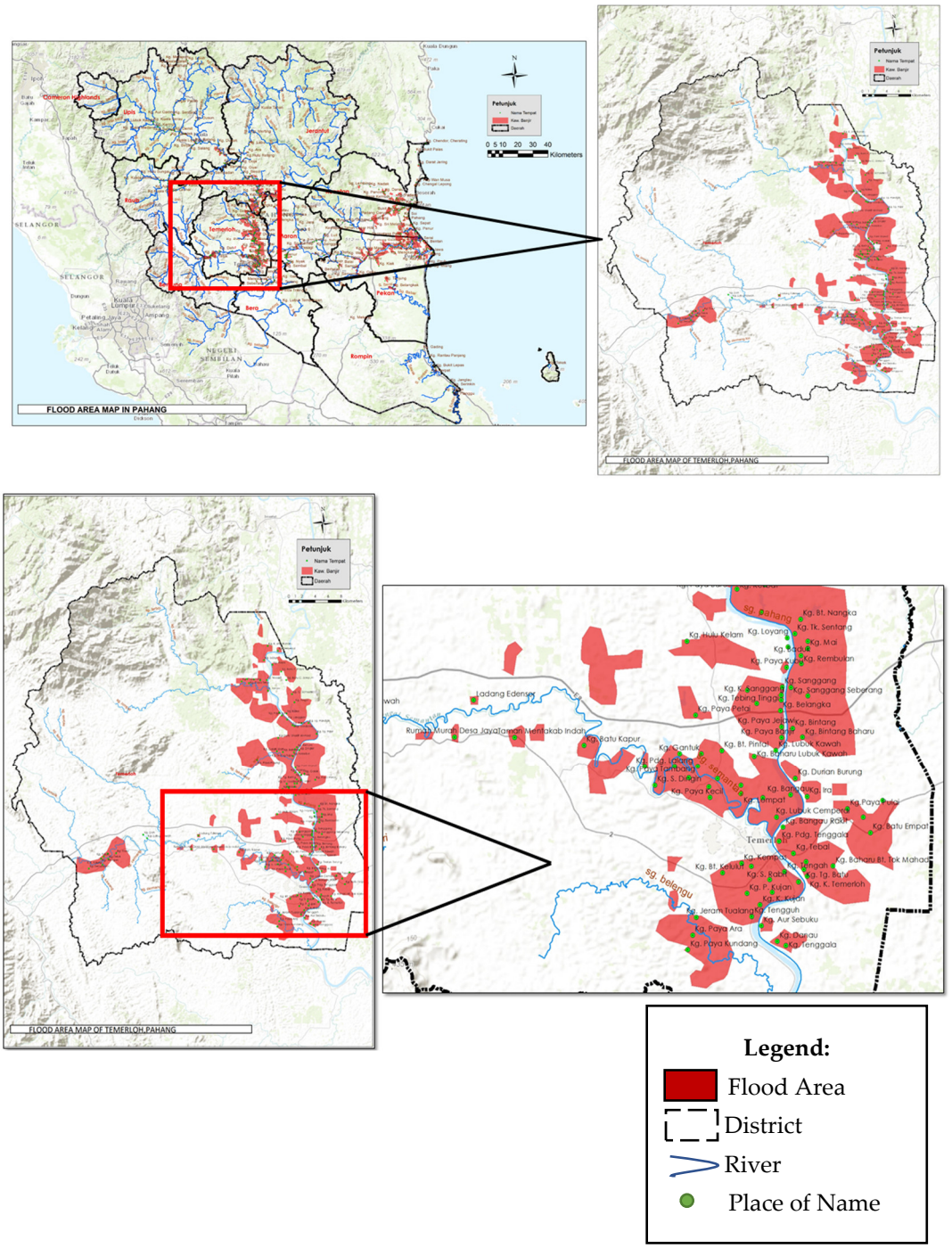

Figure 1. Study area and flood risk area in map of Temerloh, Pahang, Malaysia.

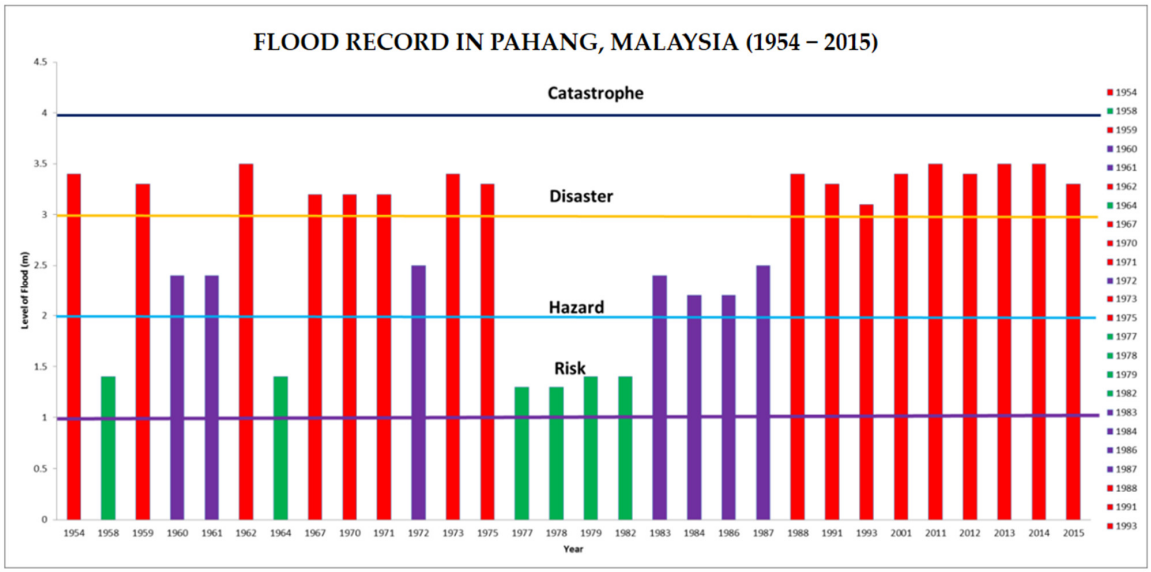

Figure 2. Flood event record in Malaysia, 1954 to 2015. Source: [21].

2.2. Methodology

The study employed a mixed-methods approach. Surveys were conducted among 350 flood victims from various age groups, with the data collection period spanning from January to March 2017. The respondents were selected using stratified random sampling. The survey included questions on pre-flood preparedness, post-flood recovery, and perceptions of government support. Data analysis was performed using statistical software and the process is illustrated in Figure 3. The sampling method for this study involves constructing questions for the survey and selecting an area severely affected by floods. Temerloh district was chosen because it can provide in-depth information from various stakeholders, addressing the research questions effectively through both survey and interview techniques. The sampling method is based on the researcher's knowledge of the community living in flood-risk zones. A simple random sampling technique was deemed appropriate, ensuring that each unit has an equal chance of being selected, using a random table to eliminate bias. Sampling was conducted in two stages: households affected by floods and focus groups represented by community leaders such as village heads and relevant officers.

The sampling calculation of the study sample was calculated using the Krejcie and Morgan (1970) formula; S = required sample size, N = identified population size, and p = population proportion assumed to be 0.5 because this magnitude produces the maximum sample size, d = maximum degree of precision (0.05) X^2 = chi-square value from the table at 1 degree of freedom which is 3.841.

N = 190,500 person (Population Size)

$$S = \frac{X^2 Np\,(1-p)}{D^2\,(N-1) + (X^2P\,(1-p)}$$

$$\frac{3.841\,(190{,}500)(0.5)(1-0.5)}{(0.05)^2(190{,}500-1) + 3.841(0.5)\,(1-0.5)}$$

$$\frac{182{,}928}{477} = 383$$

S = 383 person:350 person

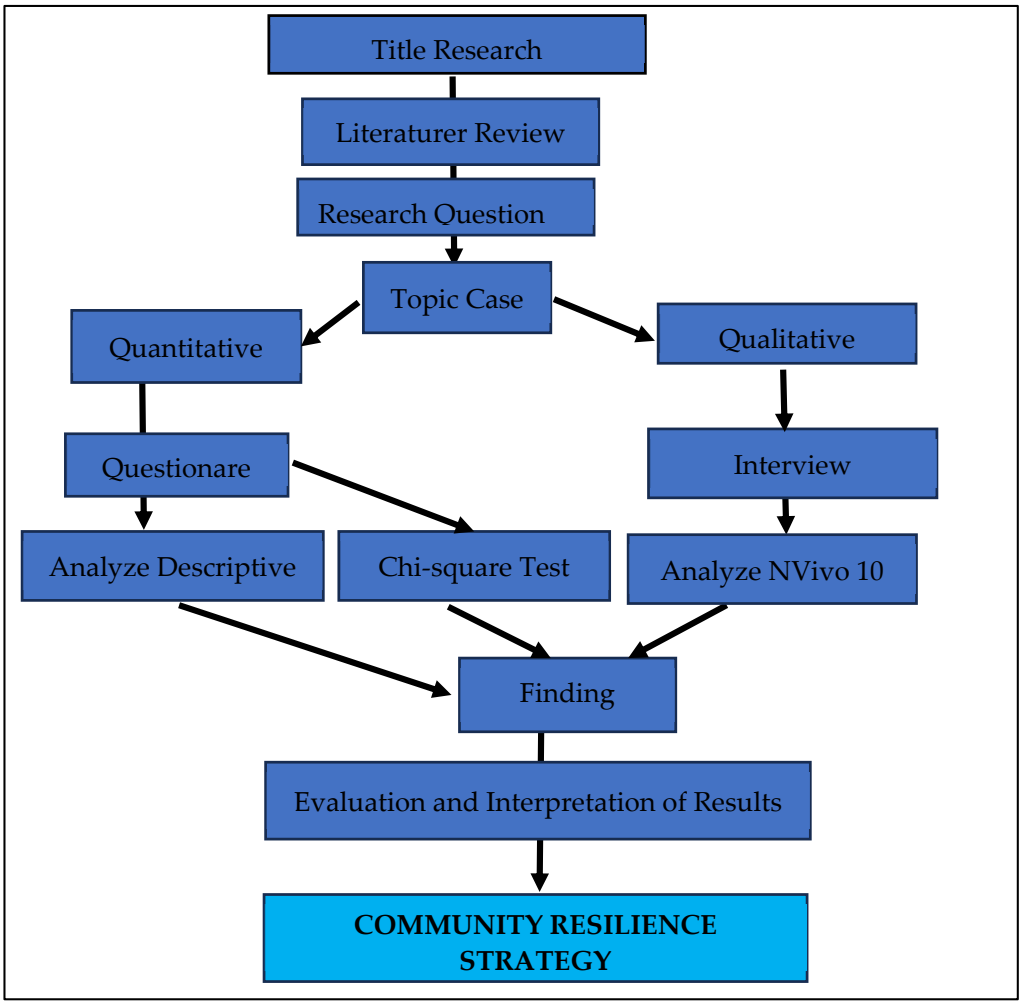

Figure 3. Research flowchart.

This sampling method may have limitations, as the sample may not represent the entire population. However, it adequately represents those affected by the floods and is suitable for a case study on community issues. To identify factors influencing community resilience to flood disasters, data were collected through questionnaires distributed to flood victims in the Temerloh district. The questionnaire was designed to gather information on community experiences and perceptions related to flood events and management strategies. It included questions about the impact of floods, the effectiveness of government and NGO support, and the role of community involvement in flood management. The responses were analyzed to determine key factors that affect resilience during and after flood events. The analysis method used involves evaluating community resilience through the Torrens Community Resilience Scorecard (Table 1). This tool is employed to assess the resilience level of a community by measuring four components: community connectivity, risk and vulnerability, action measures, and resource capacity. These components are based on factors identified in previous studies and can be used to evaluate the resilience of governmental systems, community groups, institutions, hospitals, and schools. The aim is to encourage community engagement and involvement in building disaster-resilient communities [22].

Table 1. Torres guidelines community resilience card code.

Category	Dangers (1)	Warning Zone (2)	Safe Zone (3)
Total Score	25% (29–36)	26–75% (37–109)	76–100% (110–145)
1. Connectivity	25% (6–7)	265–75% (8–22)	76–100% (23–30)
2. Risk/Vulnerability	25% (8–10)	26–75% (11–30)	76–100% (31–40)
3. Action Steps	25% (5–6)	265–75% (7–18)	76–100% (19–25)
4. Capabilities and Resources	25% (10–12)	26–75% (13–37)	76–100% (38–50)

2.3. Methodology Flow Chart

The flow chart in Figure 3 above summarizes the procedures followed and the activities carried out to provide answers to the research questions. The objective of this study is to gather as much information as possible to address the research questions. The issues for this study were selected based on the following criteria:

i. Knowledge of the area and community involved during previous flooding events: This makes the local community a suitable representative group for conducting this research, given their experience with flood events;
ii. Geographic diversity in flood-risk areas: In Temerloh, most residents are located along riverbanks and in swampy or low-lying areas, making it a relevant area for the study;
iii. Accessibility to the study area: Accessibility is crucial to ensure that data collection can be conducted efficiently and cost-effectively;
iv. Time constraints for visiting all households for data collection: Limited time requires careful scheduling and planning to ensure sufficient data are collected from the involved households.

3. Results

A major flood event in Temerloh occurred in December 2014 due to prolonged heavy rainfall and overflow from the Pahang River. The areas most affected were within a 5 km radius of riverbanks, including densely populated settlements such as Temerloh. The study surveyed 350 respondents from Temerloh District. The demographic profile showed a diverse group in terms of age, gender, and occupation. Most respondents were between the ages of 30 and 50, with nearly equal numbers of male and female participants. Additionally, respondents predominantly lived in areas frequently experiencing flooding.

Table 2 shows that the majority of respondents are male, making up 57.4%, while females constitute 42.6%. In terms of race, the overwhelming majority are Malay (94.6%), followed by a small percentage of Chinese (5.1%), with no Indian respondents and 0.3% classified as other. Age distribution reveals that the largest age group is 41–60 years, representing 44.6% of the respondents. This is followed by the 31–40 years age group at 23.1%, and those over 60 years at 22.6%. The younger age groups are less represented, with 7.1% aged 19–30 years and only 2.6% under 18 years old.

In addition, an analysis to identify some of the main factors that affect the community's resilience to floods is carried out. These factors include the effectiveness of government and NGO support, the level of community involvement in flood management, and the psychological impact of repeated flooding. Statistical analysis showed that community involvement in flood management had a statistically significant impact on resilience ($p < 0.05$). Additionally, government and NGO support, including relief efforts and flood defense construction, were crucial in alleviating distress among flood victims.

Table 2. Respondent Profile.

Subject		Frequency	Percentage (%)
Gender	Male	201	57.4
	Female	149	42.6
Race	Melayu	331	94.6
	Cina	18	5.1
	India	0	0.0
	Others	1	0.3
Age	Under 18-year-old	9	2.6
	19–30 years old	25	7.1
	31–40 years old	81	23.1
	41–60 years old	156	44.6
	More than 60 years old	79	22.6

Data were analyzed using the chi-square test with a significance level of $p < 0.05$ to determine the relationships between independent variables and components of community resilience. This analysis revealed significant correlations, enabling the identification of vulnerable community sectors and their connections to rehabilitation and resilience aspects. Community resilience indicators are measured to assess the community's ability to endure, prepare for, and recover from disruptions. Additionally, they are designed to evaluate the strengths and weaknesses of resilience.

3.1. Pre-Flood Management

Table 3 shows the analysis of the relationship between the length of residence and flood management practices prior to flooding. The results indicate that residents with over 10 years of experience in the area are significantly more proactive in their flood preparedness. More than 50% of these long-term residents have made substantial preparations, including acknowledging potential losses and staying in their homes until the floodwaters recede. This proactive approach is supported by a significant chi-square value ($\chi^2 = 9.411$, $p = 0.309$), suggesting that experience and length of residence influence preparedness and resilience strategies. Interview findings support these results, with long-term residents viewing flooding as a normal and inevitable part of life, leading to higher levels of acceptance and readiness.

Table 3. Analysis of the Significant Relationship between Settling Period (%) and pre-flood management at $p < 0.05$.

Settlement Period and Management before the Flood	Raising the Flood	Accepting All Possibilities	Stay at Home until the Flood Recovers	Total (%)
Percentage (%) residence period less than 10 years	2.9	18.1	0.9	21.8
Percentage (%) residence period more than 10 years	15.2	52.9	9.2	77.3
Total (%)	18.1	80.0	10.0	100

3.2. Post-Flood Management

Table 4 shows that post-flood management behaviors are significantly influenced by the length of residence. Long-term residents demonstrate strong community bonds and are more likely to collaborate with neighbors and NGOs in post-flood recovery efforts. Approximately 50% of long-term residents engaged in mutual support and assistance,

as indicated by a chi-square value of $\chi^2 = 9.411$ ($p = 0.309$), reflecting the importance of community cohesion and experience in disaster response (Figure 4).

Table 4. Analysis of the relationship between resident period (%) and management during floods significant at $p < 0.05$.

Settlement Period and Management during Floods	Cooperation with Neighbors	Cooperation with NGOs	Cooperation with the Government	Non-Action	Total (%)
Percentage (%) residence period less than 10 years	11.2	9.2	1.4	0.3	22.3
Percentage (%) residence period more than 10 years	50.0	24.2	3.5	2.0	77.8
Total (%)	59.2	33.5	4.9	2.3	100

Figure 4. Flow water level during a flood (red line).

3.3. Concerns Regarding Government Support

Table 5 illustrates that perceptions of government support vary significantly between income levels. About 16% of low-income households and 4% of high-income households expressed dissatisfaction with government support. Low-income families, who rely heavily on government aid, often feel inadequately supported, while higher-income households, who rely less on government assistance, may perceive support differently. The significant relationship between education level and perceptions of government support highlights that lower-income groups are more dependent on governmental aid, whereas higher-income groups may have alternative resources (Figure 5).

Table 5. Analysis of the Relationship between Education Level and Government's Seriousness toward Flood Issues Significant at $p < 0.05$.

Variables	Chi-Square Test Results			Statistical Formulation			
	Value	df	Value sig. = p	Lower Income (<RM2000)		Higher Income (>RM2000)	
				Agree	Disagree	Agree	Disagree
The government's views are serious about the issue of flooding with education standards	40.421	20	0.004	63.3	16.8	16.4	3.5

3.4. Resilience

Resilience can be observed in various situations and conditions. Most definitions emphasize the ability to adapt when facing disruptions, stress, or adversity [14]. The analysis results (Figure 5) regarding the assistance received by flood victims show that family support is the highest at 17.7%, while support from neighbors is the lowest at 5.4%. The impact of this assistance on flood victims is crucial in the context of their resilience quality. This is because it involves the psychological health of the victims. In the context of resilience, psychological health is strongly related because the assistance received can help victims rebuild confidence and improve their quality of life. Each flood victim experiences trauma due to losses in various aspects. Therefore, the support from their environment helps victims achieve normal mental health levels. Assistance in providing support can enhance the mental and emotional resilience of individuals or communities after a disaster. It is related to social support, which refers to the social interactions between victims and the assistance received [12].

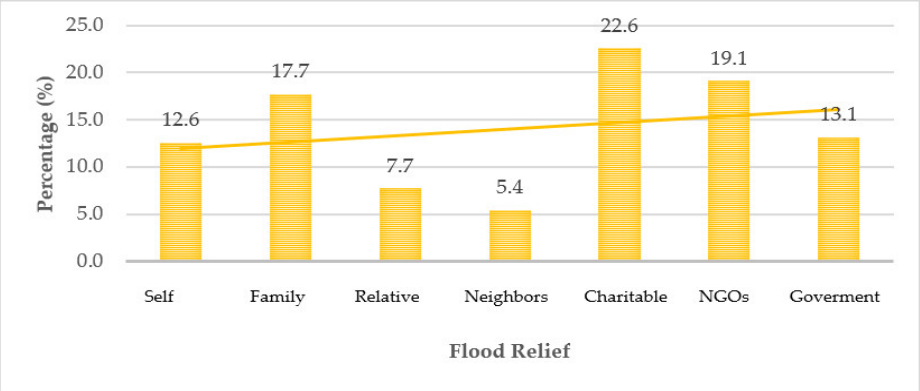

Figure 5. Flood relief received.

The data on resilience highlight the critical role of social support systems in helping flood victims recover from the psychological and emotional impacts of the disaster. The findings indicate that family support is the most significant source of assistance, with 17.7% of respondents identifying it as their primary source of help. This underscores the importance of close familial ties in providing emotional stability and practical aid during times of crisis. Families often serve as the first line of defense, offering immediate and sustained support that is essential for mental health and recovery.

Conversely, the lowest level of support came from neighbors, at 5.4%. This lower percentage suggests potential areas for community improvement. Neighbors can be valuable sources of immediate assistance during and after a disaster, but the data indicate that this potential is underutilized. Enhancing community cohesion and encouraging neighborly support could significantly improve overall resilience. Initiatives that foster community bonds, such as neighborhood groups or local disaster preparedness training, could help increase this form of support. The psychological health of flood victims is closely tied to the support they receive. Assistance from family and the broader community helps victims regain confidence and rebuild their lives, mitigating the trauma and loss experienced during the flood. The provision of support contributes to improving mental health, helping individuals to recover and adapt more effectively to post-disaster conditions.

Social support is integral to resilience, as it involves interactions that provide emotional comfort, practical help, and a sense of belonging. These interactions are vital for individuals coping with the aftermath of a disaster. The data suggest that strengthening social networks and ensuring robust support systems can significantly enhance the resilience of flood-affected communities. Thus, this emphasizes the need for targeted efforts to bolster family and community support mechanisms. By doing so, we can enhance the resilience and

psychological well-being of individuals facing natural disasters, ultimately leading to more resilient communities better equipped to handle future crises.

Therefore, it indicates that residents with longer experience in dealing with floods show higher levels of resilience. This is likely due to more effective adaptive strategies developed from past experiences. These results suggest that increasing community training and awareness about flood management could enhance overall community resilience. Targeted training programs could help residents handle floods more effectively. While this study provides valuable insights, it has limitations such as a limited sample size. Future research could involve a broader area and use longitudinal methods to understand changes in community resilience over time.

3.5. Community Resilience

The analysis method used involves evaluating community resilience through the Torrens Community Resilience Scorecard. This tool is employed to assess the resilience level of a community by measuring four components: community connectivity, risk and vulnerability, action measures, and resource capacity. These components are based on factors identified in previous studies and can be used to evaluate the resilience of governmental systems, community groups, institutions, hospitals, and schools. The aim is to encourage community engagement and involvement in building disaster-resilient communities [22]. The results of this assessment are analyzed to determine the current resilience status in Temerloh, categorized into Danger Zone, Caution Zone, or Safe Zone. These categories are represented graphically to illustrate the community's resilience status against disasters.

The study findings reveal that each component has a moderate percentage (Warning Zone), with the Risk or Vulnerability component at 54.2%, Action Measures at 52.5%, and Resource Capacity at 48.3%. Only Connectivity recorded 81.6%, placing it in the Good Zone. Overall, Temerloh District scores within the Warning Zone (Table 6). This situation indicates a need for improvement and more holistic involvement from all local stakeholders, including the local community.

Table 6. Result of the Torrens Community Resilience Card Score.

Score/Zone	Score	Percentage (%)	Zone
Score Total	85.67	62.57%	Warning
1. Connectivity	23.42	81.6%	Good
2. Risk/Vulnerability	20.71	54.2%	Warning
3. Action Steps	15.81	52.5%	Warning
4. Capabilities and Resources	25.75	48.3%	Warning

4. Discussion

The findings align with the existing literature on flood resilience, which emphasizes the importance of both physical and psychological support in enhancing community resilience [12]. The statistically significant role of community involvement confirms previous research, suggesting that local participation can improve flood management outcomes [13]. The psychological impact observed underscores the need for strategies that address emotional and mental well-being, in addition to physical infrastructure. Compared to previous studies, our findings provide new insights into the specific factors that influence resilience in the context of frequent flooding in Malaysia. While earlier research highlighted the importance of government support, our study further emphasizes the critical role of community involvement and psychological factors, adding depth to the understanding of resilience mechanisms in flood-prone areas.

The results suggest that enhancing community involvement in flood management and integrating psychological support into flood management strategies can significantly improve resilience. Policymakers should consider these aspects when designing flood management plans to ensure a more comprehensive approach to disaster preparedness

and recovery. The study faced several limitations, including the reliance on self-reported data, which may introduce bias. The sample size, while substantial, may not fully represent all flood-prone areas within Temerloh. Future research should aim to include a broader sample and explore additional factors influencing resilience. Based on the findings, it is recommended that flood management strategies incorporate more community-based approaches and psychological support mechanisms. Future research should investigate the long-term impacts of these strategies on community resilience and explore additional interventions that could further enhance preparedness and recovery.

5. Conclusions

This study highlights critical aspects of flood management in Temerloh District, Pahang, offering insights into pre-flood preparedness, post-flood response, and perceptions of government support. These aspects are vital for enhancing community resilience and aligning with sustainable development goals (SDGs). Following flood events, the community in Temerloh demonstrates strong social cohesion and mutual support. Long-term residents play a pivotal role in community recovery efforts, collaborating with neighbors and NGOs to provide assistance. This grassroots response highlights the benefits of strong social networks and local solidarity in disaster recovery and management (SDG 11-Sustainable Cities and Communities).

There is a notable disparity in perceptions of government support between income groups during flood events. While many low-income residents acknowledge the government's efforts, there remains dissatisfaction with the adequacy of the support received. In contrast, higher-income residents often rely on personal resources and community networks. Addressing these disparities requires inclusive policies that ensure equitable access to support services and foster community trust in government interventions (SDG 10-Reduced Inequalities). This concludes that local knowledge and preparedness significantly enhance community resilience to flood disasters. The findings suggest that incorporating community-based strategies into national flood management policies can improve overall resilience. Future research should focus on long-term impacts and strategies for continuous improvement in disaster preparedness.

In conclusion, fostering sustainable flood management in Temerloh District necessitates integrating local knowledge, strengthening community resilience, and ensuring equitable government support. By aligning with SDGs related to climate action, sustainable communities, and reduced inequalities, policymakers can enhance disaster preparedness and response strategies that promote long-term resilience and well-being for all residents. Suddenly, this study found that community resilience in Temerloh can be improved with enhanced training and resource provision. The main implication is the need for better flood management policies that consider local experiences and needs.

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