

INFO ARTIKEL

ARTICLE HISTORY:

Artikel diterima: 8 September 2025
Artikel direvisi: 21 Oktober 2025
Artikel disetujui: 3 Desember 2025

KORESPONDEN

Muhammad Ryman Napirah,
muhammadrymannapirah.untad@gmail.com

ORIGINAL ARTICLE

Halaman: 277 - 290
DOI:
<https://doi.org/10.30989/mik.v14i3.1756>

Penerbit:
Universitas Jenderal Achmad Yani
Yogyakarta, Indonesia.
Artikel terbuka yang berlisensi CC-BY-SA



ABSTRACT

Background: Reflecting on the earthquake that struck Palu City, it was revealed that the Palu City BPBD's preparedness was not optimal in disaster management efforts, including pre-disaster, emergency response, and post-disaster stages. Based on the results of a preliminary study conducted by researchers through interviews with Palu City BPBD employees, it was shown that employees were not optimal in disaster emergency response and participating in disaster management training.

Objective: The purpose of this study was to analyze the relationship between attitudes, emergency response plans, and disaster mobilization with disaster preparedness among Palu City BPBD employees.

Methods: This type of research is quantitative research with an analytical design and uses a cross-sectional approach. The sample in this study was 83 Palu City BPBD employees with total sampling. Data analysis was carried out using univariate and bivariate methods.

Results: The results of the study indicate a relationship between attitudes ($p\text{-value}=0.035$), emergency response plans ($p\text{-value}=0.042$), and resource mobilization ($p\text{-value}=0.046$) with disaster preparedness among employees at the Palu City BPBD.

Conclusion: It is recommended that the Palu City BPBD strengthening attitudes of employees through regular training and simulations, developing detailed, scenario-based emergency response plans, and ensuring resource mobilization.

Keywords: disaster preparedness, employees

ABSTRAK

Latar Belakang: Berkaca pada gempa bumi yang melanda Kota Palu, terungkap bahwa kesiapsiagaan BPBD Kota Palu belum optimal dalam upaya penanggulangan bencana, baik pada tahap prabencana, tanggap darurat, maupun pascabencana. Berdasarkan hasil studi pendahuluan yang dilakukan peneliti melalui wawancara dengan pegawai BPBD Kota Palu, ditemukan bahwa pegawai belum optimal dalam tanggap darurat bencana dan mengikuti pelatihan penanggulangan bencana.

Tujuan: Tujuan penelitian ini adalah untuk menganalisis hubungan antara sikap, rencana tanggap darurat, dan mobilisasi bencana dengan kesiapsiagaan bencana pada pegawai BPBD Kota Palu.

Metode: Jenis penelitian ini adalah penelitian kuantitatif dengan desain analitik dan menggunakan pendekatan cross-sectional. Sampel dalam penelitian ini adalah 83 pegawai BPBD Kota Palu dengan total sampling. Analisis data dilakukan dengan metode univariat dan bivariat.

Hasil: Hasil penelitian menunjukkan adanya hubungan antara sikap ($p\text{-value}=0,035$), rencana tanggap darurat ($p\text{-value}=0,042$), dan mobilisasi sumber daya ($p\text{-value}=0,046$) dengan kesiapsiagaan bencana pada pegawai di BPBD Kota Palu.

Kesimpulan: Disarankan agar BPBD Kota Palu memperkuat sikap pegawai melalui pelatihan dan simulasi rutin, mengembangkan rencana tanggap darurat berbasis skenario yang terperinci, dan memastikan mobilisasi sumber daya.

Kata kunci: Kesiapsiagaan Bencana, Pegawai

<https://ejournal.unjaya.ac.id/index.php/mik>

INTRODUCTION

The WHO defines a disaster as a disruption that causes significant human, economic, material, or environmental losses, with a serious impact on a community or society, exceeding its ability to cope using its own resources.¹ According to Law No. 24 of 2007, paragraph 7, preparedness is a series of activities undertaken to anticipate disasters through organization and appropriate and effective measures.²

According to the Indonesian Institute of Sciences (LIPI) and the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2006), there are five factors influencing disaster preparedness: 1) Knowledge and attitudes toward disaster risks, 2) Policies and guidelines, 3) Plans for disaster emergencies, 4) Disaster warning systems, and 5) Ability to mobilize resources.^{3,4}

According to the EM-DAT (International Disaster Database) report, natural disasters worldwide resulted in 11,804 deaths and affected more than 68 million people in 2018.⁵ The National Disaster Management Agency (BNPB) recorded 2,829 disasters in Indonesia from January to September 2019. The most common hydrometeorological disasters were hurricanes, tornadoes, landslides, and floods.⁶

Central Sulawesi Province is a disaster-prone area with a high risk of damage, injuries, and deaths, requiring a swift and appropriate response from all elements of society, particularly healthcare infrastructure. The National Disaster Management Agency

(BNPB) reported that the impact of the earthquake and tsunami in Central Sulawesi resulted in 2,657 deaths, 667 missing, 4,471 seriously injured, 87,835 slightly injured, and 172,635 displaced at 400 evacuation centers.⁷

Palu City is listed as an earthquake-prone area due to its highest tectonic activity in Indonesia. Palu is located on a large fault in the earth's crust, known as the Palu-Koro fault.⁶ Staff preparedness before a disaster is key to preventing or mitigating the impacts of disasters, such as high mortality rates.³

Staff attitudes, including their responses, feelings, and beliefs in responding to a disaster, are important factors. This is consistent with research by Setiawati (2020) that found a significant relationship between attitudes and staff disaster preparedness.⁸

Emergency response plans refer to the involvement of personnel during a disaster and how personnel handle victims during evacuations. This is consistent with research by Susanti (2021) that found a relationship between emergency response plans and personnel's disaster preparedness.⁹

Good resource mobilization involves personnel participating in training designed to improve their professionalism. This is consistent with research by Misnaniarti (2010) in Hayaturrahmi & Husna (2018), which found a relationship between resource mobilization and personnel's disaster preparedness.¹⁰

The Palu City Regional Disaster Management Agency (BPBD) is a regional government agency responsible for disaster management, particularly local disasters.

Reflecting on the earthquake that struck Palu City, it was revealed that the BPBD's preparedness was suboptimal in disaster management efforts, encompassing pre-disaster, emergency response, and post-disaster phases.

Based on the results of a preliminary study conducted by researchers through interviews with employees of the Palu City Regional Disaster Management Agency (BPBD), it was revealed that employees were not yet fully engaged in disaster emergency response and disaster management training. Due to the very limited number of personnel at the Palu City BPBD, disaster preparedness implementation was not optimal.

Based on this background, the researchers were interested in conducting research on factors related to disaster preparedness among Palu City BPBD employees. Specifically, this study aimed to analyze the relationship between attitudes, emergency response plans, and disaster mobilization with disaster preparedness among Palu City BPBD employees. In short, the novelty of this research lies not only in the identification of completely new factors, but in the in-depth analysis of the specific relationships between key factors in a real context, which allows for practical recommendations to improve the effectiveness of officer preparedness.

MATERIALS AND METHODS

This study was a quantitative study with an analytical design and a cross-sectional approach to determine factors related to disaster preparedness among Palu City Regional Disaster Management Agency (BPBD) employees. This study was conducted at the Palu City BPBD from June to August 2025. The sample consisted of 83 Palu City BPBD employees. Sampling was conducted using total sampling. Data analysis was performed using univariate and bivariate methods. In this study, univariate analysis aimed to describe the dependent variable, namely disaster preparedness, and the independent variables, namely attitudes, emergency response plans, and resource mobilization. In this study, bivariate analysis was conducted to examine factors related to disaster preparedness.

RESULTS AND DISCUSSION

Univariate Analysis

Age Group

The distribution of respondents by age group at the Palu City Regional Disaster Management Agency (BPBD) was divided into eight groups. This can be seen in Table 1 as follows:

Table 1
Distribution of Respondents by Age Group at the Palu City BPBD

Age Group	Frequency (n)	Percentage (%)
22-26	10	12.0
27-31	25	30.1
32-36	16	19.3
37-41	17	20.5
42-46	8	9.6
47-51	4	4.8

Age Group	Frequency (n)	Percentage (%)
52-57	3	3.6
Total	83	100

Sourcer: Primary Data, 2025

Table 1 shows that the distribution of respondents by age group was highest at 27-31 years old, with 25 respondents (30.1%), while the lowest was 52-57 years old, with 3 respondents (3.6%).

Gender

The distribution of respondents by gender at the Palu City BPBD in this study was male and female. This can be seen in Table 2 as follows:

Table 2
Distribution of Respondents by Gender at the Palu City BPBD

Gender	Frequency (n)	Percentage (%)
Male	15	18.1
Female	68	81.9
Total	83	100

Sourcer: Primary Data, 2025

Table 2 shows that the distribution of respondents by gender was predominantly female, with 68 respondents (81.9%), while male respondents were 15 respondents (18.1%).

Highest Education

The distribution of respondents by highest education at the Palu City BPBD was high school, diploma 3, diploma 4, bachelor's degree, and master's degree. This can be seen in Table 3 as follows:

Table 3
Distribution of Respondents Based on Last Education at the Palu City BPBD

Highest Education	Frequency (n)	Percentage (%)
High School	7	8.4
D3	45	54.2

Highest Education	Frequency (n)	Percentage (%)
D4	5	6.0
S1	25	30.1
S2	1	1.2
Total	83	100

Sourcer: Primary Data, 2025

Table 3 shows that the distribution of respondents based on last education was highest with a D3 degree, with 45 respondents (54.2%), while the lowest was a Master's degree, with 1 respondent (1.2%).

Attitude

The distribution of respondents based on their attitudes can be seen in Table 4 as follows:

Table 4
Distribution of Respondents Based on Attitudes at the Palu City BPBD

Attitude	Frequency (n)	Percentage (%)
Poor	34	41.0
Good	49	59.0
Total	83	100

Sourcer: Primary Data, 2025

Table 4 shows that the distribution of respondents based on their attitudes is highest, with 49 respondents (59.0%) in the good category, while 34 respondents (41.0%) are in the poor category.

Emergency Response Plan

The distribution of respondents based on the emergency response plan can be seen in Table 5 as follows:

Table 5
Distribution of Respondents Based on the Emergency Response Plan at the Palu City BPBD

Emergency Response Plan	Frequency (n)	Percentage (%)
Poor	58	69.9
Good	25	30.1
Total	83	100

Source: Primary Data, 2025

Table 5 shows that the distribution of respondents according to the emergency response plan is highest, with 58 respondents (69.9%) in the poor category, while 25 respondents (30.1%) are in the good category.

Resource Mobilization

The distribution of respondents based on resource mobilization can be seen in Table 6 as follows:

Table 6
Distribution of Respondents Based on Resource Mobilization at the Palu City BPBD

Resource Mobilization	Frequency (n)	Percentage (%)
Poor	63	75.9
Good	20	24.1
Total	83	100

Source: Primary Data, 2025

Table 6 shows that the distribution of respondents based on resource mobilization was highest, with 63 respondents (75.9%) in the poor category, while 20 respondents (24.1%) were in the good category.

Disaster Preparedness Among Employees

The distribution of respondents based on their disaster preparedness is shown in Table 7 below:

Table 7

Distribution of Respondents Based on Disaster Preparedness among Employees at the Palu City BPBD

Disaster Preparedness among Employees	Frequency (n)	Percentage (%)
Not Prepared	51	61.4
Prepared	32	38.6
Total	83	100

Source: Primary Data, 2025

Table 7 shows that the distribution of respondents according to their disaster preparedness among employees is highest, with 51 respondents (61.4%) in the unprepared category, while 32 respondents (38.6%) are in the prepared category.

The Relationship between Attitude and Disaster Preparedness among Employees at the Palu City BPBD

To determine the relationship between attitudes and disaster preparedness among employees, a cross-tabulation chi-square test was used. The results of the relationship analysis are shown in Table 8:

Table 8
The Relationship between Attitude and Disaster Preparedness among Employees at the Palu City BPBD

Attitude	Disaster Preparedness among Employees		Total	p-value
	Not Prepared	Prepared		
	n	%	n	%
Poor	26	76.5	8	23.5
Good	25	51.0	24	49.0
Total	51	61.4	32	38.6
			83	100
				0.035

Source: Primary Data, 2025

Table 8 shows that respondents with unfavorable attitudes were more likely to be

unprepared 26 respondents (76.5%), compared to those with preparedness 8 respondents (23.5%). Meanwhile, respondents with favorable attitudes were more likely to be unprepared 25 respondents (51.0%), compared to those with preparedness 24 respondents (49.0%).

Based on the results of the chi-square analysis of attitudes and disaster preparedness among employees, the p-value was 0.035 (<0.05). Ho was rejected and Ha was accepted, indicating a relationship between attitudes and disaster preparedness among employees at the Palu City Regional Disaster Management Agency (BPBD).

Attitude influences behavior through the decision-making process, specifically the decision of health workers to implement disaster preparedness in disaster management efforts. Employees with a positive preparedness attitude will be able to provide optimal health services during flood emergencies.⁸

76.5% of respondents had a negative attitude, indicating they were not prepared. This is because employees are concerned about the negative impacts of disasters, such as stress, that volunteering during a disaster will cause them. This is inconsistent with research by Said (2020), which states that good physical and psychological well-being is essential for nurses to better respond to disasters, and they will be better prepared to effectively and efficiently provide necessary care and ongoing support to victims.¹¹

The results of this study also showed that respondents with a less positive attitude were more likely to be prepared (23.5%). This is because employees have a less positive attitude regarding the importance of understanding the management planning in the Palu City Regional Disaster Management Agency (BPBD). However, according to the information obtained, they are able to prioritize victims who should receive assistance first when a disaster occurs. This aligns with research by Yuliano et al. (2019), which found that staff have a lack of understanding regarding disaster management, but they are willing to learn about triage, which makes them more confident in providing assistance.¹²

This study also showed that respondents with a more positive attitude were more likely to be unprepared (51.0%). This occurs because employees believe that cooperation between staff can reduce disaster casualties, but they believe that medical personnel in the disaster mitigation phase should not be involved in conducting risk assessments based on their respective expertise. This aligns with research by Yunus & Hiola (2021), conducted at the Tibawa Community Health Center in Gorontalo, which found that nurses were willing to collaborate and share tasks in disaster preparedness efforts, but lacked pre-disaster management skills.¹³

This study also showed that respondents with positive attitudes were more prepared (49.0%). This is because employees

believe that collaboration between employees is necessary to minimize disaster casualties. Furthermore, employees have a strong sense of responsibility towards the community in the event of a disaster, enabling them to solve problems during the emergency response and post-disaster recovery phase. This study aligns with research by Hesti (2019), which states that attitude plays a significant role in a person's preparedness for disaster recovery. This means that the better their attitude about disasters, the more prepared they are.¹⁴

Based on the chi-square analysis of attitudes and disaster preparedness among employees, a p-value of 0.035 was obtained, resulting in $p<0.05$. Therefore, the alternative hypothesis of this study is accepted and the null hypothesis is rejected. This means there is a relationship between attitudes and disaster preparedness among employees at the Palu City Regional Disaster Management Agency (BPBD).

Thus, the attitude component is indeed crucial to employee disaster preparedness. According to LIPI/UNESCO/ISDR (2006), to improve disaster preparedness, healthcare workers and their staff must demonstrate a positive attitude of concern for disaster risks. A positive attitude demonstrates concern, fostering self- and patient-preparedness, thus facilitating the rescue process during a disaster.³ Attitudes influence a person's behavior through decision-making.¹⁴

This study aligns with research conducted by Direja & Wulan (2018), with chi-

square results indicating a $p=0.000<0.05$, concluding that there is a significant relationship between attitude and healthcare worker preparedness for earthquakes and tsunamis in all Bengkulu City Community Health Centers.¹⁵ This study is inconsistent with Danumah et al.'s (2016) study on disaster management attitudes and preparedness among Nigerian dentists. The chi-square test showed a p-value of 0.581 ($p\text{-value}>0.05$), indicating that dentists' attitudes had no significant relationship with disaster preparedness.¹⁶

Based on observations and interviews, the researchers found that employees' preparedness attitudes in facing disasters were The Palu City Regional Disaster Management Agency (BPBD) is considered good. This is evident in their sense of responsibility, ability to prioritize victims who prioritize assistance, and belief that collaboration between employees can minimize disaster casualties. This demonstrates that employees have a positive attitude towards disaster preparedness. This research aligns with research by Astari et al. (2020) that found a relationship between attitude and health workers' disaster preparedness.¹⁷

The Relationship between Emergency Response Plan and Disaster Preparedness among Employees at the Palu City BPBD

To determine the relationship between emergency response plans and disaster

preparedness among employees at the Palu City BPBD, see Table 9:

Table 9
The Relationship between Emergency Response Plan and Disaster Preparedness among Employees at the Palu City BPBD

Emergency Response Plan	Disaster Preparedness among Employees		Total	p-value		
	Not Prepared					
	n	%				
Poor	31	53.4	27	46.6		
Good	20	80.0	5	20.0		
Total	51	61.4	32	38.6		
			83	100		

Source: Primary Data, 2025

Table 9 shows that respondents with poor emergency response plans were more likely to be unprepared 31 respondents (53.4%), compared to 27 respondents (46.6%) who were prepared. Meanwhile, more respondents with a good emergency response plan were unprepared 20 respondents (80.0%), compared to 5 respondents (20.0%).

Based on the results of the chi-square analysis of the emergency response plan and employee disaster preparedness, the p-value was 0.042 (<0.05). Ho was rejected and Ha was accepted, indicating a relationship between the emergency response plan and employee disaster preparedness at the Palu City Regional Disaster Management Agency (BPBD).

An emergency plan focuses on the actions to be taken in the first few hours of a crisis. Implementation of the plan is usually under the direction of the Emergency Response Team.¹⁸

The primary goal of an emergency plan is to minimize the impact of the emergency. Everyone must understand how the

emergency response organization operates, or it will fail.¹⁸

Respondents with poor emergency response plans were more likely to be unprepared (53.4%). This occurs because employees have never been involved in disaster emergency response. Therefore, when a disaster strikes, they don't know what to do. This aligns with research (Adisah et al., 2022), which states that some health workers are not involved in disaster response due to a lack of institutional preparation for disasters.¹⁹

The results of this study also show that respondents with poor emergency response plans were more prepared (46.6%). This is because, although employees have never been involved in rapid initial assessments or health assessments during a disaster, they have already addressed vulnerable groups by providing food and nutrition to evacuation centers. This research contradicts research (Haniarti, 2020), which states that although health workers have extensive experience in addressing food and nutrition crises caused by disasters, they are often unaccustomed to acting quickly and appropriately in crisis situations, resulting in low sensitivity to crisis situations.²⁰

This study also shows that respondents with good emergency response plans are more likely to be unprepared (80.0%). This is because, although employees conducted emergency simulations at the Palu City Regional Disaster Management Agency (BPBD), they were not yet responsive in

conducting disaster triage. This aligns with research (Bakri, 2020), which states that training methods involving drills/simulations appear to play little role in improving health workers' preparedness for flood disaster management.²¹

This study also showed that respondents with a well-developed emergency response plan were 20.0% more prepared. This is because some employees had participated in disaster emergency simulations, allowing them to expedite the provision of assistance, especially to victims in critical condition, thus saving lives. This finding contradicts research by Bakri (2020), which explains that conducting emergency simulations appears to play little role in improving health workers' disaster preparedness for disaster management.²¹

Based on the results of a chi-square analysis of the emergency response plan and disaster preparedness among employees at the Palu City Regional Disaster Management Agency (BPBD), the result was $p=0.042$, with a $p<0.05$ value. Therefore, the alternative hypothesis of this study was accepted and the null hypothesis was rejected. This means there is a relationship between the emergency response plan and employee disaster preparedness at the Palu City BPBD. These results indicate that the emergency response plan is related to employee disaster preparedness. This is indicated by the lack of employee involvement in the emergency

response, resulting in their lack of experience in dealing with disasters.

This is inconsistent with Law Number 24 of 2007, which stipulates that emergency response is carried out immediately upon a disaster to address the negative impacts. This includes rescue and evacuation of victims, property, fulfillment of basic needs, protection, management of evacuees, and restoration of facilities and infrastructure.²

Research by Adisah et al. (2022) showed a statistical analysis with a p-value of 0.007, indicating a relationship between involvement in the disaster response and disaster management based on previous experience in the Silih Nara Community Health Center work area.¹⁹ Research conducted by Brewer (2020) found a relationship between previous disaster experience and disaster preparedness.(22) This contrasts with Wahidah's (2016) research, which showed a p-value of $1,000>0.05$, concluding that there was no relationship between previous disaster experience and disaster preparedness. This is generally related to the preparedness of healthcare workers in Gumukmas District, Jember Regency.⁴

Based on observations and interviews, researchers found that the emergency response plan for employees at the Palu City Regional Disaster Management Agency (BPBD) is still lacking. This is indicated by the lack of employee involvement in disaster emergency response. Field observations also

support this assumption, as few staff were involved in the emergency response during the 2018 Palu City disaster, resulting in a shortage of staff.

Therefore, an emergency response plan plays a crucial role in employee disaster preparedness. This contradicts research by Susanti (2021), which states that the clinical experience of disaster management personnel influences their preparedness in handling disaster victims. Therefore, having qualified personnel at disaster sites is highly desirable. Staff with emergency nursing experience will act more consistently than those without clinical experience. Previous experience in handling crisis situations will increase nurses' confidence and enable them to maintain their knowledge and skills.⁹

The Relationship between Resource Mobilization and Disaster Preparedness among Employees at the Palu City BPBD

To determine the relationship between resource mobilization and disaster preparedness among employees at the Palu City BPBD, see Table 10:

Table 10
The Relationship between Resource Mobilization and Disaster Preparedness among Employees at the Palu City BPBD

Resource Mobilization	Disaster Preparedness among Employees		Total	p-value
	Not Prepared	Prepared		
	n	%	n	%
Poor	43	68.3	20	31.7
Good	8	40.0	12	60.0
Total	51	61.4	32	38.6
			83	100
				0.046

Source: Primary Data, 2025

Table 10 shows that respondents with poor resource mobilization were more likely to be unprepared, with 43 respondents (68.3%), compared to 20 respondents (31.7%) who were prepared. Meanwhile, 12 respondents (60.0%) were more prepared, compared to 8 respondents (40%) who were unprepared.

Based on the results of the chi-square analysis of resource mobilization and disaster preparedness among employees, the p-value was 0.046 (<0.05). Ho was rejected and Ha was accepted, indicating a relationship between resource mobilization and disaster preparedness among employees at the Palu City Regional Disaster Management Agency (BPBD).

Resource mobilization activities must be equipped with adequate knowledge and attitudes related to disasters, accompanied by sound emergency planning and an appropriate and effective disaster early warning system. Training in resource mobilization is crucial to minimize the potential for chaotic movement during a disaster.²³

68.3% of those with poor resource mobilization were unprepared. This is because employees have never participated in disaster training, such as earthquakes. Information was obtained that only representatives of employees attended training, thus those who did not attend were not optimally prepared. Research conducted by Ablah (as cited in Susanti (2021) through focus group discussions with medical personnel in New York City revealed that they

had more experience with disaster emergency preparedness training than their colleagues who had not received the training. They acknowledged being specifically prepared to respond to disasters and being given a reliable role when a disaster occurs.⁹

The results of this study also showed that those with poor resource mobilization were more prepared (31.7%). It was also found that although employees had never participated in supporting technical training such as RHA and victim evacuation, they had participated in simulations/exercise drills at command posts and in the field. This finding contradicts research by Andrew F. Sikula, cited by Bakri (2020), which indicates that several training methods can be provided to workers, not only in the form of simulations but also in on-the-job training, vestibules, demonstrations and examples, apprenticeships, and classroom methods.²¹

This study also showed that those with good resource mobilization were more prepared (40%). Information was obtained that employees had participated in technical field training relevant to their profession and were part of the disaster preparedness team. However, during the disaster, health workers were confused and unfamiliar with their duties in the field. This contradicts Harefa et al. (2021), who stated that although health workers have sufficient practice, they should be more focused on learning routines. They should be prepared to participate in disaster management, which will influence their

experience in disaster preparedness, such as floods and earthquakes.²⁴

The results of this study also showed that 60% of staff were prepared to mobilize resources. This indicates that employees had participated in technical field training relevant to their profession, in addition to their involvement in simulations, both at command posts and in the field, related to disaster-related disease management. This aligns with Susilawati (2019), who stated that human resources or health workers for health services during disasters need to pay attention to the disaster management competencies of local health workers, particularly those working in Community Health Centers (Puskesmas), particularly in disaster-prone areas. Therefore, the role of health workers is crucial to minimizing losses due to disasters. Furthermore, responsive and prepared health workers are also needed in disaster management.²⁵

Based on the Chi-Square analysis of resource mobilization and employee preparedness, the p-value was 0.046, resulting in $p < 0.05$. Therefore, the alternative hypothesis of this study is accepted and the null hypothesis is rejected. This means there is a relationship between resource mobilization and employee preparedness at the Palu City Regional Disaster Management Agency (BPBD).

These results indicate that resource mobilization is related to employee disaster preparedness at the Palu City BPBD. This is

indicated by the lack of mobilization or deployment of human resources for training, which will result in a shortage of skilled experts, thus minimizing employee preparedness in the face of disasters.

This research is supported by LIPI and UNESCO (2006) in resource mobilization, a trained team is also needed to handle disaster preparedness, to create trained human resources.³ Emergency and disaster training is necessary for every individual, especially nurses. Emergency department nurses are accustomed to the daily routines of their departments. Maintaining this routine patient processing allows nurses to perform their duties at their most effective level when faced with stressful and chaotic environments.²⁶

The US Department of Homeland Security (2006), in its ASTDN (2007), stated the importance of drills, as evidenced by research conducted by emergency teams, which required members to know what to do and how to assist disaster victims, a practice demonstrated solely through drills.²⁷ The hospital's disaster management drill planning improved staff knowledge and skills in disaster response.⁹

Referring to Hesti's (2019) research, the Chi-Square test showed a $p=0.004 < 0.05$, concluding that there was a significant relationship between training and earthquake and tsunami preparedness at the Padang City Community Health Center.¹⁴ Research conducted by Wahida (2020) also showed that disaster preparedness training was

associated with nurses' disaster preparedness ($p\text{-value} = 0.023$).²⁸ In contrast, the research by Bakri et al. (2020) showed no significant difference in the proportion of preparedness according to the disaster management training factor, with a $p\text{-value}$ of 1.081 ($p > 0.05$).²¹

Based on observations and brief interviews with staff, researchers found that resource mobilization in the form of disaster preparedness training was still suboptimal. This lack of training on disasters such as earthquakes, technical support, and field simulations related to natural disasters is evident. This clearly demonstrates the inadequate mobilization of human resources in disaster preparedness.

CONCLUSIONS

The conclusions of this study are as follows:

1. The distribution of respondents based on their attitudes is highest, with 49 respondents (59.0%) in the good category, while 34 respondents (41.0%) are in the poor category.
2. The distribution of respondents according to the emergency response plan is highest, with 58 respondents (69.9%) in the poor category, while 25 respondents (30.1%) are in the good category.
3. The distribution of respondents based on resource mobilization was highest, with 63 respondents (75.9%) in the poor category, while 20 respondents (24.1%) were in the good category.

4. There is a relationship between attitudes and disaster preparedness among employees at the Palu City BPBD (p-value=0.035).

5. There is a relationship between emergency response plans and disaster preparedness among employees at the Palu City BPBD (p-value=0.042).

6. There is a relationship between resource mobilization and disaster preparedness among employees at the Palu City BPBD (p-value=0.046).

Australia: State Emergency Service (SES); 2018.

6. Badan Nasional Penanggulangan Bencana (BNPB). 2019. Indeks Resiko Bencana Indonesia.

7. PUSDATIN BNPB. 2018. Penanganan Pelayanan Kesehatan Fase Transisi Pemulihan Bidang Kesehatan, Palu, Provinsi Sulawesi Tengah.

8. Setiawati I, Utami GT, Sabrian F. Gambaran Pengetahuan dan Sikap Perawat Tentang Kesiapsiagaan Pelayanan Kesehatan Dalam Menghadapi Bencana Banjir. *Jurnal Ners Indonesia*. 2020;10(2):158.

9. Susanti H. Pengetahuan dan Kesiapsiagaan Mahasiswa Diploma III Keperawatan Dalam Menghadapi Bencana Gempa Bumi dan Tsunami. *NASUWAKES: Jurnal Kesehatan Ilmiah*. 2021;14(2).

10. Hayaturrahmi R, Husna C. Kesiapsiagaan Sumber Daya dan Kerja Sama Dalam Sistem Penanggulangan Gawat Darurat Terpadu Pada Manajemen Bencana. *Jurnal Ilmiah Mahasiswa Fakultas Keperawatan*. 2018;3(3).

11. Said NB, Chiang VCL. The Knowledge, Skill Competencies, and Psychological Preparedness of Nurses for Disasters: A systematic Review. *Int Emerg Nurs*. 2020;48.

12. Putra A, Kartika K, Alfandi M. Hubungan Pengetahuan dan Sikap Relawan Bencana Dengan Keterampilan Melakukan Triase Metode Start di Kota Bukittinggi. In: Prosiding Seminar Kesehatan Perintis. Jombang: Repository STIKES ICME Jombang; 2019.

13. Yunus P, Aprianti Hiola FA. Kesiapsiagaan Tenaga Kesehatan dalam Tanggap Kegawatdaruratan Bencana Banjir di Puskesmas Tibawa Kabupaten Gorontalo. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*. 2021;4(2):171–8.

14. Hesti N, Yetti H, Erwani E. Faktor-Faktor yang berhubungan dengan Kesiapsiagaan Bidan dalam Menghadapi Bencana Gempa dan Tsunami di Puskesmas Kota Padang.

THANK YOU

Thank you to all parties who have helped in the implementation of this research. Especially to the Palu City BPBD and research respondents.

REFERENCES

1. Emergency Nurses Association, Hammond BB, Zimmerman PG. Keperawatan Gawat Darurat dan Bencana. Sheehy. Elsevier. US; 2017.
2. Undang-Undang Republik Indonesia Nomor 24 Tahun 2007 tentang Penanggulangan Bencana.
3. Sopaheluwakan J. Kajian Kesiapsiagaan Masyarakat dalam Mengantisipasi Bencana Gempa Bumi dan Tsunami. Jakarta: LIPI (UNESCO); 2006.
4. Wahidah DA, Rondhianto, Hakam M. Faktor - Faktor Yang Mempengaruhi Kesiapsiagaan Perawat Dalam Menghadapi Bencana Banjir di Kecamatan Gumukmas Kabupaten Jember. 2016; 4 (3).
5. WHO. Indonesia Disaster Management Reference Handbook. In: State Emergency Service (SES), editor. State Emergency Service (SES) [Internet].
6. Badan Nasional Penanggulangan Bencana (BNPB). 2019. Indeks Resiko Bencana Indonesia.
7. PUSDATIN BNPB. 2018. Penanganan Pelayanan Kesehatan Fase Transisi Pemulihan Bidang Kesehatan, Palu, Provinsi Sulawesi Tengah.
8. Setiawati I, Utami GT, Sabrian F. Gambaran Pengetahuan dan Sikap Perawat Tentang Kesiapsiagaan Pelayanan Kesehatan Dalam Menghadapi Bencana Banjir. *Jurnal Ners Indonesia*. 2020;10(2):158.
9. Susanti H. Pengetahuan dan Kesiapsiagaan Mahasiswa Diploma III Keperawatan Dalam Menghadapi Bencana Gempa Bumi dan Tsunami. *NASUWAKES: Jurnal Kesehatan Ilmiah*. 2021;14(2).
10. Hayaturrahmi R, Husna C. Kesiapsiagaan Sumber Daya dan Kerja Sama Dalam Sistem Penanggulangan Gawat Darurat Terpadu Pada Manajemen Bencana. *Jurnal Ilmiah Mahasiswa Fakultas Keperawatan*. 2018;3(3).
11. Said NB, Chiang VCL. The Knowledge, Skill Competencies, and Psychological Preparedness of Nurses for Disasters: A systematic Review. *Int Emerg Nurs*. 2020;48.
12. Putra A, Kartika K, Alfandi M. Hubungan Pengetahuan dan Sikap Relawan Bencana Dengan Keterampilan Melakukan Triase Metode Start di Kota Bukittinggi. In: Prosiding Seminar Kesehatan Perintis. Jombang: Repository STIKES ICME Jombang; 2019.
13. Yunus P, Aprianti Hiola FA. Kesiapsiagaan Tenaga Kesehatan dalam Tanggap Kegawatdaruratan Bencana Banjir di Puskesmas Tibawa Kabupaten Gorontalo. *Media Publikasi Promosi Kesehatan Indonesia (MPPKI)*. 2021;4(2):171–8.
14. Hesti N, Yetti H, Erwani E. Faktor-Faktor yang berhubungan dengan Kesiapsiagaan Bidan dalam Menghadapi Bencana Gempa dan Tsunami di Puskesmas Kota Padang.

<p>15. Jurnal Kesehatan Andalas. 2019;8(2):338–45.</p> <p>16. Direja AHS, Wulan S. Faktor-Faktor yang Berhubungan Dengan Kesiapsiagaan Tenaga Kesehatan Dalam Menghadapi Bencana Gempabumi dan Tsunami. 2018;(2).</p> <p>17. Danumah JH, Odai SN, Saley BM, Szarzynski J, Thiel M, Kwaku A, et al. Flood Risk Assessment and Mapping in Abidjan District Using Multi-Criteria Analysis (AHP) Model and Geoinformation Techniques. <i>Geoenvironmental Disasters</i>. 2016;1;3(1).</p> <p>18. Anis Astari Y, Lestantyo D. Faktor Predisposing, Enabling, dan Reinforcing yang Berhubungan dengan Kesiapsiagaan Perawat Rumah Sakit Jiwa Dalam Menghadapi Bahaya Kebakaran. <i>Jurnal Kesehatan Masyarakat</i>. 2020;8(6):804–11.</p> <p>19. Afifuddin M. Melaksanakan Prosedur Kesehatan dan Keselamatan Kerja [Internet]. Purwodadi: CV. Sarnu Untung; 2019.</p> <p>20. Silitonga E, Manurung J, Hidayat W, Wandra T. Kesiapsiagaan Petugas Kesehatan Puskesmas Dalam Manajemen Bencana di Wilayah Kerjapuskesmas Silih Nara Kabupaten Aceh Tengah. Prepotif: <i>Jurnal Kesehatan Masyarakat</i>. 2022;6(1):188–203.</p> <p>21. Haniarti, Yusuf S. Manajemen Penanganan Gizi Balita Pasca Bencana. <i>Jurnal Ilmiah Manusia Dan Kesehatan</i>. 2020;3(1):133–42.</p> <p>22. Bakri H, Arif SK, Amin H. Kesiapsiagaan Tenaga Kesehatan Puskesmas Dalam Penanggulangan Bencana Banjir di Kecamatan Manggala Kota Makassar Tahun 2019. <i>Media Kesehatan Politeknik Kesehatan Makassar</i>. 2020;15(1):59.</p> <p>23. Brewer CA, Hutton A, Hammad KS, Geale SK. A Feasibility Study On Disaster Preparedness In Regional And Rural Emergency Departments In New South Wales: Nurses Self-Assessment Of Knowledge, Skills And Preparation For Disaster Management. <i>Australas Emerg Care</i>. 2020;23(1):29–36.</p>	<p>24. Sinambela M, Hasibuan A, Makbul R, Armus R, Marlyono SG, Simarmata MM, et al. Mitigasi dan Manajemen Bencana. In: Buku Manajemen. Medan: Yayasan Kita Menulis; 2021.</p> <p>25. Krisman Harefa E, Ginting D, Ester M, Sitorus J, Nababan D. Pengaruh Perilaku Tenaga Kesehatan Terhadap Kesiapsiagaan Bencana di Kabupaten Nias Utara Tahun 2021. Prepotif: <i>Jurnal Kesehatan Masyarakat</i>. 2021;5(2):1152–8.</p> <p>26. Susilawati A, Efendi F, Hadisuyatmana S. Gambaran Kesiapan Tenaga Kesehatan dalam Manajemen Bencana di Puskesmas Wilayah Rawan Bencana. <i>Indonesian Journal of Community Health Nursing</i>. 2019;4(1):11.</p> <p>27. Oksantika R, Haksama S. Analisis Faktor yang Mempengaruhi Kesiapsiagaan Tenaga Kesehatan dalam Menghadapi Bencana Letusan Gunung Merapi di Puskesmas Pakem. <i>Media Gizi Kesmas</i>. 2022 Jun 2;11(1).</p> <p>28. Qureshi K, Goodwin Veenema T. The Role of the Public Health Nurse In Disaster Preparedness, Response, and Recovery. Association of Public Health Nurses Public Health Preparedness Committee. 2007.</p> <p>29. Wahida, Fatmala. Hubungan Karakteristik, Pengetahuan dan Sikap Perawat dengan Kesiapsiagaan Perawat Menghadapi Bencana di RSUD Pelabuhan Ratu Kabupaten Sukabumi. <i>Jurnal Health Society</i>. 2020;9(2).</p>
---	--