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Descriptive Study: Characteristics of Coastal Communities Regarding Disaster Preparedness

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ABSTRACT

Background: Flores Island is one of the areas with a fairly high level of disaster risk. Increasing the preparedness of coastal communities is important through disaster mitigation efforts that involve the community (community based disaster management), between sectors (Pentahelix), are sustainable and can reach all levels of society, especially communities that are vulnerable or at high risk of disaster. Research Objectives: This research aims to provide an overview of the characteristics of coastal communities regarding disaster preparedness in the Work Area of the Ratu City Health Center, Ende Regency, East Nusa Tenggara Province (NTT). Method: The research design used in this research is descriptive with a cross sectional approach. The population in this study were coastal communities in the Kota Ratu Health Center, Ende Regency, East Nusa Tenggara Province (NTT) using a probability sampling technique using a simple random sampling approach, with a total sample of 41 respondents. Meanwhile, the instrument used in the data collection process in this research was a questionnaire sheet and the data analysis used was univariate analysis with data presented in narrative form, frequency distribution tables and percentages. Results: The results of the research show that the frequency distribution of all variables, namely the majority of knowledge preparedness, is good, namely 18 respondents (43.9%), the majority attitude preparedness variable is in the good category, 22 respondents (53.7%), the majority of the skills preparedness variable is in the good category, namely 19 respondents (46.3%), the majority of policy preparedness variables are in the good category, namely 30 respondents (73.2%), the majority of emergency response plan preparedness variables are in the good category, namely 18 respondents (43.9%), the majority of disaster early warning system preparedness variables are in the good category, namely 26 respondents (63.4%) and the majority of resource mobilization preparedness variables were in the good category, namely 20 respondents (48.8%). Thus, the frequency distribution of preparedness of coastal communities as a whole before intervention was given was that the majority were in the good and sufficient categories, namely 20 respondents each (48.8%). Conclusion: the attitude preparedness variable, policy preparedness and the early warning system preparedness variable are in the good category, above 50%.

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1. INTRODUCTION

Indonesia's territory is located between three tectonic plates, namely the Eurasian plate, the Pacific plate and the Australian-Indian plate. This condition causes Indonesia to become an area prone to earthquakes, tsunamis, volcanic eruptions and other types of geological disasters[1]. Flores Island is one of the areas with a fairly high level of disaster risk. The regional seismicity map shows that the northern part of Bali and Nusa Tenggara has one seismic source zone called the Flores Back Arc Thrusting. This fault has several historical earthquakes such as the Flores earthquake and tsunami in 1992[2]. Coastal areas are one of the areas that are vulnerable to tsunami disasters, so they require public preparedness, especially since the tsunami phenomenon is a natural phenomenon that is still a

mystery and cannot be detected when it occurs. Early Warning System (EWS) or early warning system, is only a tool to give signals but does not provide predictions when exactly a disaster will arrive.[2]

Increasing the preparedness of coastal communities is important through disaster mitigation efforts that involve the community (*community based disaster management*), between sectors (*pentahelix*), are sustainable and can reach all levels of society, especially communities that are vulnerable or at high risk of disasters to reduce to as little as possible losses due to disasters. . Law Number 24 of 2007 concerning Disaster Management has emphasized the importance of community participation in disaster management which includes decision making, providing information, supervision, planning, implementation and maintenance of programs, and among other things related to the preparation of disaster mitigation plans to reduce disaster risk[3].

One of the educational approaches that nurses can use is the simulation method approach as an effort to increase the effectiveness of people's preparedness and habituation to living side by side with disasters. Simulation methods in education have a strategic impact in the short and long term. In the short term, it is hoped that the simulation method can increase the public's acquisition of practical knowledge about natural disasters which is useful for dealing with disasters that may occur at any time. In the long term, it is hoped that self-responsiveness and awareness of the surrounding environment will be formed, which is a disaster-prone area[4]. Disaster education in coastal communities has not been carried out effectively due to the lack of community empowerment in disaster prevention and management[5]. The simulation method in disaster education based on the Public Health Program is expected to be able to increase the preparedness of coastal communities in recognizing disaster signs, preventing and managing them as a form of increasing community participation in maintaining a safe community[6]. This research aims to provide an overview of the characteristics of coastal communities regarding disaster preparedness in the Work Area of the Ratu City Health Center, Ende Regency, East Nusa Tenggara Province (NTT)

2. METHOD

The research design used in this research is descriptive with a cross sectional approach. The population in this study were coastal communities in the Kota Ratu Health Center, Ende Regency, East Nusa Tenggara Province (NTT) using a probability sampling technique using a simple random sampling approach, with a total sample of 41 respondents. Meanwhile, the instrument used in the data collection process in this research was a questionnaire sheet and the data analysis used was univariate analysis with data presented in narrative form, frequency distribution tables and percentages. Data processing through editing, coding, scoring, processing and cleaning processes. Data analysis techniques include univariate analysis, bivariate analysis, namely the dependent t-test. Both tests were carried out using SPPS 25. This research ethics uses the principles of right to self-determination, right to privacy and dignity, right to anonymity and confidentially, right to fair treatment, right to protect for discomfort and pain.

3. RESULTS AND DISCUSSION

Results

1) **Respondent Characteristics**

Respondent characteristics include age, gender and occupation.

Table 1 Distribution of respondents based on age, gender and occupation.

Characteristics	F	%
Age		
20-29 years	5	12.2
30-39 years	6	14.6
40-50 years	11	26.8
> 50 years	19	46.3
Total	41	100.0
Gender		
Male	13	31.7

Characteristics	F	%
Female	28	68.3
Total	41	100.0
Work		
Housewife	19	46.3
Fisherman	8	19.5
Trader	4	9.8
Other	10	24.4
Total	41	100.0

Source: Primary data 2023

Based on table 1 above, it shows that the majority of respondents are aged >50 years, namely 19 people (46.3%), the majority of respondents are female, namely 28 respondents (68.3%) and the majority of respondents have jobs > as Housewives (IRT), namely 19 people. (46.3%).

2) **Distribution of Research Variables**

The distribution of research data can be seen in the table below which includes data on frequency distribution, the variables of knowledge preparedness, attitude preparedness, skills preparedness, policy preparedness, emergency response plan preparedness, disaster early warning system preparedness.

Table 2 Distribution of respondents based on preparedness knowledge, attitudes, skills, policies, emergency response plans, early warning and resource mobilization.

Variable	F	%
Knowledge Preparedness		
Good	18	43.9
Average	15	36.6
Poor	8	19.5
Total	41	100.0
Attitude Preparedness		
Poor	22	53.7
Average	18	43.9
Good	1	2.4
Total	41	100.0
Skills Preparedness		
Good	19	46.3
Average	16	39.0
Poor	6	14.4
Total	41	100.0
Policy Preparedness		
Good	30	73.2
Average	10	24.4
Poor	1	2.4
Total	41	100.0
Emergency Response Plan Preparedness		
Good	18	43.9
Average	17	41.5
Poor	6	14.6
Total	41	100.0
Disaster Early Warning System Preparedness		
Good	26	63.4
Average	12	29.3
Poor	3	7.3
Total	41	100.0
Resource Mobilization Preparedness.		
Good	20	48.8

Variable	F	%
Average	15	36.6
Poor	6	14.6
Total	41	100.0
Coastal Community Preparedness		
Good	20	48.8
Average	20	48.8
Poor	1	2.4
Total	41	100.0

Source: Primary data 2023

Based on table 2 above, it shows that the frequency distribution of all variables, namely knowledge preparedness, the majority is good, namely 18 respondents (43.9%), the majority attitude preparedness variable is in the good category, 22 respondents (53.7%), the majority skills preparedness variable is in the good category, namely 19 respondents (46.3%), the majority of the policy preparedness variable is in the good category, namely 30 respondents (73.2%), the majority of the emergency response plan preparedness variable is in the good category, namely 18 respondents (43.9%), the majority of the disaster early warning system preparedness variable is in the good category, namely 26 respondents (63.4%) and the majority of resource mobilization preparedness variables were in the good category, namely 20 respondents (48.8%). Thus, the frequency distribution of preparedness of coastal communities as a whole before intervention was given was that the majority were in the good and sufficient categories, namely 20 respondents each (48.8%).

Discussion

1) Respondent Characteristics

The distribution of respondents shows that the majority of respondents are aged >50 years, namely 19 people (46.3%), the majority of respondents are female, namely 28 respondents (68.3%) and the majority of respondents have jobs > as Housewives (IRT), namely 19 people (46.3 %). There are several factors that influence the level of community capacity in dealing with landslides, namely age (0.00), gender (0.00), education level (0.00), income (0.00), type of house (0.00), and experience in dealing with disaster events (0.027) [7].

The total income factor has a positive constant value, which means that the higher the income, the higher the level of capacity. Other research states that there is a positive correlation between family income and life insurance (r = 0.154; sign < 0.01) and property insurance (r = 0.232; sign < 0.01). Other study findings show a positive correlation between the age of the population and the act of preparing land/houses elsewhere (r = 0.162; sign < 0.01) and preparing life insurance (r = 0.163; sign < 0.01). This means that residents who are relatively mature in age tend to take preparedness measures by preparing land/houses in other places and insuring their lives. The study findings show that the influence of age is the length of time they have lived in the study location which encourages them to prepare a new location that is safer and free from disasters [8]

2) Knowledge Preparedness

The distribution of respondents based on the knowledge preparedness variable shows that the majority are in the good category, namely 18 respondents (43.9%). The community in general has local knowledge passed down from generation to generation in anticipating landslide disasters with various coping strategies, both structural (physical) and non-structural (non-physical)15. Factors that influence community disaster preparedness consist of 1) knowledge of disaster preparedness, 2) attitudes towards disaster preparedness, 3) policies and guidelines, 4) plans for disaster emergencies, 5) disaster warning systems, and 6) resource mobilization[9]. Coastal communities obtain good knowledge about disaster preparedness from various sources such as direct and indirect experience, as well as obtained through print media, radio and television, these media have a big influence in forming public opinion and trust and become a cognitive basis for increasing knowledge [10].

A person's understanding is obtained through knowledge which is the result of knowing and this occurs after the person senses a particular object. Sensing occurs through the five human senses, namely the senses of sight, hearing, smell, taste and touch. Most human knowledge is acquired

through the eyes and ears. Knowledge will underlie beliefs about an object and will form a habit, this will then give rise to a will which is expressed in attitudes and behavior [11].

Knowledge is one component of the competency of health workers, including nurses. Nurses who have good knowledge tend to be able to carry out their duties well in any condition, but on the other hand, lacking knowledge will affect the performance and ability of nurses to help their patients [12]. Lindell and Whitney (2000) show that there is a positive correlation between knowledge of the source of the danger faced and the actions taken regarding the danger. This means that an individual who knows the source of the danger he is facing poses a risk to himself, so he will take preventive action to avoid the risk of that danger [8].

3) Attitude Preparedness

The distribution of respondents based on the attitude preparedness variable shows that the majority are in the good category, namely 22 respondents (53.7%). According to Firda & Haksama (2020) good community attitudes will be implemented consistently if there are strict rules from policy makers and good role models from public figures so that it is important in forming community attitudes that are supported by government policies [13]. Theoretically, it is stated that attitude is a person's view or determination towards an object which will be followed by action after there is a stimulus to act. A positive or accepting attitude will make a person carry out activities or actions in accordance with what is indicated, enjoy it, be passionate about carrying it out, think creatively and innovatively and have a sense of responsibility [12].

Apart from that, attitude clearly shows the connotation of appropriate reactions to certain stimuli, which in everyday life is an emotional reaction to social stimuli. Attitude is also a form of evaluation or feeling reaction towards an object, taking sides or impartially, which is a certain regularity in terms of feelings (affection), thoughts (cognition), and predispositions for action (conation) towards an object in the surrounding environment, including the threat of disaster for coastal communities. Attitudes in facing disasters are a manifestation of knowledge that is implemented through actions and skills to defend oneself during a disaster [14].

4) Skills Preparedness

Distribusi responden berdasarkan variabel kesiapsiagaan keterampilan menunjukkan bahwa mayoritas kategori baik yakni 19 orang responden (46.3%). Skill is the ability to do something well. To apply theoretical knowledge in specific situations. The process of change in a person's skills involves the following, namely perception, readiness, guided response, mechanism, seemingly complex response, adjustment and creation[15]. The community's lack of skills regarding disaster preparedness is caused by a lack of human resource capacity, skills or skills are skills that must be possessed by a person to carry out their work in their respective fields of duty[9]. Disaster preparedness education using lecture, discussion and question and answer methods as well as simulations using leaflets and power points as well as practicums is guidance or lessons given by someone to other people with the aim of the community knowing, understanding and being able to take appropriate action in carrying out disaster preparedness activities.

5) Policy Preparedness

The distribution of respondents based on the policy preparedness variable shows that the majority are in the good category, namely 30 respondents (73.2%). Policy is basically a form of formal support from the government which is expressed in various forms of regulations and agreements regarding what the community must do and what it must not do related to disaster preparedness, both specifically and in an integrated manner. This decision is binding. Policies related to disaster preparedness will be very influential because they are concrete efforts in implementing disaster preparedness activities, which include; public education, emergency planning, disaster early warning system (SPD) and resource mobilization. Policies need to be described in the types of policies to anticipate disasters, such as disaster management organizations, action plans for emergency response, disaster warning systems, education, and disaster allocation. One of the disaster preparedness policies can be Standard Operating Procedures (SOP) which community institutions must have[14].

The implementation of policies that support preparedness in the Community-Based Disaster Risk Reduction program is related to the level of preparedness possessed by the community. The high

level of disaster preparedness in the community is supported by policy support, technical support is also needed, such as the provision of facilities and infrastructure capable of supporting disaster risk reduction programs, such as: earthquake-resistant residential buildings, disaster early warning systems, and other policies. that supports disaster preparedness.

6) Emergency Response Plan Preparedness

The distribution of respondents based on the emergency response plan preparedness variable shows that the majority are in the good category, namely 18 respondents (43.9%). Disaster preparedness efforts involve the main stakeholders (individuals and households, government, and school communities) and supporting stakeholders (community institutions (PKK, Karangtaruna, Majlis Taklim, adat densities, etc.), NGOs and NGOs, professional groups, and other parties. private). Individuals and households are one of the main stakeholders who are the spearheads, subjects and objects of preparedness which directly influence disaster risk. (LIPI-UNESCO/ ISDR, 2006) [16]

7) Disaster Early Warning System Preparedness

Distribusi responden berdasarkan variabel kesiapsiagaan sistem peringatan dini bencana menunjukkan bahwa mayoritas kategori baik yakni 26 orang responden (63.4%). According to research by Fitriyana et al (2016), there are several factors that have a relationship between emergency response preparedness in Aviation Security and the danger of fire disasters, namely knowledge (p-value = 0.02), facilities and infrastructure (p-value = 0.019), fire training (p-value =0.02). Meanwhile, supervision and age have no relationship with emergency response preparedness for fire disasters [17]. The research results of Fitriani et al (2021) generally state that there is a relationship between behavior and fire emergency response preparedness. Various factors influence this behavior, namely knowledge, attitudes, perceptions, training attended, simulations participated in, fire protection facilities, and supervision of officers regarding fire emergency response [18].

8) Resource Mobilization Preparedness

Distribusi responden berdasarkan variabel kesiapsiagaan mobilisasi sumber daya menunjukkan bahwa mayoritas kategori baik 20 orang responden (48.8%). Several aspects that require attention in developing preparedness according to LIPI-UNESCO/ISDR, (2006) include: a) Planning and organization: directions and policies related to planning for handling emergency situations that are appropriate and continuously updated, as well as an adequate response organizational structure. b) Resources: inventory of all organizational resources in a complete manner, division of tasks and responsibilities. c) Coordination: strengthening coordination between institutions/organizations as well as eliminating friction and increasing cooperation between related institutions/organizations. d) Readiness: the disaster management organizational unit must be fully responsible for monitoring and maintaining readiness standards for all elements. e) Training and public awareness: there needs to be adequate training and public awareness as well as the availability of accurate information [14].

9) Coastal Community Preparedness

The distribution of respondents based on the coastal community preparedness variable shows that the majority are in the good and sufficient categories, namely 20 respondents each (48.8%). Factors that can influence a community's preparedness for disasters are; 1) external motivation includes policies, education and training, funds, 2) knowledge, 3) attitudes, and 4) skills [14]. Paton (2003) models that determining a person's preparedness for natural hazards starts from a person's perception to the cognitive processes that underlie changes in behavior and become a person's habits over time. The process of a person's preparedness in this model is divided into 3 phases, namely the motivation phase, the desire formation phase, and the change from desire to preparation phase [8]. Communities are required to have adequate disaster management skills. People skills are very important when disasters occur and disaster victims fall [6]. The aim of community-based disaster management is to increase community awareness and preparedness, especially those living in areas prone to natural disasters, strengthen the ability to face disasters, especially in collaboration with various parties, develop disaster organizations adapted to local conditions, increase community knowledge about disasters [6]. Disaster education is an education that is important for people's lives, because disasters are events that have many negative impacts on human life. Even though a particular area has absolutely no potential for disaster, disaster education must still be implemented, because it does not rule out the possibility that disaster will strike at any time and anywhere [1]. The form of

education about disaster mitigation or preparedness is through health promotion, which is carried out by showing videos.

4. CONCLUSION

The attitude preparedness variable, policy preparedness and the early warning system preparedness variable are in the good category, above 50%. Coastal communities can participate in improving their competence related to disaster preparedness, including knowledge, attitudes and skills, policies, emergency response plans, early warning plans and resource mobilization. Apart from that, in general, coastal communities are expected to further increase their role and function in disaster preparedness efforts both in terms of the availability of resources, facilities and medical equipment as well as other needs needed during a disaster. The government and society can use the results of this research as material for formulating Community-Based Disaster Risk Reduction (PRB BK) policies, especially in increasing the role of multi-sectors (Pentahelix) such as government, media, business, universities and society.

REFERENCES

[1] M. Saparwati, Trimawati, and F. Wijayanti, "Peningkatan Pengetahuan Kesiapsiagaan Bencana Dengan Video Animasi Pada Anak Usia Sekolah," *Pro Heal. J. Ilm. Kesehat.*, vol. 2, no. 1, pp. 23–28, 2020, [Online]. Available: http://jurnal.unw.ac.id:1254/index.php/PJ/article/download/22-28/pdf

[2] G. Priyowidodo and J. E. Luik, "Literasi Mitigasi Bencana Tsunami untuk Masyarakat Pesisir di Kabupaten Pacitan," *Ekotrans*, vol. 13, no. 1, pp. 47–61, 2013, [Online]. Available: https://erepo.unud.ac.id/id/eprint/21432/1/8ab08cad8d0229afd065504424d53330.pdf

[3] E. Trisna and M. Musiana, "Analisis Kesiapsiagaan Keluarga Menghadapi Bencana Covid-19," vol. 16, no. 1, pp. 50–56, 2022, [Online]. Available: http://www.ejurnal.poltekkes-tjk.ac.id/index.php/JKESLING/article/view/Efa Trisna%2C Musiana Musiana/1523

[4] et al Rusilowati, "Mitigasi Bencana Alam Berbasis Pembelajaran Bervisi Science Environment," *J. Pendidik. Fis. Indones. (Indonesian J. Phys. Educ.*, vol. 8, no. 1, pp. 51–60, 2012, doi: ISSN: 1693-1246.

[5] T. Anggun, R. E. Putera, and R. Liesmana, "Pemberdayaan Masyarakat dalam Pengurangan Risiko Bencana Banjir di Kecamatan Padang Selatan," *JDKP J. Desentralisasi dan Kebijak. Publik*, vol. 1, no. 2, pp. 123–137, 2020, doi: 10.30656/jdkp.v1i2.2415.

[6] K. Ibrahim, E. Emaliyawati, and D. I. Yani, "Pelatihan dan simulasi penanggulangan bencana bagi masyarakat media karya," *Media Karya Kesehat.*, vol. 3, no. 1, pp. 27–38, 2020, [Online]. Available: http://jurnal.unpad.ac.id/mkk/article/download/23991/12381

[7] H. Setiawan, "Analisis tingkat kapasitas dan strategi coping masyarakat lokal dalam menghadapi bencana longsor- studi kasus di Tawangmangu , Karanganyar , Jawa Tengah (Analysis of coping strategies and the level of local community ' s capacity towards landslide- a cas," *Penelit. Sos. dan Ekon. Kehutan.*, vol. 11, no. 1, pp. 70–81, 2014.

[8] A. Krishna, M. Nababan, S. Sagala, and J. Lassa, "Adaptasi Non Struktural Penduduk Penghuni Permukiman Padat terhadap Bencana Banjir: Studi Kasus Kecamatan Baleendah, Kabupaten Bandung," *Resil. Dev. Initiat.*, no. 5, pp. 1–19, 2014, [Online]. Available: http://www.preventionweb.net/files/39755_39755wp5sagalaetaladaptasinonstrukt.pdf

[9] A. Hakim Husen, C. Kaelan, A. Nurdin, and A. J. Hadi, "Faktor Determinan Kesiapsiagaan Perawat Terhadap Bencana Gunung Meletus (Gamalama) di Puskesmas Wilayah Kerja Dinas Kesehatan Kota Ternate," *Wind. Heal. J. Kesehat.*, vol. 3, no. 2, pp. 159–167, 2020, doi: 10.33368/woh.v0i0.313.

[10] R. Setyowati and S. A. Mulasari, "Pengetahuan dan Perilaku Ibu Rumah Tangga dalam Pengelolaan Sampah Plastik The Level of Housewife ' s Knowledge and Behavior in Managing Plastic Waste," *J. Kesehat. Masy. Nas.*, vol. 7, no. 12, pp. 562–566, 2013.

[11] Y. Siswanto and I. P. Lestari, "Pengetahuan Penyakit Tidak Menular Dan Faktor Risiko Perilaku Pada Remaja," *Pro Heal. J. Ilm. Kesehat.*, vol. 2, no. 1, pp. 1–6, 2020.

[12] S. F. Radhi, Imran, and Mudatsir, "Hubungan Tingkat Pengetahuan Dan Sikap Perawat Dengan

Kesiapsiagaan Menghadapi Bencana Wabah Penyakit Malaria Di Kabupaten," no. December 2015, 2019, [Online]. Available: https://www.researchgate.net/publication/331431829

[13] et al Utami, "Pengetahuan, Sikap dan Keterampilan Masyarakat dalam Pencegahan COVID-19 di DKI Jakarta," *J. Kesehat. Holist.*, vol. 4, no. 2, pp. 68–77, 2020, doi: 10.33377/jkh.v4i2.85.

[14] M. D. Rina Susanti, Sri Adelila Sari, Sri Milfayetty, "Hubungan Kebijakan, Sarana Dan Prasarana Dengan Kesiapsiagaan Komunitas Sekolah Siaga Bencana Banda Aceh," *J. Ilmu Kebencanaan Pascasarj. Univ. Syiah Kuala*, vol. 1, no. 1, pp. 42–49, 2014.

[15] P. M. P. Winoto and C. Zahroh, "Pengaruh Sosialisasi Kesiapsiagaan Bencana Melalui Metode Simulasi Terhadap Peningkatan Ketrampilan Dalam Mengahadapi Bencana Pada Mahasiswa Siaga Bencana (Magana) Universitas Nahdlatul Ulama Surabaya," *J. Heal. Sci.*, vol. 13, no. 2, pp. 157–164, 2020, doi: 10.33086/jhs.v13i2.1474.

[16] I. Nurhidayati and E. Ratnawati, "Kesiapsiagaan Keluarga Dengan Lanjut Usia Pada Kejadian Letusan Merapi Di Desa Belerante Kecamatan Kemalang," *J. Keperawatan dan Kesehat. Masy. Cendekia Utama*, vol. 7, no. 1, p. 20, 2018, doi: 10.31596/jcu.v0i0.210.

[17] I. Fitriyani, Ekawati, and B. Kurniawan, "Faktor-Faktor Yang Berhubungan Dengan Kesiapsiagaan Tanggap Darurat Pada Aviation Security Terhadap Bahaya Kebakaran Di Terminal Bandara X," *J. Kesehat. Masy.*, vol. 4, no. 3, pp. 416–424, 2016.

[18] Z. N. Fitriani, Y. Setyaningsih, and H. M. Denny, "Review Literature: Studi Perilaku Kesiapsiagaan Tanggap Darurat Kebakaran," *J. Ilm. Permas*, vol. 11 No 2, no. April, pp. 311–320, 2021.