ROLE COMMUNITY-BASED DISASTER MANAGEMENT SYSTEM: SYSTEMATIC REVIEW

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ABSTRACT

Background: Community based disaster risk management (CBDRM) is used to reduce disaster risk and increase community resilience to disasters that occur. Community-based disaster risk management is one of the main trends of international disaster prevention and reduction, which was firstly established in the UK in the late 1980s and has since been widely valued and applied by international, national, and local organizations. This study was to access the individual disaster preparedness of villagers in a northwestern rural community and examine the determinants of their individual disaster preparedness across multiple dimensions: place, individual sociodemographic factors, family socioeconomic status, hazard adaptation, community and environmental influences. **Methods:** This article was obtained from 2018 to 2023. This research is a study using the Systematic Literature Review method. The search strategy used in this literature review is to use 4 databases, including Elsevier, Science Direct, Pubmed, Plos One, and Grey Literature. The interactions between the different determinants will be discussed. The design used in this study was a systematic review using the PRISMA 2009 flowchart, namely selecting articles that did not comply with the criteria for inclusion, screening, eligibility, and downloading of articles. **Results:** A total of 10 articles were analyzed, this study reveal that community-based risk management can reduce disaster risk and increase community resilience to disasters that occur as well as increase community capacity to prepare themselves and increase community knowledge about disasters. **Conclusions:** Communities need to be empowered in the role of disaster management in rural areas.

Keywords: Community, Role, Disaster Risk Management, Rural

INTRODUCTION

Indonesia is a country prone to earthquakes, landslides and eruptions volcanoes and tsunamis. As a consequence of the state's obligation to protect its people the government is expected to take appropriate steps to reduce risks and have an emergency plan to minimize the impact of the disaster.

Rural communities are generally more vulnerable to natural hazards when compared to urban communities. Moreover, rural communities are diverse and unique in their place, population, agricultural production and culture, which make it challenging for different rural settings to prepare for disasters. There is a little comparison made about the individual disaster preparedness among rural communities with different

geographic landforms (Guo, C,et all, 2021 Disasters, from hurricanes to pandemics, tremendously impact human lives and behaviors. Physical closeness to family post-disaster plays a critical role in mental healing and societal sustainability. Nonetheless, little is known about whether and how family colocation alters after a disaster, a topic of immense importance to a post-disaster society. (Wang W, et all, 2022).

Disaster destroys all types of capital, including economic, human and social capital. Thus, disaster preparedness is crucial to address the consequences of disaster at individual, family and community level as preparedness increases the ability to respond quickly to the consequences of a disaster and it works as one of the major components to minimize the negative impacts from disaster (Kyne D, et all, 2020).

Community-based disaster risk management (CBDRM) is one of the main trends of international disaster prevention and reduction, which was firstly established in the UK in the late 1980s and has since been widely valued and applied by international, national, and local organizations. Developing community-centered strategies for disaster reduction to formulate the policies, plans, and schemes of CBDRM to respond to the growing challenges of disaster risks was adopted by various countries in recent years. The dominant idea of the community- centered strategies for disaster reduction is to rely on community organizations to mobilize all residents to participate in the construction of community disaster prevention and reduction with the assistance of governments and non-governments (A. Tiwari, 2015).

Therefore, the overall aim of this study is to access the individual disaster preparednessof villagers in northwest rural community and examine the determinants of their individual disaster preparedness across different dimensions: place, individual sociodemographic factors, family socioeconomic status, hazard adaptations, community and neighbourhood influences. The interactions between different determinants will be discussed. In turn, these findings will help to improve disaster management system model to increase individual disaster preparedness in rural communities.

METHODS

The design used in this study was a systematic review using the PRISMA 2009 flowchart, namely selecting articles that did not comply with the criteria for inclusion, screening, eligibility, and downloading of articles.

Search strategy: This research is a study using the Systematic Literature Review method. The search strategy used in this literature review is to use 4 databases, including Science Direct, Pubmed, Plos One, Elsevier And Grey Literature and Garuda. The search results can be used as a reference in the article search process. The search process is carried out using the PICO framework which is determined according to the Boolean form of AND and OR. The keywords used in this study were "Role OR Model AND Family AND Disaster AND Rural". The journal articles used in this literature review have been published for the last 5 years (2018-2023). The article method used in this study was quasi-experimental, One- Group Pretest-Posttest Design, Classroom Action Research (CAR), and Questionnaires. The process of searching for journal articles used using the PRISMA method examines data extraction and critically reviews them to determine the feasibility of the articles used in compiling this literature review. The selection is carried out through

several stages, including selection according to the title, keywords, abstract, as well as inclusion and exclusion criteria. The inclusion criteria used in this study were all forms. plasticine or playdough therapy. As for the exclusion, it is not plasticine or Playdough therapy.

The screening process was carried out by entering keywords and abstracts, then finding a total of 4.474 articles from the three databases, then filtering based on full-text found 1.284 articles. Articles that are not selected are issued with some unsupported components. Then an assessment was carried out based on the JBI Critical apraisal with 10 articles found with proper assessment results. As for the quality assessment of the article, we do it using critical appraisal tools based on the Joanna Briggs Institute (JBI) with three answers Yes, No, Not available. Furthermore, measurements are taken to be able to review this article and can be used as a literature review.

DISCUSSION

RESULTS

The results of research conducted by (Sadeka et al., 2020) revealed that Orang Asli families faced positive and negative experiences as a result of the disaster.

In addition, family preparedness for disasters was found to be low. Thus, an inclusive disaster preparedness policy is needed for Orang Asli families towards building a disaster- resilient community.

And reinforced by research from (Ali et al., 2019) revealed that CBDM in Indonesia is carriedout by increasing the capacity of the community to prepare for and deal with disasters by encouraging the full participation of the government, private sector and the community. To institutionalize this effort, disaster organizations have been developed according to local conditions; increase public knowledge and awareness as well as guard against possible disasters caused by human activities.
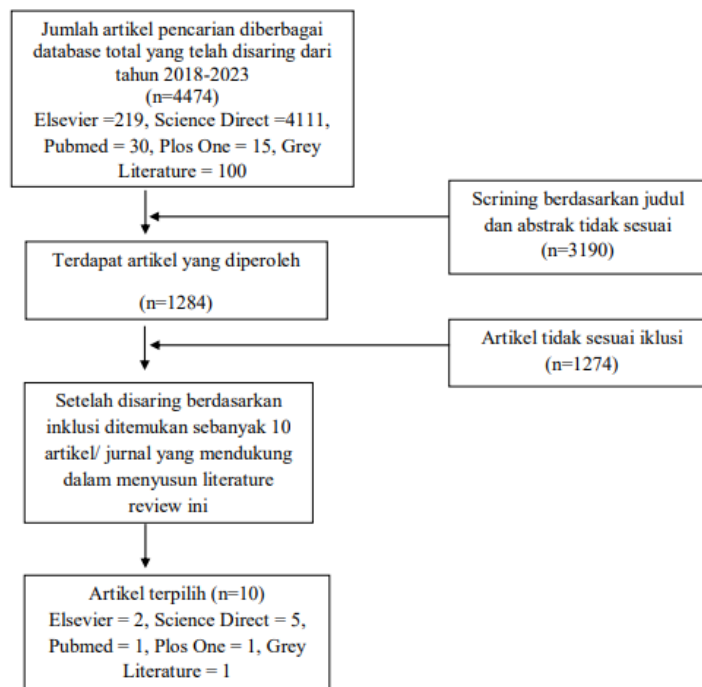

Figure 1. PRISMA flowchart

CONCLUSION

The conclusion of this paper reveals that community-based risk management can reduce disaster risk and increase community resilience to disasters that occur as well as increase community capacity to prepare themselves and increase community knowledge about disasters. Therefore it is important to optimize the role of the community in dealing with disasters in order to minimize the possibility of disaster risk.

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Table 1. Literature results

No	Title	Author	Population	Purpose	Method	Outcame
1.	Disaster experienc es and preparedn ess of the Orang Asli Families in Tasik	Sumaiya Sadeka a (2020)	Orang Asli families in Tasik Chini, Malaysia	explores disaster experiences and preparednes s of the disaster affected Orang Asli families in Tasik Chini, Malaysia	Applying a qualitative research approach, this study was collected data from 10 respondents from 10 families based on convenient sampling and in-depth interview	This study revealed that Orang Asli families faced both positive And negative experiences due to disaster. Moreover, disaster preparedness of the families was found to be low. Thus, there is need an inclusive disaster preparedness policy for the Orang Asli families towards building a Disaster resilient community.
2	Role of social capital in local knowledg e evolution and transfer in a network of rural communi ties coping with landslide disasters in Sri Lanka	Uditha Dasanay akaa,Yoko Matsuda	Communit ies in the villages of Etanwala and Mandaram nuwara in Sri Lanka	Aims to investigate the features of social capital and its influence on the transfer of local knowledge on landslides that are critical to preserving this valuable local knowledge system.		Elderly group was found to be the dominant group in transfer of local knowledge withinthe networks. Moreover, the findings presented the influence and importance of social capital in preserving the local knowledge system of landslide disaster.
3	Disaster risk managem ent models for rural relocation communi ties of mountain ous southwest ern China under the stress of geological disasters	Yun Xu 2020, Xiaoping Qiu , Xueting Yang Xuyang Lu , Guojie Chen 2020	Risk manageme nt in Changde Village and in Dabashan Village	In disaster preparednes s and response, relocation is not an expedient measure, and a well- rounded managemen t model ntegrated disaster eduction with sustainable livelihood, poverty alleviation can improve risk-resistance capacity	CVA has been used widely in disaster preparedness and mitigation in recent decades, for instance, it has been adopted by Philippines as part of their Citizenry-Based and Development-Oriented Disaster Response	the governments and habitants approved that relocation has led to get the goal of integration of sustainable livelihoods, disaster risk reduction, and environmental protection. This indicated that relocation was well integrated the livelihood adjustment in the county policies in the context of disasters risks in the past

				and enhances resilience of the community		
4	Individual Disaster Prepared ness in Drought- and- Flood- Prone Villages in Northwest China: Impact of Place, Out- Migration and Communi ty	Chunlan Guo, Timothy Sim and Guiwu Su 2021	A multi- level population -based stratified approach was adopted to capture a repre- pentative sample of rural residents living in poverty with different geographi c landforms in Northwest China	examined the individual disaster preparednes s of rural residents in three drought- and- flood- prone villages with different landforms (plains, loess plateau and mountains)	a cross- sectional self- report structured question naire survey conducted in Northwest China	This research highlights the needs for tailored community- based disaster risk reduction programs to improve villagers' knowledge and skills of disaster preparedness.
5	Social relationsh ip changes in victim families due to a social disaster: Experien ces of student victims' families in the South Korean	Cho, S. M., Jeong, A., Ha, J. H., & Kim, E. Y. (2017).	54 family members of the student victims	interviewed victims' families two years after the incident. We explored how they have experienced changes in their social relationships	a series of first in-depth interview questions	The student victims families stated that they have experienced significant changes in their relationships with their immediate family members in daily life
6	Family Functioni ng and Its Predictor s among Disaster Bereaved Individua ls in China: Eighteen Months after the Wenchuan Earthquake	Xiaolian Jiang, Xiaoyi Cao, Xiaolin Li, Man- chun Jenny Hui Lo, Rong Li	A convenien ce sample of 274 bereaved individual s was recruited via door-to- door Interviews	examine perceived family functioning in bereaved individuals, explore the effects of demographi c characteristi cs and disaster- related variables on family functioning, analyze the relationship between perceived family functioning and loneliness	data collection method was feasible, the two research assistants were able to make effective communication with the bereaved, and all the respondents understood the questionnaires	Significant differences in family function (Family APGAR Index), cohesion, or adaptability (FACESa͂ A`) between male and female respondents. positive family function, cohesion, and adaptability were significantly related to less emotional and social loneliness
7	Huddling with families after disaster: Human	Weiguang Wang, Natasha		These findings reveal the powerful	employ the Difference-in- differences	disaster created a gap across socioeconomic groups nonexistent beforehand,

	resilience and social disparity	Z. Foutz Guodong		psychologica l and behavioral impacts of the disaster upon the broader populations, and simultaneously	(DiD) statistical analysis to quantify the shift in family colocation	with the disadvantaged displaying weaker lifts in family colocation
8	Local communi ty-based disaster managem ent' The transform ation of religious and local wisdom values in preparati on to deal with natural hazards in West Sumatra, Indonesia	Syafwan Rozi and Abdul R. Ritonga	Minangka bau people In West Sumatra, Indonesia	Aimed to create and implement a CBDM Model based on religious and local wisdom of Minangkaba u people in West Sumatra, Indonesia	Research and Development (R&D) design with a generic adaptive model of Creswell from Gall and Borg, the researchers created, Implemented and evaluated a CBDM model based on religion and local wisdom	this model provided space and a model of how people and local communities with their wisdom values were empowered in overcoming their problems regarding natural hazards.
9	Community based disaster management: Indonesian experience	M Ali , M Arsyad , A Kamalud din, N Busthanu l, and A Dirpan	Indonesia for example in several areas that were hit by major disasters in the previous year namely in the Aceh, Kediri, Jakarta, Papua, etc	intended to explain the implementation of community-based disaster Management (CBDM).	data used in this paper are secondary data onto several references. Between 1815 and 2014 (200 years) there was 13.172 times disaster happened and killed 291.427 people.	The CBDM in Indonesia is implemented by increasing the capacity of communities to prepare for and cope with a disaster by encouraging full participation of government, private and public
10	Farmers' participat ion in communi ty-based disaster managem ent: The Role of trust, place attachme nt and self- efficacy	Li Peng, Jing Tan, Wei Deng, Ying Liu	The data were collected through a questionna ire survey (N=516) in the geodisaster-prone area of rural Chongqin g, China.	This study empirically examined whether social trust (including interpersonal trust and institutional trust) affects rural residents' participatio n in CBDM.	Samples divided the 38 counties of Chongqing Into three categories according to GDP rankings. The top 12 counties are relatively developed counties, 13-24 are medium-level counties, and 25-38 are less developed counties. 10-35	Institutional trust can increase participation by increasing place attachment. Self-efficacy and female identity strengthens the linkage between interpersonal trust and PCBDM. A high CR value means that the indicators are highly correlated, indicating that they are well suited as manifest variables for the same construct. An AVE

				farmers were randomly interviewed from each community. Each sample needed to satisfy several requirements: they had to be farmers living in the community (age>18 years old) with a normal ability to answer questions, one respondent per household.	exceeding 0.5 indicates satisfactory convergent validity as it means that the construct accounts for more than 50% of the variance in the indicators, on average. As shown in Table 2, the AVE of each construct ranged from 0.508 to 0.693, exceeding the threshold value of 0.5. Overall, the measurement model meets the