

ISSN 2354-8428
e-ISSN 2598-8727

JURNAL KEPERAWATAN

KOMPREHENSIF

COMPREHENSIVE NURSING JOURNAL

Published by :

**Sekolah Tinggi Ilmu Keperawatan
PPNI Jawa Barat**

Vol. 9 No. 3, July 2023



JURNAL KEPERAWATAN KOMPREHENSIF	VOL. 9	NO. 3	Bandung July 2023	ISSN 2354-8428	e-ISSN 2598-8727
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Case Study

Social Factors of Community Disaster Preparedness

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Received : 26/06/2023

Revised : 28/07/2023

Accepted : 29/07/2023

Online : 31/07/2023

Published : 31/07/2023

Abstract

Aims: Indonesia is prone to disasters because of its geography, geology, water, and population. One way to reduce the risk is for the community to be ready through social factors. The purpose of the study to determine social factors of community disaster preparedness.

Methods: the search strategy used Google Scholar, Science Direct, and DOAJ which were searched from 2018-2023. The keywords used were community, disaster preparedness, social capital, community resilience, and social support. The Critical Appraisals Skills Program was then conducted. There were six articles that met the inclusion criteria.

Results: The results of all these articles show that social capital, community resilience and social support have a relationship with disaster preparedness through various research methods. The results also show that social factors are strongly related to disaster management, especially disaster preparedness. The facts also show that there is conformity with the theory that social factor determinants can increase community preparedness in the face of disasters.

Conclusion: Based on the results of the literature review, social factors including social capital, community resilience and social support significantly influence community preparedness in the face of disasters.

Keywords:

Community, community resilience, disaster preparedness, social factor

INTRODUCTION

Indonesia is a country located at the confluence of 3 world tectonic plates, namely the Australasian plate, Pacific plate, Eurasian plate. This causes Indonesia to be a country with a high risk of disaster threats. Indonesia has geographical, geological, hydrological and demographic conditions that allow disasters to occur, both due to natural factors, non-natural factors and human factors that cause human casualties, environmental damage, property losses, and psychological impacts (1). World Risk Report noted that Indonesia ranks 36th with a risk index of 10.36 out of

172 countries most prone to natural disasters in the world (2). Based on BNPB data, as of 2019 there have been 29,969 disasters in Indonesia, ranging from landslides, tornadoes, earthquakes, tsunamis, and others.

Although it is difficult to avoid disasters, reducing the impact of disasters is an expectation that must be achieved. An effort to reduce the impact of disasters is to improve disaster mitigation. Disaster mitigation is part of preventive efforts to prevent public health disasters (3). One form of disaster mitigation is to form disaster preparedness. Preparedness is an

action to respond to disasters quickly and appropriately so as not to cause public health disasters in a broader sense (4,5). Preparedness is a series of activities carried out for community preparedness in the face of disaster is very important to prepare an action plan to reduce the impact of problems that occur due to natural disasters including earthquake and tsunami disasters (6). Disaster management in an area is highly dependent on the condition of its people. It is necessary to understand their behavior patterns when facing disasters. The ability and capacity of the community to overcome the problems caused by disasters is very important to note, one of which is social problems in the community. Social aspects have a very important role in any process related to the community, including disaster preparedness.

There are various social factors that influence community preparedness in the face of disasters. These social factors significantly influence disaster mitigation efforts including community preparedness. Social capital factors, community resilience, and social support play an important role in influencing community preparedness in the face of disasters (7-10). The purpose of the study was to determine social factors as determinants in community disaster preparedness.

METHODS

This study employs a literature review that draws conclusions about the topic of "Social Factors as Determinants in Community Disaster Preparedness" based on the interpretation of existing literature by means of the PICO framework (P: Community, I: Social Capital, Community Resilience, Social Support, and C: Community). D: -Disaster Preparation, P: Preparation for Emergencies. In this study, the search strategy was carried out using data-based and keywords. The data base used is Google Scholar, Science Direct, and DOAJ. The keywords used were "Community", "Disaster Preparedness",

"Social Capital", "Community Resilience", "Social Support".

Eligibility Criteria:

In this study, inclusion criteria were used, namely articles with a range of years 2018-2023, articles in English and Indonesian, providing full text: abstract, introduction, methods, results, discussion. The study search was conducted in the community, the focus was on disaster preparedness. The search for study articles was for articles that used an observational design. Articles that did not match the keywords and outcomes were excluded.

Data Extraction:

The article search stage starts from the screening stage that matches the inclusion criteria, and articles that do not match the keywords and outcomes are excluded. Once obtained according to the inclusion criteria, an assessment will be carried out using The Critical Appraisals Skills Program (CASP). The literature search in this study was conducted in three stages. In the first stage: the range of years 2018-2023, English and Indonesian articles, providing full text (abstract, introduction, methods, results, discussion); In the second stage: the search for studies conducted in the community; In the third stage: the focus is disaster preparedness. The search for article studies was articles that used an observational design. Creating PICO as follows, P: community, I: social capital, community resilience, and social support. C: - community, O: disaster preparedness. The search strategy was conducted through three data bases, including Google Scholar, Science Direct, and DOAJ. After conducting the search strategy, 9,471 articles were obtained, distributed from Google Scholar as many as 5,682 articles, Science Direct as many as 2,857 articles, and DOAJ as many as 932 articles. Then the first stage of screening was carried out, obtained as many as 8,838 articles, then in the second stage, 103 articles were obtained, and in the final stage, 6 articles were obtained that were in accordance with the keywords, outcomes, and inclusion criteria.

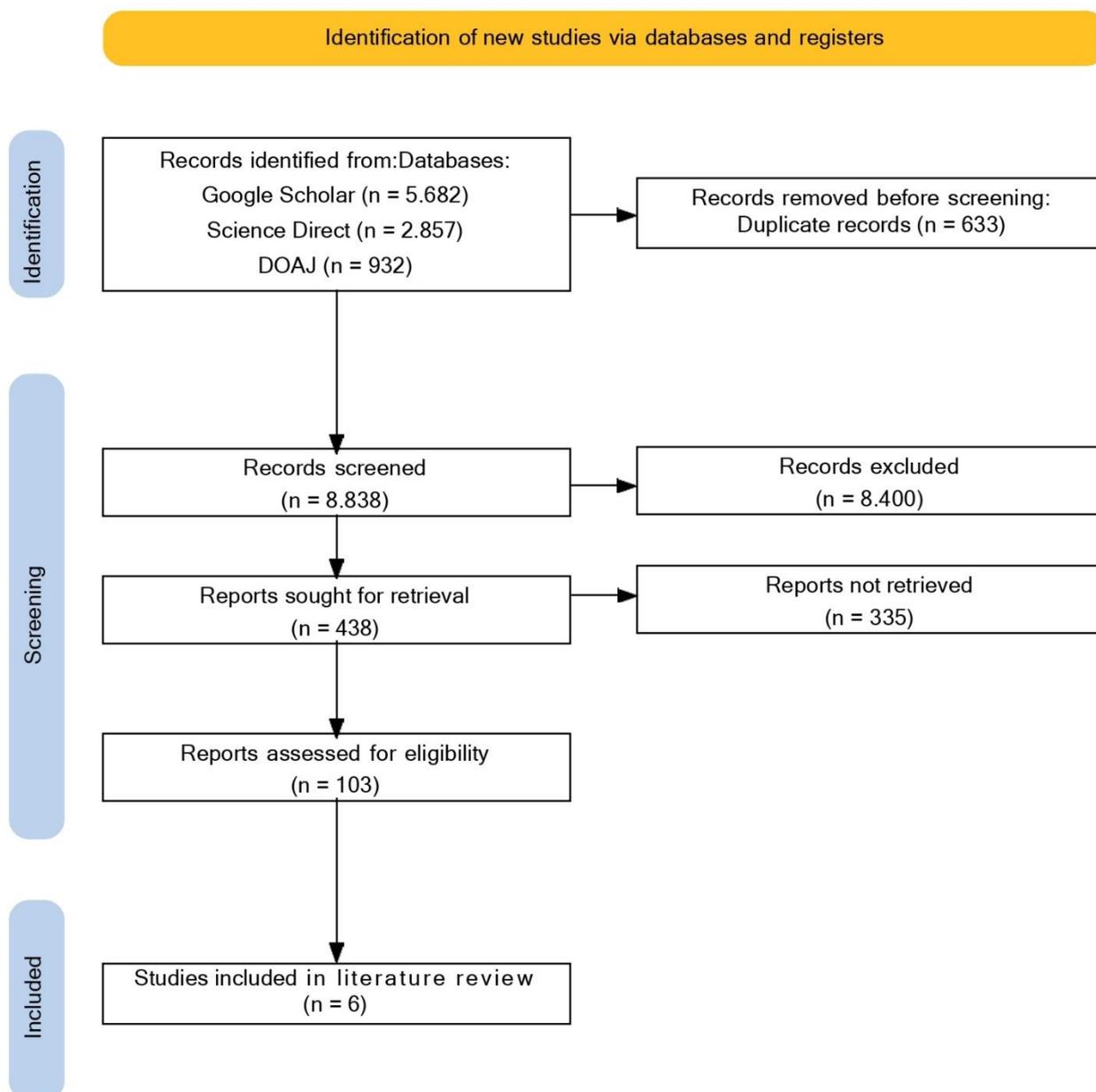


Figure 1 identifications of new studies

RESULTS

Table 1. Key Findings from Research Articles

Researcher	Title	Study Design	Population	Results	Conclusion
Husnul Ramadhan, M. Fachri Adnan, Zikri Alhadi (11)	Pengaruh Modal Sosial terhadap Kesiapsiagaan Bencana di Kawasan Pesisir Pantai Air Manis Kota Padang	Quantitative approach with descriptive method	Coastal Area Community with a sample of 110 people	Based on regression analysis, there is an influence of social capital on disaster preparedness in the Air Manis Beach Coastal Area of Padang City with the regression equation $Y = (6.525+1.158X)$. With the contribution of social capital amounting to 59.3%.	There is an influence of social capital on disaster preparedness in the Air Manis Beach Coastal Area of Padang City.
Sumaiya Sadeka, Mohd Suhaimi Mohamad, Mohammad Imam Hasan Reza, Jamiah Manap, Md. Sujahangir Kabir	Social Capital and Disaster Preparedness: Conceptual Framework and Linkage	Descriptive method	-	Based on the conceptual framework, there is a relationship between social capital and disasters. Social	There is a relationship between social capital and disasters.

Sarkar (12)				capital includes social networks as well as standards of reciprocity and trust, which are critical to accelerating disaster planning and recovery.	
Wiwandari Handayania, Micah R. Fisherb, Iwan Rudiartoa, Jawoto Sih Setyonoa, Dolores Foley (13)	Operationalizing Resilience: A Content Analysis of Flood Disaster Planning in Two Coastal Cities in Central Java, Indonesia	Content analysis	-	The findings show that there are fourteen plan/program areas in terms of hazard exposure reduction, reduction of vulnerability of people and property, improved land and environmental management, and improved preparedness to address flooding in the two selected cities. preparedness to address flooding	The content analysis revealed that resilience is not a term commonly applied in urban and disaster-related contexts. Yet it is clear that disasters, such as flooding, are major issues that need attention in Semarang and Tegal.



				in the two selected cities.	
Deasy Dwi Yulianti, Johan Budhiana, Iyam Mariam, Dila Nurul Arsy (14)	Pengaruh Resiliensi Komunitas terhadap Kesiapsiagaan Masyarakat dalam Menghadapi Bencana Tanah Longsor di Desa Girijaya Kecamatan Nagrak Kabupaten Sukabumi	Correlational with cross sectional approach	All residents of Girijaya Village, Nagrak Sub-district, Sukabumi District with a sample size of 380 people.	Most respondents have moderate community resilience, and preparedness is ready, with a p-value = 0.000 which means <0.05, indicating that there is an influence of community resilience on community preparedness.	There is an influence of community resilience on community preparedness in facing landslides in Girijaya Village, Nagrak Sub-district, Sukabumi District.
Samson Mideksa, Dina D. Galang, MulualemEndeshaw Fetuma Feyera, Yosef, Gebreyohannes, Desalegn Ararso, Tsegaye Getachew, Sabit Ababor, Ermias Woldie, Zelalem Kebede, Firmaye Bogale, Dagmawit Solomon (15)	Social Support as Determinants of Disaster Preparedness	Correlational descriptive design	9th and 10th grade students of selected high schools from Luzon, Visayas, and Mindanao in the Philippines with a total sample size of 933.	Family social support is positively and significantly related to disaster preparedness with a value of R=0.456 and p-value=0.000. Peer social support is positively and significantly related to disaster preparedness	The higher the social support from parents, peers, and schools, the higher the student involvement in disaster preparedness.



				with a value of R=0.421 and p-value=0.000. School social support is positively and significantly related to disaster preparedness with R=0.581 and p-value=0.000.	
Millia Anggraini, Yaslina Yaslina, Kalpana Kartika, Samsuri Maidani (16)	Hubungan Dukungan Sosial dan Ketersediaan Informasi terhadap Perilaku Kesiapsiagaan Menghadapi Erupsi Gunung Merapi pada Siswa SMPN 2 Tanjung Baru Kab. Tanah Datar	Descriptive analytic with a cross sectional approach	All students of SMPN 2 Tanjung Baru with a sample of 67 people.	There is a relationship between social support and preparedness behavior with a p-value = 0.004 with an OR = 5.077 and there is a significant relationship between information availability and preparedness behavior with a p-value = 0.003 with an OR = 5.400.	There is a relationship between social support and information availability with preparedness behavior preparedness behavior.

DISCUSSION

Based on the 6 articles that have been reviewed, researchers will explain social factors as determinants in community disaster preparedness. In this literature review, most of the studies are quantitative studies.

Disaster preparedness is the activities and actions taken in advance to ensure an effective response to hazard impacts, including timely and effective early warning and evacuation of threatened locations (17,18). In the literature review, there are social factors to disaster preparedness, namely social capital, community resilience, and social support. In research by (19) showed that there is a relationship between social capital and disaster preparedness (20). In addition, conceptually social capital has a direct relationship with disaster preparedness. According to (21) social capital is a part of social life such as networks, norms, and trust that encourages participants to act together more effectively to achieve common goals. In Sadeka (20) social capital has a beneficial impact on a variety of issues, including disaster preparedness. Where social capital includes social networks as well as reciprocal standards and trust that are critical to accelerating disaster planning and recovery. In research by (22) showed that there is a relationship between community resilience and community preparedness. Resilience and a person's experience of disaster determine what actions will be taken when the disaster comes based on previous knowledge or experience to improve preparedness (23). Communities that have had disaster experience have a more prepared level of preparedness. This is because personal experiences that have been or are being experienced will shape and influence the community towards the stimulus of the surrounding environment. In research by Mideksa (24) showed that there is a relationship between social support and disaster preparedness Anggraini (25). Social support is one of the terms interpreting how a social relationship

can channel gifts that are beneficial to the mental or physical health of an individual (26).

Social support plays an important role in disaster preparedness because the more social support, the higher the chance of preparing for an upcoming disaster. Good social support will create a team that is held before, during and after a disaster. The higher the thought process and organizing activities, the higher the desired goals in preparing for the upcoming disaster. In addition, the more plans to provide information, education, materials, and skill development for disaster preparedness, the higher the thinking and organizing activities to achieve the desired goals in preparation for the upcoming disaster (24,25).

The results of all these articles show that social capital, community resilience and social support have a relationship with disaster preparedness through various research methods. The results also show that social factors are strongly related to disaster management, especially disaster preparedness. The facts also show that there is conformity with the theory that social factor determinants can increase community preparedness in the face of disasters.

CONCLUSION

This literature review explores the relationship between social factors, including social capital, community resilience, and social support, in disaster preparedness. Social capital, which includes networks, norms, and trust, encourages collaboration and effective response to hazard impacts. Community resilience, on the other hand, is influenced by personal experiences and disaster experiences, resulting in more prepared communities. Social support, in turn, increases the likelihood of preparing for disasters and fosters a team for disaster preparedness. Overall, social factors strongly contribute to disaster management and increase community preparedness in the face of disasters. Social factors including social

capital, community resilience and social support significantly influence community preparedness in the face of disasters. This is supported by 6 articles that have been reviewed and in these articles it is stated that preparedness is influenced by various factors, including social capital, community resilience, and social support.

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