Available on: https://nursingjurnal.respati.ac.id/index.php/JKRY/index
Jurnal Keperawatan Respati Yogyakarta, 12(2), May 2025, 144 – 150

Nursing Student Perceptions on Disaster Preparedness: A Quantitative Study in Indonesia

Hardin La Ramba[1]*, Yurita Mailintina[2], Yarwin Yari[3], Ulfa Nur Rohmah[4], Dian Fitria[5], Ressa Andriyani Utami[6], Ludovikus[7], Asti Nuraeni[8], Bernadetta Germi Aridamayanti[9], M. Arifki Zainaro[10], Ma Elizabeth C. Baua[11], Sanglar Polnok[12]

[1,2,3,5]Sekolah Tinggi Ilmu Kesehatan RS Husada, Jakarta, Indonesia
[4]Universitas Sriwijaya, Palembang, Indonesia
[6]Politeknik Kesehatan Kementerian Kesehatan Jakarta I, Jakarta, Indonesia
[7]Horizon University, Karawang, Indonesia
[8]Sekolah Tinggi Ilmu Kesehatan Telogorejo, Semarang, Indonesia
[9]Universitas Lambung Mangkurat, Banjarmasin, Indonesia
[10]Universitas Malahayati Lampung, Bandar Lampung, Indonesia
[11]School of Nursing and Allied Health Sciences, St. Paul University Philippines
[12]Dhonburi Rajabhat University, Bangkok, Thailand

Abstract

Disaster preparedness is the most important part of disaster management. Nursing students as prospective nursing staff are required to know to understand disaster management preparedness. This study reinforces the importance of integrating disaster education in the nursing curriculum and can be the basis for developing learning that is more applicable and responsive to emergency situations. The design of this study was quantitative with a crossectional-descriptive approach. Sampling used in the study using Non-Probability Sampling technique. Data analysis was conducted using the Statistical Program for Social Science (SPSS) computer application program (Mean, median, mode, max, min, Range, SD, variance, and Std. Deviation. Based on variable X1, the results of the regression test show that variable X1 has a positive regression coefficient with a value of b = 0.106. Based on variable X2, the results of the regression test show that variable X2 has a positive regression coefficient with a value of b = 0.029. The research finding is that nursing students have a positive perception of disaster preparedness. Therefore, the learning design in the disaster nursing course in the nursing education curriculum continues to be improved. This is done as an effort to increase students' understanding as prospective nurses who are always swift in dealing with disasters.

Keywords: *Disaster; Nursing, Student; Perception; Preparedness*

Article info: *Article info: Sending on November 22, 2024; Revision on May 08, 2025; Accepted on May 14, 2025*

**) Corresponding author: Hardin La Ramba*
E-mail: hardinlaramba@gmail.com

1. Introduction

Disasters can happen anywhere and without warning, requiring proactive action to reduce errors and save lives. Nurses are often first responders in times of disaster and play an important role in preserving life and sustaining all aspects of the health of disaster-affected communities (Hirani, 2023).

Disaster preparedness is the most important part (Dowlati et al., 2021), and this part of the cycle in disaster response management (Lamberti-Castronuovo et al., 2022). In the implementation of disaster response strategies requires coordination of human resources, one of which is health human resources, including doctors, care and other health workers. Nurse preparedness in the face of disasters is important because nurses are members of the healthcare team who need to work systematically and collaboratively in all conditions (Kaviani et al., 2022).

Student competence in disaster preparedness can affect community safety (Murphy et al., 2021). Nursing students as prospective nursing staff are required to know to understand disaster preparedness (Yari et al., 2021). Increasing awareness of nursing students in disaster preparedness is very important as the development of disaster nursing education programs (Kang & Seo, 2023). Student involvement in disaster management is an effective step in disaster (Patel et al, 2019).

Students as prospective nurses are always

required to always improve their skills in dealing with emergencies and disasters (Yari et, al., 2021), holds a wide range of responsibilities related to disaster preparedness and response that are critical in times of crisis (Grimes et al., 2020) and their efforts in promoting health, and helping patients to adapt to diseases that occur in society (Allari, 2020) and always be alert in every disaster management (Zahra Chegini, et al., 2020).

Preparedness in facing disasters plays an important role in determining the success rate of disaster management. Nurses have an important role in providing nursing action in the phases of disaster mitigation, preparedness, response, recovery and rehabilitation (Ihsan et al,. 2020). It is very important to investigate and evaluate disaster preparedness in nurses (Wang, et al., 2022). Understanding disaster preparedness and their willingness to respond to disasters is important in maintaining proper disaster management. To promote the involvement of emergency nurses in disaster response, disaster education programs should be expanded (Won-Seok Choi et al. 2022).

Although a number of studies have highlighted the important role of nurses in the disaster management cycle and the need for disaster education for health workers, not many studies have specifically examined nursing students' perceptions of disaster preparedness in the Indonesian context. Most of the literature focuses on nursing personnel who are already working, not on students who are studying and being prepared as future health workers.

Therefore, this research is important to do because nursing students are prospective health workers who will be at the forefront of disaster management. Students' perceptions of disaster preparedness reflect the initial readiness and effectiveness of the education they receive, which ultimately impacts the capacity of the health system to respond to crises. In the midst of increasing frequency and complexity of disasters in Indonesia, understanding the preparedness of nursing students is needed to develop more targeted and evidence-based educational interventions. This research can also be the basis for developing an integrative nursing curriculum that is responsive to disaster issues in Indonesia.

2. Method

This research design is quantitative descriptive approach, by assessing how nursing students perceive disaster preparedness.

The respondents in this study were undergraduate nursing students from across Indonesia. The sampling method used was stratified random sampling, a technique where the population is divided based on specific characteristics such as geographic location (Lee & Kim, 2022). Data collection was conducted online using Google Forms, from June to September 2023. Research data collection was made using Google Formulir. The process of distributing questionnaires by collaborating and coordinating with colleagues involved as authors in this study. A total of 608 respondents participated in this study, School of Health Sciences or universities located in Papua, Sulawesi, Kalimantan, Sumatra, and Java.

Data analysis was conducted using the Statistical Program for Social Science (SPSS) computer application program (Mean, median, mode, max, min, Range, SD, variance, and Std. Deviation).

The questionnaire used in this study was the Scale of Perception of Disaster Preparedness among Nurses developed by Ozan and Kazak (Unver et al., 2018).

The characteristics of the participants described in this study include gender, semester level of students, institutional origin, and age. In this study, validity and reliability tests were conducted on 30 respondents, with 30 questions. After testing the validity and reliability using SPSS, it was found that the ten questionnaires were valid and the Cronbach's Alpha result was 0.93, which means that this questionnaire shows a level of reliability, indicating that this instrument has excellent consistency, and a high level of reliability, so it can be considered a reliable tool for measuring the variables or concepts studied in the study.

3. Results and Discussion

Results

Based on table 1 regarding demographic characteristics, it can be seen that out of 608 respondents, the mean value is 101.747, median 102, mode 60, maximum 150, minimum 60, range 90, SD 27.7552, variance 770.351. In addition, table 2 shows that the respondents with the most gender are female (85.8%) and male (34.8%). The highest level of student education is level 1 (34.8%), level II (28.5%), level III (26.6%) and level IV (10.1%). Institutional origin was RS Husada College of Health Sciences, Jakarta (3.7%), Papua College of Health Sciences Sorong (2.3%), Graha Edukasi College of Health Sciences Makassar (11.2%), Lambung Mangkurat University, Banjarmasin (11.3%), Malahayati University, Bandar Lampung (22%) and Baitul Hikmah College of Health Sciences, Bandar Lampung (49.5%). The age of most respondents was 19 years old (28.6%) and the least was 25 years old (1.0%).

The result of the normality test based on spss software give that the sig value (2-tailed) 0.060 is greater than 0.05, so the data is normally distributed. In table 3 about the heteroscedasticity test is used to determine whether the variation of the regression model error is not constant (not homoskedastic) across all levels of the value of the independent variable. In simple terms, heteroscedasticity means that the distribution of model errors is uneven along the values of the independent variables. Based on table 5, the sig value of X1 0.832 and X2 0.64 is greater than 0.05, so it is concluded that there is no

Heterokedastisitas problem. Figure 1 about the heteroscedasticity test graph shows no clear pattern such as the point spreads above and below the number 0 on the Y axis, so there is no heteroscedasticity.
Based on multicollinearity test it is known that the Tolerance value X1 0.786 and X2 0.786> 0.1000 while the VIF value X1 1.272 and X2 1.272 < 10.00, it can be concluded that free or no multicollinearity occurs. Based on hypothesis testing, it can be seen that the percentage of variable diversity in the number of Y variables that can be explained by the X1 and X2 variables is 13.5% or 0.135 while the remaining 86.5% is explained by other variables outside the regression model.

Table 1. Demographic Characteristics

Characteristics Of Demographics Demographics		**%**
Variabel	Mean	101.747
	Median	102
	Modus	60
	Max	150
	Min	60
	Range	90
	SD	27.7552
	Variance	770.351
Gender	Female	85.8
	Male	14.2
Student Levels	Level I	34.8
	Level II	28.5
	Level III	26.6
	Level IV	10.1
Institution	Husada Hospital College of Health Sciences, Jakarta	3.7
	Papua College of Health Science, Sorong	2.3
	Graha Edukasi College of Health Sciences, Makassar	11.2
	Lambung Mangkurat University, Banjarmasin	11.3
	Malahayati University, Bandar Lampung	22
	Baitul Hikmah College of Health Sciences, Bandar Lampung	49.5
Age	17 Year	2.3
	18 Year	15.8
	19 Year	28.6
	20 Year	27.5
	21 Year	13.2
	22 Year	6.6
	23 Year	3.5
	24 Tahun	1.6
	25 Tahun	1

Based on table 4 regarding the multiple linear regression test, it is concluded that the constant is 22.076, this indicates that if X1 and X2 are equal to 0, the value of Y remains at 22.076. Based on variable X1, the regression test results show that variable X1 has a positive regression coefficient with a value of b = 0.106. This means that if there is an increase in the value of variable X1 by 1 point, there will also be an increase in variable Y by 0.106. Based on the X2 variable, the regression test results show that the X2 variable has a positive regression coefficient with a value of b = 0.029. meaning that if there is an increase in the value of the X1 variable by 1 point, there will also be an increase in the Y variable by 0.029.

Based on table 5 of the Calculated F Test, the calculated F value is 47.271 F table 2.7106 and the sig value is 0.000 <0.05, it can be concluded that there is a positive and significant effect of the X1 and X2 variables together simultaneously on Y so that H3 is accepted and H0 is rejected. Based on table 4 regarding the results of the T test, the calculated T value is 5.108 t> table 0.7559 and sig 0.000 <0.05 so it can be concluded that X has no positive effect on H1, H1 is accepted, H0 is rejected. The T test based on the table above obtained the T value of 4.974 t> table 0.7559 and sig 0.000 <0.05 so it can be concluded that X has no positive effect H2 accepted H0 rejected. Based on the test results, it can be concluded that nursing students have a positive perception of disaster preparedness.

Table 2. Nursing Student Perceptions of Disaster Preparedness

NO	Question	Totally Agree		Agree		Disagree Less		Disagree		Strongly Disagree	
		F	%	F	%	F	%	F	%	F	%
1	In order to feel prepared for disasters. I must regularly participate in disaster training activities.	253	41.6	337	55.5	18	2.9	0	0	0	0
2	I have to increase my knowledge about disasters through regular training to be better prepared when facing disasters.	306	50.3	285	46.9	13	2.14	4	0.7	0	0
3	I know where I can get help in case of a disaster (casualty evacuation. search and rescue. logistical support. communication. etc.).	221	36.3	325	53.5	49	8.06	10	1.6	3	0.5
4	I had to improve my knowledge of disaster preparation. and I had to learn what I didn't understand and master regarding disaster management.	301	49.5	300	49.3	7	1.15	0	0.0	0	0
5	It is very important for me to know how communication systems are used in disasters.	334	54.9	264	43.4	10	1.64	0	0.0	0	0
6	I already know what to do in order of priority in case of disaster.	162	26.6	334	54.9	92	15.13	20	3.3	0	0
7	I felt my educational background was sufficient for my preparedness for disasters.	62	10.2	405	66.6	122	20.07	14	2.3	5	0.8
8	I can carry out emergency response and evacuation plan procedures at disaster sites.	123	20.2	361	59.4	105	17.27	16	2.6	3	0.5
9	I can triage disaster victims on site.	113	18.6	333	54.8	137	22.53	20	3.3	5	0.8
10	I can provide first aid to disaster victims.	161	26.5	338	55.6	93	15.30	11	1.8	5	0.8
11	In the case of epidemic diseases. I can prevent contamination.	111	18.3	363	59.7	117	19.24	15	2.5	2	0.3
12	In disasters. I feel able to provide first aid to patients without a doctor's guidance.	100	16.4	255	41.9	192	31.58	41	6.7	20	3.3
13	When rescuing victims. I was able to work as part of an emergency medical team	174	28.6	359	59.0	66	10.86	6	1.0	3	0.5
14	I know my role and responsibilities during the post-disaster period.	138	22.7	397	65.3	60	9.87	10	1.6	3	0.5
15	After a disaster. I can provide psychological support (Psycosocial Support) to disaster victims.	185	30.4	378	62.2	42	6.91	3	0.5	0	0
16	I can recognize the symptoms of acute stress disorder and post-traumatic stress syndrome in disaster victims.	117	19.2	362	59.5	112	18.42	14	2.3	3	0.5
17	I can train and help people with post-disaster trauma.	136	22.4	370	60.9	89	14.64	11	1.8	2	0.3
18	During the post-disaster period. I was able to fulfill my duty of providing healthy food. drink. and accommodation for the victims.	158	26.0	389	64.0	56	9.21	5	0.8	0	0
19	I can use theoretical knowledge in carrying out disaster simulations.	117	19.2	400	65.8	80	13.16	7	1.2	4	0.7
20	I understand the importance of communication and collaboration in teams.	274	45.1	318	52.3	16	2.63	0	0.0	0	0
21	Disaster nursing should be an integral part of the nursing student curriculum.	238	39.1	349	57.4	19	3.13	2	0.3	0	0
22	I feel nursing students have a moral responsibility to disaster preparedness.	273	44.9	319	52.5	12	1.97	4	0.7	0	0
23	I agree that knowledge of certain types of disasters is essential for nursing students.	286	47.0	312	51.3	10	1.64	0	0.0	0	0
24	I believe that nursing can make a significant contribution in the emergency response phase of a disaster.	259	42.6	334	54.9	15	2.47	0	0.0	0	0
25	In my opinion. nursing students should be able to identify disaster risks in the surrounding environment.	255	41.9	332	54.6	21	3.45	0	0.0	0	0
26	I feel nursing students have an important role to play in educating the community about disaster preparedness.	263	43.3	318	52.3	27	4.44	0	0.0	0	0
27	I agree that nursing students should be knowledgeable about disaster preparedness policies.	269	44.2	325	53.5	14	2.30	0	0.0	0	0
28	I agree that nursing should be at the forefront of providing relief in times of disaster.	278	45.7	310	51.0	20	3.29	0	0.0	0	0
29	I felt the need to gain knowledge about first aid in disaster victims.	286	47.0	314	51.6	8	1.32	0	0.0	0	0
30	I feel confident in using disaster preparedness tools and equipment.	155	25.5	355	58.4	86	14.14	8	1.3	4	0.7

Table 3. Heterokedasticity Test

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.762	.281		6.279	.000
	Intervention Stage (X1)	-.003	.012	-.010	-.212	.832
	Post Disaster Stage (X2)	.002	.003	.028	.613	.640

a. Dependent Variable: Abs_Ress

Figure 1. Heterokedasticity Test Graph

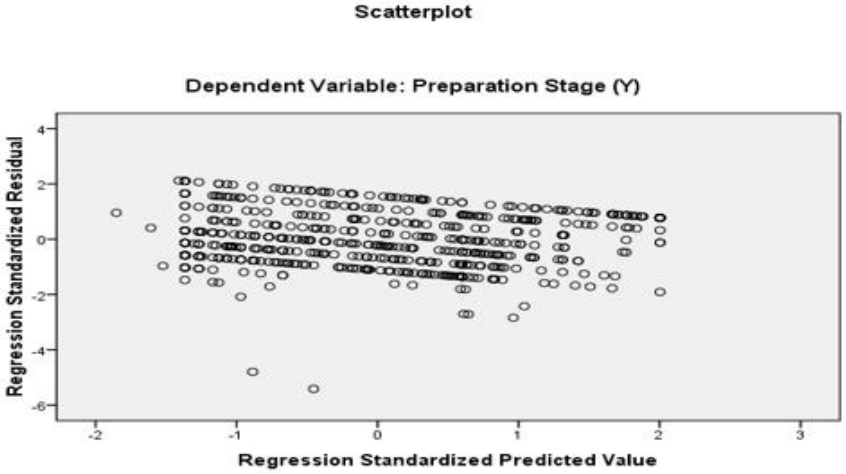

Table 4. Multiple Linear Regression and T Count Test (n=608)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
Multiple Linear Regression Test						
1	(Constant)	22.076	.487		45.360	.000
	Intervention Stage (X1)	.106	.021	.218	5.108	.000
	Post Disaster Stage (X2)	.029	.006	.212	4.974	.000
Test T Count						
1	(Constant)	22.076	.487		45.360	.000
	Intervention Stage (X1)	.106	.021	.218	5.108	.000
	Post Disaster Stage (X2)	.029	.006	.212	4.974	.000

Table 5. Test F Count (n=608) ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	472.745	2	236.372	47.271	.000[a]
	Residual	3025.241	605	5.000		
	Total	3497.985	607			

a. Predictors: (Constant). Post Disaster Stage (X2). Intervention Stage (X1)

b. Dependent Variable: Preparation Stage (Y)

Discussion

Identifying student learning is the most important part that must be done by a teacher to improve teaching strategies that have an impact on student progress. This is also done to increase the strategy of understanding of students in their role as prospective nurses who will serve in primary care (Gcawu & Rooyen, 2022). Learning identification can be done by assessing student perceptions of the learning carried out.

From the results of the research conducted, it is known that Nurses' readiness for disaster situations is shaped by factors such as their educational background, participation in disaster training, prior volunteer experience during emergencies, dedication to their profession, and psychological resilience. Healthcare leaders can improve nurses' disaster preparedness by offering focused support and necessary resource (Seyda Bati, 2025) in disaster nursing courses conducted by students. According to Albaqawi et al. (2020) that in the focus of nursing education, a student must be equipped with adequate perceptions, knowledge, and behaviors about prevention or preparedness.

The impact of disasters around the world is enormous and growing. Therefore, it is necessary to conduct better mitigation and preparedness studies carried out by individuals and communities in reducing disaster victims (Ryan at al., 2020). Nurses in a community setting are responsible for continuously assessing, monitoring, and evaluating the patient's physiological parameters and physical and psycho-social status as well as determining nursing actions and interventions to manage the patient's health status (Pardilla et al., 2018; Inayat et al., 2021).

The lack of readiness of newly graduated nurses has become a global concern, especially in the field of nursing (Shahsavari et al., 2020). Therefore, Respondents with lower disaster awareness were more likely to have poor community preparedness compared to those with higher awareness. Thus, the government should engage communities in disaster plans (Hargono et al., 2023) that must be studied in reducing the adverse effects of emergencies and disasters (Hasan et al., 2022).

As a nurse who is always on the front lines in disasters, it is very important to ensure that nurses' knowledge and skills are sufficient to respond to disaster events (Hasan et al., 2021; Hasan et al., 2022). Therefore, nurses are always prepared in disaster response and management to reduce vulnerability and people's lives and property (Hasan et al., 2022)

4. Conclusions and Suggestions

Disasters that continue to occur almost every year impress on all of us the importance of disaster preparedness. The research finding is that nursing students have a positive perception of disaster preparedness. Therefore, the learning design in the disaster nursing course in the nursing education curriculum continues to be improved. This is done as an effort to increase students' understanding as prospective nurses who are always swift in dealing with disasters.

5. Acknowledgments

Thank you to Perkumpulan Husada and Sekolah Tinggi Ilmu Kesehatan RS Husada, Jakarta who have supported and funded this research.

6. References

Albaqawi, H. M., Alquwez, N., Balay-Odao, E., Bajet, J. B., Alabdulaziz, H., Alsolami, F., ... & Cruz, J. P. (2020). Nursing students' perceptions, knowledge, and preventive behaviors toward COVID-19: a multi-university study. *Frontiers in public health*, *8*, 573390. https://doi.org/10.3389/fpubh.2020.573390

Allari, R. S. (2020). Nursing as a profession: Undergraduate female students' perception. *TMR Integrative Nursing*, *4*(2). https://doi.org/10.53388/TMRIN20200403

Dowlati, M., Seyedin, H., & Moslehi, S. (2021). Hospital Preparedness Measures for Biological Hazards: A Systematic Review and Meta-Synthesis. *Disaster Medicine and Public Health Preparedness*, *15*(6), 790-803. https://doi.org/10.1017/dmp.2020.132

Gcawu, S. N., & van Rooyen, D. (2022). Clinical teaching practices of nurse educators: An integrative literature review. *Health SA = SA Gesondheid*, *27*, 1728. https://doi.org/10.4102/hsag.v27i0.1728

Grimes, A., Sparke, V., Rouen, C., & West, C. (2020). Preparedness and resilience of student nurses in Northern Queensland Australia for disasters. *International Journal of Disaster Risk Reduction* https://doi.org/10.1016/j.ijdrr.2020.101585

Hasan, M. K., Uddin, H., & Younos, T. B. (2022). Bangladeshi nursing students' perceived preparedness and readiness for disaster management. *International Journal of Disaster Risk Reduction*, *81*, 103303. https://doi.org/10.1016/j.ijdrr.2022.103303

Hasan, M. K., Younos, T. B., & Farid, Z. I. (2021). Nurses' knowledge, skills and preparedness for disaster management of a Megapolis: Implications for nursing disaster education. *Nurse education today*, *107*, 105122. https://doi.org/10.1016/j.nedt.2021.105122

Hirani, S. A. A. (2023). Preparing next generation of nurses to care for disaster affected population: A call to action in nursing curriculum. *Teaching and Learning in Nursing*. https://doi.org/10.1016/j.teln.2023.04.009

Ihsan, F., Kosasih, C. E., & Emaliyawati, E. (2022). Nurses Preparedness in Facing Disasters: Literature Review: Literature Review. Faletehan Health Journal; Vol 9 No 01. https://doi.org/10.33746/fhj.v9i01.319

Inayat, S., Younas, A., Sundus, A., & Khan, F. H. (2021). Nursing students' preparedness and practice in critical care settings: A scoping review. *Journal of Professional Nursing*, *37*(1), 122-134. https://doi.org/10.1016/j.profnurs.2020.06.007

Kang, J., Lee, H., & Seo, J. (2023). Relationship Between Nursing Students' Awareness of Disaster, Preparedness for Disaster, Willingness to Participate in Disaster Response, and Disaster Nursing Competency. *Disaster Medicine and Public Health Preparedness*, *17*, E220. https://doi.org/10.1017/dmp.2022.198

Kaviani, F., Aliakbari, F., Sheikhbardsiri, H., & Arbon, P. (2022). Nursing Students' Competency to Attend Disaster Situations: A Study in Western Iran. *Disaster Medicine and Public Health Preparedness*, *16*(5), 2044-2048. https://doi.org/10.1017/dmp.2021.263

Lamberti-Castronuovo, A., Valente, M., Barone-Adesi, F., Hubloue, I., & Ragazzoni, L. (2022). Primary health care disaster preparedness: a review of the literature and the proposal of a new framework. *International Journal of Disaster Risk Reduction*, 103278. https://doi.org/10.1016/j.ijdrr.2022.103278

Lee, Y., & Kim, J. (2022). *Advances in stratified sampling methods and applications in social research*. International Journal of Research Methodology, 15(1), 65-81. https://doi.org/10.5678/ijrm.2022.05671

Murphy, J. P., Kurland, L., Rådestad, M., Magnusson, S., Ringqvist, T., & Rüter, A. (2021). Emergency department registered nurses overestimate their disaster competency: A cross-sectional study. *International emergency nursing*, *58*, 101019. https://doi.org/10.1016/j.ienj.2021.101019

Padilla, R. M., Urden, L. D., & Stacy, K. M. (2018). Nurses' perceptions of barriers to rapid response system activation: a systematic review. *Dimensions of Critical Care Nursing*, *37*(5), 259-271. https://doi.org/10.1097/dcc.0000000000000318

Patel, R. K., Pamidimukkala, A., Kermanshachi, S., & Etminani-Ghasrodashti, R. (2023). Disaster Preparedness and Awareness among University Students: A Structural Equation Analysis. *International journal of environmental research and public health*, *20*(5), 4447. https://doi.org/10.3390/ijerph20054447

Ryan, B., Johnston, K. A., Taylor, M., & McAndrew, R. (2020). Community engagement for disaster preparedness: A systematic literature review. *International journal of disaster risk reduction*, *49*, 101655. https://doi.org/10.1016/j.ijdrr.2020.101655

Shahsavari, H., Bakhshi, F., Khosravi, A., Najafi, Z., & Ghorbani, A. (2020). Perceived professional preparedness of senior nursing students' questionnaire: Development and psychometric evaluation. *Nurse Education Today*, *93*, 104533. https://doi.org/10.1016/j.nedt.2020.104533

Unver, V., Basak, T., Tastan, S., Kok, G., Guvenc, G., Demirtas, A., Ayhan, H., Köse, G., Iyigun, E., & Tosune, N. (2018). Analysis of the effects of high-fidelity simulation on nursing students' perceptions of their preparedness for disasters. *International emergency nursing*, *38*, 3–9. https://doi.org/10.1016/j.ienj.2018.03.002

Wang, Y., Liu, Y., Yu, M., Wang, H., Peng, C., Zhang, P., Nian, X., Jia, Q., & Li, C. (2023). Disaster Preparedness Among Nurses in China: A Cross-Sectional Study. Journal of Nursing Research, 31(1), e255. https://doi.org/10.1097/jnr.0000000000000537

Won-Seok Choi, Sung Youl Hyun, & Hyunjin Oh. (2022). Perceived Disaster Preparedness and Willingness to Respond among Emergency Nurses in South Korea: A Cross-Sectional Study. International Journal of Environmental Research and Public Health, 19(11812), 11812. https://doi.org/10.3390/ijerph191811812

Yari, Y., La Ramba, H., & Yesayas, F. (2021). Hubungan tingkat pengetahuan dan sikap dengan kesiapsiagaan bencana banjir pada mahasiswa kesehatan di DKI Jakarta. *Jurnal Kesehatan Holistic*, *5*(2), 52-62. https://doi.org/10.33377/jkh.v5i2.100

Zahra Chegini, Morteza Arab-Zozani, Edris Kakemam, Mojgan Lotfi, Afsaneh Nobakht, & Hanieh Aziz Karkan. (2022). Disaster preparedness and core competencies among emergency nurses: A cross-sectional study. Nursing Open, 9(2), 1294–1302. https://doi.org/10.1002/nop2.1172