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## THE EFFECT OF DISASTER PREPAREDNESS ON THE SOCIAL SENSITIVITY OF SOCIAL SCIENCES PRE-SERVICE TEACHERS

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**Abstract.** Social sensitivity to disasters is an act of concern carried out by someone after a disaster either in the form of real action or material assistance. The level of one's social sensitivity to disasters is assumed to be influenced by the attitude of disaster preparedness. This study aims to determine the effect between disaster preparedness on social sensitivity of prospective social studies education teachers. The approach used is quantitative with the type of correlation research. The population used in this study were all students of the Social Science Education Department, UIN Maulana Malik Ibrahim Malang, Indonesia who were taking the Geography of Disaster Course with a total of 118 people. The sample was determined as many as 91 people used in this study. Instruments in the form of questionnaires were used to measure disaster preparedness and social sensitivity of students with a Likert scale of 1-4 (strongly disagree - strongly agree). Data analysis in this study used normality test, homogeneity test, and t-test assisted by SPSS IBM 23 programme with 5% significance level. The results showed that the disaster preparedness variable had a sig value.  $0,000 > 0,05$ . The conclusion is that disaster preparedness has a significant effect on the social sensitivity of social sciences pre-service teachers.

**Keywords:** *Disaster Preparedness; Social Sensitivity; Social Science Pre-service Teachers*

### A. INTRODUCTION

Indonesia is one of the countries prone to disasters (Ayuningtyas et al., 2021; Djalante & Garschagen, 2017). This is due to the geological conditions and geographical position of Indonesia which is very complex, so natural disasters often occur. The frequent disasters that occur in Indonesia, so people need to have disaster preparedness to minimise the impact, including students.

Disaster preparedness is a condition of readiness to deal with disasters or other emergencies (Dewi et al., 2014). Preparedness involves planning, preparing and practising to deal with a critical situation or disaster that is likely to occur (Achora & Kamanyire, 2016; Tyubee, 2020). It includes steps such as understanding risks and threats, preparing to provide necessary resources and equipment, developing and evaluating emergency response plans, and practising emergency response skills (Achora & Kamanyire, 2016).

Social sensitivity to disasters is assumed to be influenced by disaster preparedness. Social sensitivity to disasters is an act of concern carried out by someone after a disaster either in the form of real action or material assistance. Social sensitivity to disasters refers to the ability of individuals and communities to understand, feel, and act on social needs and conditions that occur during and after natural disasters (Berrebi et al., 2021). Social sensitivity in natural disasters involves empathy, caring and a willingness to help those affected by the disaster (Banfield & Dovidio, 2012). It also includes the ability to adapt to social changes that occur during disasters, such as uncertainty, lack of resources, and changes in social interactions.

Social sensitivity to disasters can be manifested as volunteering at the time of a disaster, raising funds for victims, and helping to fulfil the needs of victims in the form of clothing and food. This attitude is important in community life, because humans need each other. Therefore, social sensitivity towards others is highly recommended. So as students who have a high level of education, they should have an attitude of social sensitivity towards others.

In contrast, the reality is that the level of social sensitivity among students is still relatively low (Afifa et al., 2022; Anggraini, 2022; Isnaeni et al., 2018; Nurhayati et al., 2020). This condition is in accordance with the level of social sensitivity to disasters among social science education students, UIN Maulana Malik Ibrahim is also still relatively low. The results of the initial survey conducted showed that the level of social sensitivity to disasters owned by students in the high category was 43% and the low category was 57%. There is a suspicion that the low social sensitivity of students to disasters is influenced by low disaster preparedness. Therefore, further research needs to be done related to the effect of disaster preparedness on students' social sensitivity. This is important because social studies students as prospective teachers must have high disaster preparedness and social sensitivity to disasters as a provision for educating their students.

Research related to disaster has been conducted by several researchers. First, Devkota et al. (2016) presented the results of post-earthquake research in Kathmandu, Nepal in 2015. The results showed that the response of Nepalese people to the districts in Kathmandu City was not so high, this is because people prefer to care about themselves. Whereas if people care about the victims in the Kathmandu area, the public response will be higher because the government has provided more assistance than other districts so that people will not provide more assistance. Second, Lindawati dan Wasludin (2017) explained that someone who has high knowledge about disasters will have preparedness 4 times that of people who have low knowledge about disasters. There are several factors that influence knowledge, namely education, occupation, age, interest, experience, neighbourhood culture, and information. In addition, the results of his research also state that there is no relationship between attitude and preparedness. This means that both having and not having an attitude will not affect disaster preparedness. Third, Adiwijaya (2017) explained that people who have high knowledge will affect their attitude and disaster preparedness. In addition, researchers explained that the attitude of the community can also affect preparedness. This means that disaster knowledge without application in behaviour or real action will not improve disaster preparedness. Fourth, Susanto et al. (2021) revealed that there is a positive relationship between disaster knowledge and disaster preparedness. When students have high disaster knowledge, they will also have high disaster preparedness. Then, researchers also explained the factors that influence disaster knowledge on social sensitivity, namely internal and external factors. In internal factors, students only acquire or know about disaster mitigation knowledge without any application in the form of preparedness behaviour. While external factors are the influence of the natural environment.

Based on previous research that has been described, there has been no study that explains the effect of disaster preparedness on social sensitivity to disasters in prospective social studies

education teachers. Therefore, this study aims to determine the effect between disaster preparedness on social sensitivity of prospective social science education teachers.

## B. METHODS

The approach used is quantitative with the type of correlation research (Sugiyono, 2014). The population used in this study were all students of the Social Science Education Department, UIN Maulana Malik Ibrahim Malang, Indonesia who were taking the Geography of Disaster Course with a total of 118 people. Furthermore, the sample was determined by random sampling technique and calculated using the Slovin's formula. Based on the calculation results, 91 samples were used in this study.

Instruments in the form of questionnaires were used to measure disaster preparedness and social sensitivity of students. The questionnaire used a Likert scale of 1-4 (strongly disagree - strongly agree). The Likert scale is used to determine the attitudes, opinions, and perceptions of individuals or groups towards social phenomena that are happening (Sugiyono, 2014). The instrument in the form of a questionnaire is based on each indicator. Measurement of disaster preparedness consisting of 12 assertions, using indicators: 1) availability of disaster information, 2) alertness during a disaster, 3) actions to save themselves, and 4) disaster socialisation activities. Furthermore, social sensitivity to disasters consisting of 12 assertions, measured by indicators: 1) empathy for disaster victims, 2) social care during disasters, 3) self-awareness of disasters, and 4) respect for others in coping with disasters. The instruments in this study have been tested for validity and reliability. The results of the validity test of the preparedness instrument can be seen in table 1.

**Table 1. Disaster Preparedness Validity Test Results**

No. Item	r Count	r Table	Decision
1.	0.679	0,422	Valid
2.	0.551	0,422	Valid
3.	0.615	0,422	Valid
4.	0.538	0,422	Valid
5.	0.527	0,422	Valid
6.	0.531	0,422	Valid
7.	0.604	0,422	Valid
8.	0.603	0,422	Valid
9.	0.679	0,422	Valid
10.	0.772	0,422	Valid
11.	0.682	0,422	Valid
12.	0,455	0,422	Valid

Based on table 1, it can be concluded that the disaster preparedness instrument consisting of a statement of 12 items is said to be valid because it meets the provisions of r count which is greater than r table, namely 0.422. Furthermore, the validity test of the social sensitivity instrument to disasters can be seen in table 2.

**Table 2. Social Sensitivity Validity Test Results**

No. Item	r Count	r Table	Decision
1.	0.586	0,422	Valid
2.	0.734	0,422	Valid
3.	0.587	0,422	Valid

4.	0.673	0,422	Valid
5.	0.731	0,422	Valid
6.	0.678	0,422	Valid
7.	0.650	0,422	Valid
8.	0.387	0,422	Valid
9.	0.621	0,422	Valid
10.	0.538	0,422	Valid
11.	0.454	0,422	Valid
12.	0.529	0,422	Valid

Based on table 2, it can be concluded that the social sensitivity instrument consisting of 12 statements is said to be valid because it meets the provisions of r count which is greater than r table, which is 0.422. Furthermore, the results of the reliability test of the disaster preparedness and social sensitivity instruments were declared reliable in this study because they had an Alpha value > 0.6. The recapitulation of the instrument reliability test results can be seen in Table 3.

**Table 3. Instrument Reliability Test Results**

<b>Instrumen</b>	<b>Cronbach's Alpha</b>	<b>N of Items</b>	<b>Decision</b>
Disaster Preparedness	0.845	12	Reliable
Social Sensitivity	0.828	12	Reliable

Data analysis in this study used normality test, homogeneity test, and t test. All data analysis tests in this study used the help of SPSS IBM 23 programme with a significance level of 5%.

### C. RESULT & DISCUSSION

The results of the normality test of disaster preparedness data and social sensitivity to disasters in this study can be seen in Table 4.

**Table 4. Normality Test Results**

		<b>Unstandardized Residual</b>
<b>N</b>		<b>91</b>
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	7.81195491
Most Extreme Differences	Absolute	.048
	Positive	.048
	Negative	-.046
Test Statistic		.048
Asymp. Sig. (2-tailed)		.200 <sup>c,d</sup>

a. Test distribution is Normal.

Based on table 4, the sig value is obtained. (2-tailed) 0.200 is greater than the significance of 0.05. This means that the data used in this study are normally distributed. Furthermore, the results of the homogeneity test of disaster preparedness and social sensitivity data can be seen in table 5.

**Table 5. Homogeneity Test Results**

Levene Statistic	df1	df2	Sig.
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Disaster Preparedness	.019	1	89	.892
Social Sensitivity	1.786	1	89	.185

Based on table 5, the significance value of the disaster preparedness variable is  $0.892 > 0.05$  and the social sensitivity variable is  $0.185 > 0.05$ . So it can be concluded that the data from the two variables are homogeneous. Furthermore, the results of the t test in this study can be seen in table 6.

**Table 6. T Test Result**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	24.961	7.060		3.536	.001
Disaster Preparedness	.765	.081	.707	9.444	.000

a. Dependent Variable: Social Sensitivity

Based on table 6, it is known that the disaster preparedness variable has a sig value.  $0,000 < 0,05$ . So in this research hypothesis,  $H_0$  is rejected and  $H_a$  is accepted, which means that the independent variable has a significant influence on the dependent variable. The conclusion is that there is a significant influence between disaster preparedness on the social sensitivity of prospective social science education teachers.

Based on the research results obtained regarding the effect of disaster preparedness on students' social sensitivity, it provides significant results that students who have a high level of preparedness will encourage these students to be more sensitive and care about victims of disasters that occur around them. Disaster preparedness itself includes skills and attitudes that enable a person to face and respond effectively to disasters. Students who have a high level of preparedness are usually equipped with knowledge about disaster risks, actions that must be taken before and after a disaster, and skills in dealing with emergency situations (Febriana et al., 2015).

Students' social sensitivity to disasters reflects their level of concern, empathy and willingness to help individuals and communities affected by disasters. Students who have been trained in disaster preparedness have a better understanding of the social, economic and psychological impacts of disasters (Rahayu et al., 2020). This makes them more sensitive to the needs and suffering experienced by individuals affected by disasters.

When students have high disaster preparedness, they tend to be more aware of potential disasters and risks around them. They can identify early signs of disasters, take preventive measures, and provide quick and appropriate responses in emergency situations (Mas'Ula et al., 2019). High preparedness can also make students more proactive in involving themselves in humanitarian efforts, such as helping disaster victims and contributing to post-disaster recovery (Pradika et al., 2018).

Another factor that can influence disaster preparedness towards social sensitivity is the Emergency Response Plan. Emergency Response Plan is a series of activities carried out to anticipate disasters through organisation and through appropriate and effective steps. With an ERP, a person will be able to understand the dangers around them, know the evacuation routes and evacuation plans, have the skills to evaluate the situation appropriately, and first aid measures for disaster victims (Utomo et al., 2021). Similarly, research conducted by Perry & Lindell (2003) that someone who has a swift planning in disaster cases will then have an impact on a high empathetic attitude towards victims, because they can know what to do when before and after a disaster occurs.

Thus, this study shows that high disaster preparedness in university students can be an

important factor in increasing their social sensitivity to disasters. Efforts to improve disaster preparedness among university students can have a positive impact in shaping a generation that is more sensitive and responsive to disasters, as well as playing an active role in assisting communities in dealing with disaster risks.

#### **D. CONCLUSION**

Based on the results of the study it can be concluded that disaster preparedness has a significant effect on the social sensitivity of social sciences pre-service teachers. This is shown from the t test results that the disaster preparedness variable has a sig value.  $0,000 > 0,05$ .

Based on the results of the study, suggestions are given 1) for lecturers teaching Disaster Geography courses, increasing disaster preparedness can be done by learning using disaster mitigation simulation models and media development project models with disaster mitigation themes. 2) For students, increasing social sensitivity to disasters can be done by joining groups or communities engaged in disaster management. 3) For future researchers, further research can be carried out related to disaster mitigation based on local wisdom.

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#### **REFERENCES**

- Achora, S., & Kamanyire, J. K. (2016). Disaster Preparedness. *Sultan Qaboos University Medical Journal*, 16(1), 15–19. <https://doi.org/10.18295/squmj.2016.16.01.004>
- Adiwijaya, C. (2017). Pengaruh Pengetahuan Kebencanaan dan Sikap Masyarakat Terhadap Kesiapsiagaan Menghadapi Bencana Tanah Longsor (Studi di Kelurahan Lawanggingtung, Kecamatan Bogor Selatan, Kota Bogor). *Jurnal Manajemen Bencana (JMB)*, 3(2), 2. <https://doi.org/10.33172/jmb.v3i2.107>
- Afifa, K., Baharudin, Y. H., & Sholikhah, L. D. (2022). Hubungan Pola Asuh Orang Tua terhadap Kepekaan Sosial dan Kedisiplinan Siswa. *Cermin: Jurnal Ilmu Pendidikan, Psikologi, Bimbingan Dan Konseling*, 3(1), 1. <https://doi.org/10.52802/crm.v3i1.300>
- Anggraini, K. C. S. (2022). Penggunaan Model Pembelajaran Inkuiri Terbimbing Dalam Pembelajaran IPS untuk Meningkatkan Kepekaan Sosial terhadap Lingkungan Siswa Madrasah Ibtidaiyah di Lamongan. *At-Thullab: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 1(1), 1. <https://doi.org/10.30736/atl.v1i1.78>
- Ayuningtyas, D., Windiarti, S., Hadi, M. S., Fusrini, U. U., & Barinda, S. (2021). Disaster Preparedness and Mitigation in Indonesia: A Narrative Review. *Iranian Journal of Public Health*, 50(8), 1536–1546. <https://doi.org/10.18502/ijph.v50i8.6799>
- Banfield, J. C., & Dovidio, J. F. (2012). The Role of Empathy in Responding to Natural Disasters: Comment on "Who Helps Natural Disaster Victims?" *Analyses of Social Issues and Public Policy*, 12(1), 276–279. <https://doi.org/10.1111/j.1530-2415.2012.01285.x>
- Berrebi, C., Karlinsky, A., & Yonah, H. (2021). Individual and community behavioral responses to natural disasters. *Natural Hazards*, 105(2), 1541–1569. <https://doi.org/10.1007/s11069-020-04365-2>
- Devkota, B. P., Doberstein, B., & Nepal, S. K. (2016). Social Capital and Natural Disaster: Local Responses to 2015 Earthquake in Kathmandu. *International Journal of Mass Emergencies & Disasters*, 34(3), 439–466. <https://doi.org/10.1177/028072701603400305>
- Dewi, A. K., Hamzah, A., Pramatadie, A. M., Prajanto, B., & Meilano, I. (2014). Kapasitas Masyarakat Sekitar Kampus ITB Dalam Menghadapi Gempa Bumi. *Jurnal Dialog Penanggulangan Bencana*, 5(1), 11–24.

- Djalante, R., & Garschagen, M. (2017). A Review of Disaster Trend and Disaster Risk Governance in Indonesia: 1900–2015. In R. Djalante, M. Garschagen, F. Thomalla, & R. Shaw (Eds.), *Disaster Risk Reduction in Indonesia: Progress, Challenges, and Issues* (pp. 21–56). Springer International Publishing. [https://doi.org/10.1007/978-3-319-54466-3\\_2](https://doi.org/10.1007/978-3-319-54466-3_2)
- Febriana, Sugiyanto, D., & Abubakar, Y. (2015). Kesiapsiagaan Masyarakat Desa Siaga Bencana dalam Menghadapi Bencana Gempa Bumi Di Kecamatan Meuraxa Kota Banda Aceh. *Jurnal Ilmu Kebencanaan : Program Pascasarjana Unsyiah*, 2(3), 3. <https://jurnal.usk.ac.id/JIKA/article/view/5671>
- Isnaeni, A. S., Nusantoro, E., & Mulawarman, M. (2018). Persepsi Siswa Mengenai Pola Asuh Orangtua dengan Kepekaan Sosial Siswa. *Indonesian Journal of Guidance and Counseling: Theory and Application*, 7(4), 4. <https://doi.org/10.15294/ijgc.v7i4.19124>
- Lindawati, & Wasludin. (2017). Hubungan Pengetahuan dan Sikap Tentang Bencana Banjir terhadap Kesiapsiagaan dalam Kesehatan Pada Masyarakat RW 05 RT 01 dan RT 03 Kelurahan Gondrong Kota Tangerang. *Jurnal Medikes (Media Informasi Kesehatan)*, 4(2), 2. <https://doi.org/10.36743/medikes.v4i2.86>
- Mas'Ula, N., Siartha, I. P., & Citra, I. P. A. (2019). Kesiapsiagaan Masyarakat Terhadap Bencana Banjir Di Desa Pancasari Kecamatan Sukasada Kabupaten Buleleng. *Jurnal Pendidikan Geografi Undiksha*, 7(3). <https://doi.org/10.23887/jjg.v7i3.21508>
- Nurhayati, N., Pitoweas, B., Putri, D. S., & Yanzi, H. (2020). Analisis Kepekaan Sosial Generasi (Z) Di Era Digital Dalam Menyikapi Masalah Sosial. *Bhineka Tunggal Ika: Kajian Teori Dan Praktik Pendidikan PKn*, 7(1), 17–23. <https://doi.org/10.36706/jbti.v7i1.11415>
- Perry, R. W., & Lindell, M. K. (2003). Preparedness for Emergency Response: Guidelines for the Emergency Planning Process. *Disasters*, 27(4), 336–350. <https://doi.org/10.1111/j.0361-3666.2003.00237.x>
- Pradika, M. I., Giyarsih, S. R., & Hartono, H. (2018). Peran Pemuda Dalam Pengurangan Risiko Bencana Dan Implikasinya Terhadap Ketahanan Wilayah Desa Kepuharjo, Kecamatan Cangkringan, Kabupaten Sleman, Daerah Istimewa Yogyakarta. *Jurnal Ketahanan Nasional*, 24(2), 261. <https://doi.org/10.22146/jkn.35311>
- Rahayu, S. P., Suarjana, I. M., & Bayu, G. W. (2020). Hubungan Sikap Peduli Sosial dan Sikap Tanggung Jawab dengan Kompetensi Pengetahuan IPS. *Journal for Lesson and Learning Studies*, 3. <https://doi.org/10.23887/jlls.v3i1.24325>
- Sugiyono. (2014). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.
- Susanto, L. H., Istiana, R., Retnowati, R., Ekamilasari, E., Ichsan, I. Z., Sigit, D. V., Rahman, Md. M., Babu, R. U. M., Darussyamsu, R., & Rosyid, A. (2021). Disaster preparedness behaviors in biology education: Knowledge of environmental disaster mitigation. *Edubiotik : Jurnal Pendidikan, Biologi Dan Terapan*, 6(01), 40–48. <https://doi.org/10.33503/ebio.v6i01.1220>
- Tyubee, B. T. (2020). Disaster Preparedness: Approaches and Frameworks. In W. Leal Filho, A. M. Azul, L. Brandli, A. Lange Salvia, P. G. Özuyar, & T. Wall (Eds.), *No Poverty* (pp. 1–9). Springer International Publishing. [https://doi.org/10.1007/978-3-319-69625-6\\_15-1](https://doi.org/10.1007/978-3-319-69625-6_15-1)
- Utomo, D. T., Kurniawan, B., & Ekawati, E. (2021). Analisis Eemergency Response Preparedness pada Keselamatan Seluruh Penghuni Kebun Binatang X. *Jurnal Kesehatan Masyarakat*, 9(1), 1. <https://doi.org/10.14710/jkm.v9i1.28548>