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The resilience of the high school student's post-disaster in west Sumatera Indonesia based on gender

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Abstract

This research is aimed at identifying the level of resilience of high school student's post-disaster in West Sumatera. This research is descriptive quantitative, with the total sample of 1143 students by using simple random sampling technique. The instrument used is TIRI. The data are analyzed descriptively with the analysis of the level of resilience in percentage, using SPSS version 20.00. The Result of the research reveals that the condition of the students' resilience is high. The result showed that in general male students are at high category and female students are also at high category of resilience, still there are significant differences of the students' resilience based on gender. The research suggests more efforts are needed to improve the condition of the students' resilience on certain aspects to be more optimal.

Keywords: Resilience, Student, Post Disaster

Introduction

Indonesia is a country prone to natural disasters (Taufik, et al. 2014). This is confirmed by Kardono (2009) based on the distribution of catastrophic events over the years 2002 to 2009 in Indonesia. There are five provinces included in 10 provinces that suffered the most catastrophic events namely Nusa Tenggara Barat (West Nusa Tenggara), Sulawesi Selatan (South Sulawesi), Sumatera Utara (North Sumatera), Kalimantan Timur (East Borneo) and Sumatera Barat (West Sumatera). The area around the coast of Sumatera is one of the disaster-prone areas, especially West Sumatera (Permana, Nasution, & Gunawijaya 2011;

Setyonegoro 2011; Sutowijoyo, 2005). This area is one of the provinces where disasters frequently strike, a relatively high occurrence of the disaster area (Bima, 2011; Afi, 2010) such as flood, landslides, and earthquakes and tsunami (Natawidjaja, 2007; Sadisun, 2004). Therefore, Ayuningtyas (2008) confirms that the people of West Sumatera need to be prepared for disaster preparedness, so that whenever a disaster strikes, its impact can be minimized, especially in adolescents (Personal & Yuliawati, 2012).

Some adolescents, in their development, must have experienced a dismal past (Suwarjo, 2008), for example, those affected by disaster-strike. The disaster could be triggered by human

actions (Sugiarto, 2014; Tampi, Kumaat, & Masi, 2013) including horizontal complex, accident, war, and various disputes and conflicts, or natural factors like volcanic eruptions, earthquakes, flood, drought, and famine (Rusilowati, Binadja, and Mulyani, 2012; Priyadi Kardono, 2009: Danieli, 1996). The more extensive the disaster is, the more devastating the consequences to the victims (State & Bary, 2008). The impact includes loss of property and lives, which raise the inner shock felt by the victims (Pratama, 2007; Wiryasaputra, 2006). Furthermore, Mudjiran in Ifdil (2012) states that another impact of disaster causes people suffered psychological shock, depression, stess and trauma. This condition affects the psychosocial situation. Ehrenreich (2001) also explains that catastrophic incident resulted in psychological "trauma" to the victims, the higher the degree of severity of the disaster and the level of horror they experienced, the greater psychological effects are felt. In line, Diaz, JOP, Murthy, S., & Lakshminarayana, in Ifdil R. (2012) states that post-disaster mental health problems experienced by the people include depression, anxiety, stress and somatization.

According to Hodgkinson (in Sales, 2005), disasters occured are probably good to be a challenge for nature, environment and affected communities to be able to wake up and regain control of the future life. This success relates to the ability of the victims to be able to reorganize the structure of life and their social organization. The level of immunity that makes a person to be able to maintain, rise up, and make adjustments to the existing condition is called resilience (Reivich and Shatte, 2002).

The people who are the subject to the impact of the disaster can recover quickly if they have high resilience. Resilience of the individual will affect the individual's performance, both in school and working environment. In addition, it will affect the health of the individual both physical and mental, and determine the success of the individual in touch and interacting with the environment. These all are the basic factors of achieving happiness and success of life (Reivich & Shatte., 2002).

Furthermore, Ifdil and Taufik (2012) mention that the resilience of students in West Sumatera is very important to be improved and developed. This condition is based on the conditions in West Sumatera as one of the high potentially disaster-strike, which includes in the 5 out of 10 regions in Indonesia that are potentially disastrous. The people can directly experience the psychological impact disaster.

Based on the explanation above, it can be concluded that resilience is very important to be improved and developed within the student at school in West Sumatera. Therefore, integrated efforts need to be prepared to increase the resilience of the community in general and students in particular. On that basis, the researchers conduct a research which is a preliminary study to identify the condition of the students' resilience in West Sumatera which then becomes the basis for further research in the form of model development program to increase students' resilience post-disaster in West Sumatera.

Method

This research is descriptive quantitative, with the total sample of 1143 students by using simple random sampling technique. The instrument used is Taufik & Ifdil Resilience Inventory (TIRI) with Alpha Cronbach 0.801. The interval of resilience level: Very high > 182, High ≤182 - ≥148, moderate <148 -> 113, low ≥ 113 -> 77 r, Very Low ≤ 77. And the Data are analyzed descriptively with the analysis of the level of resilience in percentage, using SPSS ver. 20.00.

Results and Discussion

Scores levels of Students' resilience in General

Based on the research objectives to be achieved, the result of the research in the field with regard to scores achievement of the level of SMA Negeri (State High School) students' resilience in West Sumatera is presented in Table 1 below:

Table 1
Scoresof Level of SMA students' Resilience in West Sumatera
n=1143

No	Variable	Ideal	Max	Min	SD	Average	
						Score	%
1	Resilience	215	197	79	12,980	157,233	73,131

Based on Table 1, it can be seen that the overall ideal resilience score of SMA Negeri students in West Sumatera is 215, the highest score achieved by students is 197, while the lowest score achieved is 79, with the average score of achievements 157.233, and standard deviation of 12.98. Thus, the percentage average of achievement of the ideal score is equal to 73.131%.

The description of the general level of resilience can be seen in Table 2 below:

Table 2
Resilience level of Students in General
n=1143

No	Criteria	f	%
1	Very high	38	3,32
2	High	864	75,59
3	Moderate	239	20,91
4	Low	2	0,17
5	Very low	0	0,00
	Total	1143	100

Based on Table 2 above, it can be seen that in general the SMA Negeri students' resilience in West Sumatera is at the high category, which means that 864 out of the 1143 students who become the respondents have high level of resilience with the percentage of 75.59%. Next, 239 students have resilience in the moderate category with the percentage of 20.91%, and 38 students have very high resilience with the percentage of 3.32%. From the result of the research, it was found that there are two students who have low resilience with the percentage of 0.17% and no student has very low resilience.

Based on the result of the research, in general resilience of SMA Negeri students in West Sumatera is at the high category. This indicates that the individuals are able to survive in difficult circumstances, having efforts and willingness to learn and adapt to the situation, as well as trying to rise from adversity to become better individuals.

Students who have high resilience will have successful work and life satisfaction. According to Block (in Klohnen, 1996) resilience is a general ability involving high adaptability and flexibility when facing internal and external pressures. High resilience will be able to cope well with change of life at high level, to maintain health in stressful conditions, to get up from the downturn, alleviating misfortune, and to change the way of life when the prior is irrelevant and no longer appropriate to current conditions, and to face problems without violence.

The Description of Level of Male Students' Resilience

The Number of scores achievement of level of SMA male students' resilience in West Sumatera per category is shown in Table 3 below:

Table 3
Resilience level of Male Students
n = 406

No	Category	f	%
1	Very high	11	2,7
2	High	296	72,9
3	Moderate	97	23,9
4	Low	2	.5
5	Very low	0	0
	Total	406	100

Based on the table above, it can be described that out of 406 students, 5% (2 students) are at low level of resilience, 23.9% (97 students) are at moderate resilience, 72.9% (296 students) are at high level of resilience and 2.7% (11 students) are at very high level of resilience. And none of male students is at very low level of resilience.Thus, it can be stated that the majority of male high school students in West Sumatera has resilience level in the high category.

Based on the result of the research, in general the resilience of male students is at high category. This shows that male students are able to cope with and adapt to the severe incident perceived or major problems that occur in life. Then, Reivich and Shatte (2002) adds that resilience can be improved through changes in the way people view the problems that can be seen in the seven capabilities, namely impulse control, optimism, causal analysis, Empathy, self-efficacy, and reaching out.

Some male students still have resilience at moderate category, and there are still some who have resilience at low category which is caused by several factors such as emotional stress and below average- intelligence. In addition, based on study by Bonanno, G.A. et al (2006), it can also due to symptoms of PTSD / post-traumatic stress disorder (2 or more symptoms) which is to the disaster victims can be assumed with low resilience. Then Flannery (in Hensley, 2009) described trauma as a severe horror when individual deals with sudden incident, unexpected, and potentially life threatening, so it cannot be controlled and the individual cannot respond effectively as they should. Therefore, the post-disaster psychological resilience is a comprehensive concept that reveals psychological processes developed in individual to face intense life stressors.

The Description Level of Female Students' Resilience

The number of scores achievement of level of SMA female students' resilience of West Sumatera per category is shown in Table 4 below:

Table 4
The level of female students'esilience
n = 737

No	Category	f	%
1	Very high	27	3.7
2	High	568	77.1
3	Moderate	142	19.3
4	Low	0	0
5	Very low	0	0
	Total	737	100.0

From the table, it can be drawn out that out of 737 students, 19.3% (142 students) are at moderate resilience, 77.1% (568 students) are at high level of resiliency and 3.7% (27 students) are at very high level of resiliency. However, none of the female students who are at the category of low and very low resilience.

Thus, it can be interpreted that the majority of female high school students in West Sumatera has the degree of resilience in the high category.

Based on the result of the research, in general the resilience level of female are at high category. It means that female students already have good resilience. Thus, this resilience is expected to arise and develop when they encounter difficulties, because according to Masten AS (2001), a person is said to have resilience if

he/she has been subjected to various risks and difficulties (Gizir, 2004). So, we can conclude that female students who have high resilience is able to survive in a state of distress, and even when facing adversity or trauma in life.

The existence of female students who have resilience in the moderate category is caused by some other factors such as the influence of social environment and lack of the psychological support received when facing problems such as post-disaster.

The Difference Level of Students' Resilience based on gender

The differences of level of resilience of male and female students of SMA Negeri in West Sumatera are shown in Table 5 below:

Table 5
The level difference of Students' Resilience

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | T | Df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
									Lower	Upper
Resilience	Equal variances assumed	.039	.844	-3.984	1141	.000	-3.176	.797	-4.740	-1.612
	Equal variances not assumed			-3.914	792.087	.000	-3.176	.812	-4.769	-1.583

Table 5 shows that the value of f for gender with equal variance assumed is 0.039 with significance 0, 844. Since the probability is > 0.05, it indicates that the variance of the population is identical. Therefore, the value of t-test used is based on the value of equal variances assumed. Based on t-test values obtained, it can be seen that t is -3984 with significance 0, 000. Since the significance of 0, 000 < 0.05, it is concluded that there are significant differences between the

degree of resilience of male and female students. On the word, there are significant differences in the level of student resilience based on gender.

Based on the result of the research, it is found that there are significant differences between the resilience of male and female students. This indicates that gender contributes to the resilience of individuals. The risk of susceptibility to emotional stress, the protection

against the risk situation, and the response to the difficulties faced are influenced by gender.

Mancini and Bonnano (2006) explain that resilience is a complex behavioral phenomenon. According to them, resilience is an individual capacity in which there are various elements of factors such as personality, interpersonal variables (a supportive relationship), the severity and the duration of stressor. Therefore, even though everyone universally has the same characteristics associated with the ability to rise up and overcome the difficulties of life, but actually it is an individual effort to demonstrate its resilience in facing trauma.

Different personality between male and female as well as the ability to cope with problems cause emerging difference level of resilience between male and female SMA Negeri students in West Sumatera. The same thing also stated by Everall, et al., (2006) that gender contributes to the resilience of individuals. The risk of susceptibility to emotional stress, protection against the risk situation, and response to the difficulties faced are influenced by gender.

Conclusions

Based on research conducted, it can be concluded that in general, male students have high resilience, and generally female students also have high resilience. Then, there are significant differences between the resilience of the male and female students. Thus, we can conclude that gender contributes to the resilience of individuals. The research suggests that more efforts are needed to improve the condition of students' resilience on certain aspects to be more optimal.

Acknowledgments

References

Ayuningtyas, D. (2008). Analisis Kesiapan Pos Kesehatan Desa Dalam Pengembangan Desa Siaga Di Kabupaten Kepulauan Mentawai Provinsi Sumatera Barat Tahun 2008. *Jurnal Manajemen Pelayanan Kesehatan, 11*(03).

Bonanno, G. A. et. al. (2006). Psychological Resilience After Disaster. New York in the aftermath of the September 11th terroris Attack. *Psycological Science, 17*(3), 181-186.

Ehrenreich, J.H. (2001). *Coping With Disasters. A Guidebook to Psychosocial Intervention*. Revised Edition. Center for Pschology and Society, State University of New York.

Gizir CA. (2004). Academic resilience: an investigation of protective factor contributing to the academic achievement of eigth grade student in poverty. *[tesis]*. The Graduate School of Social Sciences of Middle East Technical University.

Hensley, B.J., EdB. (2009). *An EMDR Primer from Practicum to Practice*. New York: Springer Publishing Company.

Ifdil. (2012, 14 Januari 2012). Pelayanan Konseling Pasca Bencana, Paper presented at *the International Seminar of Guidance and Counseling*, Padang.

Masten AS. (2001). Ordinary magic: Resilience processes in development. *Journal of American Psychologist 56*, 227-238.

Natawidjaja, D. H. (2007). Gempabumi dan Tsunami di Sumatra dan Upaya Untuk Mengembangkan Lingkungan Hidup yang Aman Dari Bencana Alam. Paper presented at *the Symposium*. ITB: Bandung.

Negara, S., & Bary, P. (2008). Bencana alam: dampak dan penanganan sosial ekonomi. *Masyarakat Indonesia, 34*(1), 115-134.

Permana, R. C. E., Nasution, I. P., & Gunawijaya, J. (2011). Kearifan lokal tentang mitigasi bencana pada masyarakat Baduy. *Makara, Sosial Humaniora, 15*(1), 67-76.

Pribadi, K. S., & Yuliawati, A. K. (2012). Pendidikan Siaga Bencana Gempa Bumi Sebagai Upaya Meningkatkan Keselamatan Siswa (*Studi Kasus Pada SDN Cirateun dan SDN Padasuka 2 Kabupaten Bandung*).

Reivich, K & Shatte, A. (2002). *Recilience Factor*. New York: Broadway Books

Rusilowati, A., Binadja, A., & Mulyani, S. (2012). Mitigasi Bencana Alam Berbasis Pembelajaran Bervisi Science Environment Technology and Society. *Jurnal Pendidikan Fisika Indonesia (Indonesian Journal of Physics Education), 8*(1).

Sadisun, I. A. (2004). Manajemen bencana: Strategi hidup di wilayah berpotensi bencana. *Keynote Speaker*.

Sales, Pau Perez,et.al. (2005). Post Traumatic Factors and Resilience: The Role of Shelter management and Survivours' Attitudes after Earthquakes in El Salvador (2001). *Journal of Community & Applied Psychology, 15*, 368-382.

Setyonegoro, W. (2011). Tsunami numerical simulation Applied to tsunami early warning system along Sumatra region. *Jurnal Meteorologi dan Geofisika, 12*(1).

Sugiarto, S. (2014). *Budaya Kesiapsiagaan Bencana Gempa Bumi Siswa Tunagrahita Di SMPLB–C Bhakti Putera Bahagia Gantiwarno Kabupaten Klaten.* Universitas Muhammadiyah Surakarta.

Sutowijoyo, A. (2005). Tsunami, karakteristiknya dan pencegahannya. *Majalah Inovasi, 7*.

Tampi, B., Kumaat, L., & Masi, G. (2013). Hubungan Sikap Dukungan Sosial Dengan Tingkat Resiliensi Stres Penyintas Banjir Di Kelurahan Taas Kecamatan Tikala Kota Manado. *Jurnal Keperawatan, 1*(1).

Taufik. dkk. (2014). Gambaran Resiliensi Anak Pasca Bencana Banjir di Desa Dayeuhkolot, Kabupaten Bandung, Jawa Barat. *Jurnal Psikologi, 6*(11).