

## Original Research Article

# Psychological well being toward adolescents in disaster-prone areas in Padang city

Helena Patricia<sup>1\*</sup>, Chamy Rahmatiq<sup>2</sup>, Emira Apriyeni<sup>3</sup>

<sup>1,3</sup>Department of Nursing Science, <sup>2</sup>Department of Public Health, Syedza Saintika Institute of Health Science, Padang, Indonesia

**Received:** 20 August 2020

**Accepted:** 07 October 2020

### \*Correspondence:

Dr Helena Patricia,

E-mail: [helenapatricia77@gmail.com](mailto:helenapatricia77@gmail.com)

**Copyright:** © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

## ABSTRACT

**Background:** Indonesia, particularly Padang City, West Sumatra, is a prone-area toward natural disasters related to geographical, geological and demographic conditions. Natural disasters give a very significant impact on physical, psychological and social. The psychological impact that most often appears in disaster cases is Post Traumatic Stress Disorder (PTSD). One who is prone to experiencing PTSD is adolescents. To prevent PTSD from occurring, good psychological well-being is needed. The factors that influence psychological well-being are religiosity, personality, coping strategies, self-concept and social support.

**Methods:** This study is an analytical study with a cross sectional approach. This research was conducted in three disaster-prone districts in Padang City, namely North Padang, South Padang, and Koto Tangah. Data were collected through distributing questionnaires to 156 adolescents who were selected by purposive sampling. Data were collected by questionnaire and analyzed descriptively using univariate analysis, bivariate analysis with chi square test, and multivariate logistic regression analysis.

**Results:** The results of this study found that 85 respondents (54.5%) had low psychological well-being, 98 respondents (62.8%) had low religiosity, 108 respondents (69.2%) had introverted personality types, 105 respondents (67.3%) used emotional focused coping, 90 respondents (57.7%) had negative self-concept and 91 respondents (58.3%) had low family support. The results of the bivariate analysis found a relationship between religiosity (0.000), personality type (0.010), coping strategy (0.00), self-concept (0.035) and family support (0.04) toward psychological well-being.

**Conclusions:** The results of the final multivariate modeling found that adolescents with negative self-concept had 12 times chance of having low psychological well-being in disaster-prone areas in Padang City.

**Keywords:** Adolescent, Disaster-prone area, Psychological well-being

## INTRODUCTION

Indonesia is a disaster-prone region in the Southeast Asia region due to geographical, geological and demographic conditions that allow disasters to occur, whether caused by natural or non-natural factors.<sup>1</sup> One of the areas in the country of Indonesia that has a fairly high level of vulnerability to earthquakes and tsunamis is Padang City.

Natural disasters have had a very significant physical, psychological and social impact. Disaster events result in trauma to disaster victims. Natural disasters also leave psychological impacts on survivors. The psychological impact that most often appears in the cases of natural disasters is Post Traumatic Stress Disorder (PTSD).<sup>2</sup> PTSD is a disorder that can form from traumatic events that threaten a person's safety or make a person feel

helpless. People experiencing PTSD respond to traumatic events with fear and hopelessness. One who is prone to experiencing PTSD is adolescent. Adolescence is a period that is still unstable and vulnerable to various problems.<sup>3</sup>

To prevent PTSD from occurring, good psychological well-being is needed. Psychological well-being is a condition where individuals become prosperous and have the ability to accept themselves as they are, able to formulate life goals, develop positive relationships with others, be able to grow and develop independent personal potential, have autonomy and are able to control the environment.<sup>4,5</sup>

Many factors can affect a person's psychological well-being, including the characteristics of a person such as age, gender, social and economic factors, occupation, education level, including factors of religiosity, personality, psychological distress, quality of life, coping strategies, self-concept, social support and self-efficacy. Based on many factors above, the most influence factors on psychological well-being are religiosity, personality, coping strategies, self-concept, and social support.

Based on data from the Regional Disaster Management Agency (BPBD) of Padang City, from 11 sub-districts there are 3 sub-districts that are potentially affected by the tsunami, namely North Padang, West Padang, and Koto Tangah. Based on the explanation above, the researchers conducted a research on factors related to psychological well-being toward adolescents in disaster-prone areas in Padang City. The objectives of this study were: To determine what factors are related to psychological well-being toward adolescents in disaster-prone areas in Padang City.

**METHODS**

This research is a descriptive analytic research with a cross sectional study method. The dependent variable is psychological well-being and the independent variable is religiosity, personality, coping strategies, self-concept, and social support. The data collection of this research was carried out from April to July 2020 in Junior High Schools which are very close to the beach in three disaster-prone districts in Padang City, namely SMP N 40 in North Padang, SMP N 35 in South Padang and SMP N 34 in Koto Tangah.

The population in this research is all adolescents in Junior High Schools which are very close to the beach in three disaster-prone districts in Padang City. The numbers of samples in this study were 156 respondents who were selected by accidental sampling technique. The data were obtained by using a questionnaire of psychological well-being, religiosity, personality, coping strategies, self-concept and social support.

This study pays attention to the basic principles of research ethics which include autonomy, beneficence,

non-maleficence, anonymity and justice. The data analyses used in this study were univariate, bivariate, and multivariate. Univariate analysis was used to see the frequency distribution of each of the studied variables. Bivariate analysis with Chi-square test was used to examine the relationship between psychological well-being and religiosity, personality, coping strategies, self-concept and social support. Multivariate analysis using the Logistic Regression test was used to see the variables that greatly affect the psychological well-being of adolescents in disaster-prone areas.

**RESULTS**

The results of this study on 156 respondents showed that 85 respondents (54.5%) had low Psychological well-being, 98 respondents (62.8%) had low religiosity, 108 respondents (69.2%) had introverted personality types, 105 respondents (67, 3%) had a dominant coping strategy to emotional focused coping, 90 respondents (57.7%) had negative self-concepts and 91 respondents (58.3%) had low family support toward adolescents in disaster-prone areas of Padang City (Table 1).

**Table 1: Univariate analysis.**

Variable	Category	F	%
Psychological well-being	Low	85	54.5
	High	71	45.5
	Total	156	100.0
Religiosity	Low	98	62.8
	High	58	37.2
	Total	156	100.0
Personality types	Introvert	108	69.2
	Extrovert	48	30.8
	Total	156	100.0
Coping strategy	Emotional focused coping	105	67.3
	Problem focused coping	51	32.7
	Total	156	100.0
Self-concept	Negative	90	57.7
	Positive	66	42.3
	Total	156	100.0
Family support	Low	91	58.3
	High	65	41.7
	Total	156	100.0

The results of the bivariate analysis found a relationship of religiosity (0.000), personality type (0.010), coping strategy (0.00), self-concept (0.035) and family support (0.04) toward psychological well-being.

The majority of low psychological well-being was found in 75.3% of adolescents who have low religiosity, in 60.0% of adolescents who have introverted personality

types, in 80.0% of adolescents whose dominant coping strategy is Emotional Focused Coping, in 65.9% of

adolescents who have negative self-concept and 69.4% of adolescents who have low family support (Table 2).

**Table 2: Bivariate analysis.**

Variable	Psychological well being						P value
	Low		High		Total		
	f	%	F	%	f	%	
<b>Religiosity</b>							
Low	64	75.3	34	47.9	98	62.8	0,001
High	21	24.7	37	52.1	58	32.7	
Total	85	100	71	100	156	100	
<b>Personality types</b>							
Introvert	51	60.0	57	80.3	108	69.2	0,010
Extrovert	34	40.0	14	19.7	48	30.8	
Total	85	100	71	100	156	100	
<b>Coping strategy</b>							
Emotional focused coping	68	80.0	37	52.1	105	67.3	0,000
Problem focused coping	17	20.0	34	47.9	51	32.7	
Total	85	100	71	100	156	100	
<b>Self-concept</b>							
Negative	56	65.9	34	47.9	90	57.7	0,035
Positive	29	34.1	37	52.1	66	42.3	
Total	85	100	71	100	156	100	
<b>Family support</b>							
Low	59	69.4	32	45.1	91	58.3	0,04
High	26	30.6	39	54.9	65	41.7	
Total	85	100	71	100	156	100	

**Table 3: Multivariate modelling.**

Variables	B	Wald	P value	OR	95% CI
<b>Sex</b>	0.077	0.042	0.837	1.080	0.518-2.251
<b>Living together</b>	-21.026	0.000	0.999	.000	0.000-0.082
<b>Religiosity</b>	0.664	1.593	0.207	1.982	0.685-5.736
<b>Personality types</b>	1.011	6.201	0.013	.364	0.164-0.806
<b>Coping strategies</b>	-1.119	8.223	0.004	.327	0.152-0.702
<b>Self-concept</b>	0.671	3.246	0.042	1.957	0.943-4.062
<b>Family support</b>	0.375	0.495	0.048	1.455	0.512-4.133

In multivariate analysis, it was conducted a multivariate modeling by selecting an important variable for entry in the model by maintaining the variables that have the p value <0.05 and remove variables p value >0.05. Gradual variable expenditure starts from the variable that has the largest p value. The variables that were excluded were living together, sex and religiosity (Table 3).

The multivariate test results showed that the variables significantly related to psychological well-being were personality types, coping strategies, self-concept, and family support. The adolescents who had the introverted personality type have a 3.3 times chance of having low

psychological well-being, adolescents who had a dominant coping strategy to Emotional Focused Coping have a 2.3 times chance of having low psychological well-being, adolescents who had a negative self-concept had 12.1 times chance of having low psychological well-being and adolescents who had low family support had 8.6 times chance of having low psychological well-being.

Self-concept has the greatest OR value, so it can be concluded that self-concept is the variable with the greatest influence on the psychological well-being of adolescents in disaster-prone areas in Padang City (Table 4).

**Table 4: Final multivariate modeling.**

Variables	B	Wald	P value	OR	95%CI
<b>Personality types</b>	-1.012	6.414	0.011	3.363	0.166-0.795
<b>Coping strategies</b>	-1.204	9.743	0.002	2.300	0.141-0.639
<b>Self-concept</b>	0.748	4.282	0.039	12.114	1.040-14.294
<b>Family support</b>	0.772	4.524	0.033	8.165	1.063-11.411

## DISCUSSION

The results of the Univariate analysis showed that more than half of the respondents had low psychological well-being, low religiosity, introvert personality type, dominant coping strategy to emotional focused coping, negative self-concept and low family support.

During adolescence, psychological well-being seems to have its own developmental idiosyncrasy and differs significantly from later ages. The manifold changes that occur at these ages (physical, physiological, cognitive, emotional, behavioral, social, relational and institutional) make adolescence an exceptionally plastic period of life.<sup>13</sup> Psychological well-being is an important aspect in one's life as it refers to positive mental health. Psychological well-being is often defined as some combination of positive affective states such as happiness and functioning with optimal effectiveness in individual and social life.<sup>14</sup>

Kadiyono, Anissa and Harding and Diana conducted a research entitled *Religiosity and Psychological Well-Being: Implication to Improve Disaster Management*. The results showed that their psychological well-being is in moderate low category. It means that they did not have a positive attitude toward their selves and others. They cannot make their own decisions, regulate their behavior and they are not able to choose and create the environment that suits their needs.<sup>15</sup>

The results of this study also indicated that more than half of adolescents had low religiosity. This is in line with the research of Donahue, Michael and Benson, that the majority of adolescents had low religiosity. Religiosity is very helpful for individuals when they have to deal with unpleasant events. Religiosity helps individuals maintain individual psychological health in times of adversity.<sup>16</sup>

Regarding the adolescents who were respondents in this study, it was also found that more than half of adolescents had an introverted personality type. This result is in line with the research of Ludtke et al, who conducted a study toward adolescents at a university. The results of the study indicated that the majority of students had a tendency towards an introverted personality type. This is related to the task of developing adolescents who are still trying to find identity which have an impact on changing attitudes and behavior of these adolescents.<sup>17</sup>

Both types of coping strategies also had an effect on psychological well-being of adolescent where the

problem focused coping had a positive effect, while emotional focused coping had a negative effect on the psychological well-being variable. The more inclined to problem focused coping, the higher the level of psychological well-being among adolescents. Conversely, the more likely it is to emotional focused coping, the lower the psychological well level toward adolescents. The results of Rodriguez T et al research, it showed that emotional focused coping was a negative predictor of psychological well-being toward adolescents.<sup>18</sup>

Bharathi, Sreedevi conducted a study entitled *A Study on the Self-Concept of Adolescents*. The findings of the study revealed that higher percentage of adolescents had under average levels of self-concept in the dimensions of temperamental, intellectual, physical and social. Self-conception of adolescents changes in structure. Adolescents are more likely to employ complex, abstract and psychological self-characterization. Self-esteem, the evaluative side of self-concept is also modified during these years.<sup>19</sup>

The results of this research also stated that adolescents in disaster-prone areas mostly have low social support. This is in line with the statement of Adyani, Suzanna, Safuwani, and Muryali from the results of their research entitled *Perceived Social Support and Psychological Well-Being among Interstate Students at Malikussaleh University*. They stated that 'for perceived social support indicating that the students received low social support'.<sup>13</sup>

The results of the bivariate analysis showed that there was a relationship between religiosity, personality type, coping strategies, self-concept and family support for psychological well-being. The majority of low psychological well-being is found in adolescents who have low religiosity, introverted personality type, dominant coping strategies to Emotional Focused Coping, negative self-concept and low family support.

Religion has an important influence on the psychological well-being. Religion is a multifunctional phenomenon that can serve multiple purposes. It has been linked to psychological goals, anxiety reduction, personal control, self-development and research of meaning. Religiosity had an influence on the establishment of psychological well-being. Positive correlation value indicates that the higher religiosity in individual, the higher their Psychological Well-Being.<sup>20</sup>

Psychological well-being is made up of six dimensions: (1) autonomy, or the ability to regulate our own behavior, resist social pressure and follow our convictions; (2) environmental mastery, or the ability to manage the context and daily activities; (3) personal growth, which includes a continuous process of developing our own potential; (4) positive relationships with others, defined as the establishment of close, trusting and meaningful bonds with others, as well as showing concern for the well-being of others; (5) purpose in life, or setting objectives and goals which give meaning and direction to our lives; and (6) self-acceptance, or the ability to have a positive attitude and feelings of satisfaction and acceptance of ourselves. Each of these dimensions represents what it means to be healthy, well and fully functioning, and articulates the different challenges that people face in their effort to achieve positive functioning.<sup>21</sup>

Fauziah, Handarini, Muslihati said that psychological well-being is influenced by various factors both internal factors (such as self-concept and personality) and external (such as social support). In this research, it is also identified that self-concept is the strongest variable which correlate with psychological well-being compared with the other variables; social support and personality variable. There is a positive correlation between psychological well-being, self-esteem and gratitude.<sup>22</sup>

The results of this research also indicate that there is a relationship between social support and psychological well-being. This is reinforced by Adyani et al research, which showed that there is a very significant positive relationship between social support and psychological wellbeing with an effective contribution of 47.5% and a correlation coefficient in this study of 0.689. A positive correlation value indicates that the more positive one's social support is, the higher the psychological well-being. Someone who gets social support will feel be loved, cared for and cared for by others. Therefore, the individual will develop a positive attitude and have high psychological well-being. Social support itself is also one of the factors to achieve psychological well-being of a person among other factors such as age, sex, social status, religiosity and personality.<sup>13</sup> The results of the research by Marrero and Abella, explained that there was a significant relationship between introvert-extrovert personality types and psychological well-being. Teens with extrovert personality types had high psychological well-being compared to introverted personality types who had lower psychological well-being.<sup>23</sup>

Turashvil, Turashvili, also conducted a research entitled '*Structural Equation Model of Psychological Well-Being*' among 252 students. The results of the research showed that coping strategies are the predictors of psychological well-being. There are a lot of stressful situations in the daily life. Using coping strategies, people can manage critical situations and stressful environments in their lives which can have an impact toward their psychological well-being and health. A coping strategy is defined as the

ability of a person to make certain changes at the cognitive and behavioral levels in order to manage psychological stress. Folkman and Lazarus divided coping strategies into two large groups, task-oriented and emotion-oriented. Both strategies aimed at reducing and controlling the influence of stresses toward people.<sup>24</sup>

The result of multivariate test showed that the variables which are significantly related to psychological well-being were personality types, coping strategies, self-concept and family support. Self-concept is the variable with the greatest influence toward the psychological well-being of adolescents in disaster-prone areas in Padang City.

Self-concept is defined as the value that an individual places on his or her own characteristics, qualities, abilities, and actions. Self-concept is not innate, but it is developed or constructed by the individual through interaction with the environment and reflecting on that interaction. An adolescent who has an adequate self-concept is likely to follow the problem solving approach and tends to be spontaneous, creative, origin and has high self-esteem. He trusts himself and has good academic achievement motivation and it is free to accept others without any negative feelings. Low self-concept can also cause problems and they may lose motivation in learning. Building a confidence in adolescents is one of the most important steps.<sup>23</sup>

In adolescents and young adults, self-concept is an important factor in determining well-being, even being the single best predictor. Self-concept has a positive influence on a person's behavior because self-concept plays a role in thought processes, decision-making. Furthermore, self-concept also influences the values, ideals and goals to be achieved by individuals.<sup>25</sup>

## CONCLUSION

Conclusion in this study, the dominant factor of this research is the self-concept, found that adolescents with negative self-concept had 12 times chance of having low psychological well-being in disaster-prone areas in Padang City.

## ACKNOWLEDGEMENTS

The author would like to thank to the Directorate General of Higher Education, Ministry of Education and Culture, for providing beginner research grants for lecturers in the 2020 period, to the chairman, lecturer, and students of STIKES Syedza Saintika.

*Funding: Directorate General of Higher Education, Ministry of Education and Culture*

*Conflict of interest: None declared*

*Ethical approval: The study was approved by the Institutional Ethics Committee*

## REFERENCES

1. The Center for Crisis Management, Ministry of Health, Republic of Indonesia. (2018). Kementrian kesehatan RI. Available from <http://www.depkes.go.id/penanganan-krisis/> On February 23, 2019.
2. Amin MK. Post Traumatic Stress Disorders Post-Disaster: Literature Review Post Traumatic Stress Disorders Post-Disaster: *Jurnal Kesehatan Al-Irsyad (JKA)*. 2016;10(1):67-73.
3. Maurya V. Natural Disasters, Psychological Well-Being and Resilience: Concerns related to Marginalized Groups: *International Journal of Research and Analytical Reviews (IJRAR)*. 2019;6(1):270-5.
4. Wang X, Shinfuku N, Gao L, Shen, Y., Zhang, H., & Zhao, C. (2010).
5. Post-earthquake Quality of Life and Psychological Well-Being: Longitudinal Evaluation in a Rural Community Sample in Northern China. *Psychiatry and Clinical Neurosciences*. 54(4):427-33.
6. Brooks SK, Dunn R, Amlôt R, Greenberg N, James Rubin G. Social and Occupational Factors Associated With Psychological Distress and Disorder Among Disaster Responders: A Systematic Review. *BMC Psychol*. 2016;4(1):1-13.
7. Agency M, Gordon NS. *Psychosocial Issues for Children and Adolescents in Disasters Theories of Child Development*. 2011;
8. Ali, M., & Asrori, M. (2014). *Psikologi Remaja: Perkembangan Peserta Didik*. Jakarta: PT Bumi Aksara.
9. Bentzen JS. Origins of Religiousness: The Role of Natural Disasters. *SSRN Electronic J*. 2003:1-40. <https://doi.org/10.2139/ssrn.2221859>
10. Alwisol. (2012). *Psikologi Kepribadian*. Malang: UMM Press
11. Lee E, Lee H. Disaster Awareness and Coping: Impact on Stress, Anxiety, and Depression. *Perspectives in Psychiatr Care*. 2019;55(2):311-8.
12. Kate. Relationship of Caregiver Burden With Coping Strategies, Social Support, Psychological Morbidity and Quality of Life in The Caregivers of Schizophrenia. *Asian J Psychiatr*. 2013;6(5):380-8.
13. Carmen V, Gómez-López, Mercedes & Ortega-Ruiz, Rosario. Adolescents' Psychological Well-Being: A Multidimensional Measure. *International Journal of Environmental Research and Public Health*. (2018).
14. Adyani L, Suzanna E, Safuwan S, Muryali M. Perceived Social Support and Psychological Well-Being among Interstate Students at Malikussaleh University. *Indigenous: J Ilmiah Psikol*. 2019;3(2):98-104.
15. Anissa K, Diana H. Religiosity and Psychological Well-Being: Implication to Improve Disaster Management. *Advanced Science Letters*. 2017;23:10959-62.
16. Michael D, Peter B. Religion and the Well-Being of Adolescents. *J Social Issues*. 2010;51:145-60.
17. Ludtke O, Roberts BW, Trautwein U, Nagy G. A random walk down university avenue: Life paths, life events, and personality trait change at the transition to university life. *J Personality and Social Psychol*. 2011;101(3):620-37.
18. Teresa R, Paz V, Juan M, Alicia G. Coping Strategies as Predictors of Well Being in Youth Adult. *Social Indicators Research*. 2015;122:479-89.
19. Bharathi TA, Sreedevi D. A Study on the Self-Concept of Adolescents. *Internat J Sci Res*. 2016;5(10).
20. Ha KM. The Role of Religious Beliefs and Institutions in Disaster Management: A Case Study. *Religions*. 2015;6:1314-29.
21. Mercedes GL, Carmen V, Rosario OR. Psychological Well-Being during Adolescence: Stability and Association with Romantic Relationships. *Frontiers in Psychol*. 2019;10(1):1772 -8.
22. Fauziah M, Handarini DM, Muslihati. Self-Esteem, Social Support, Personality and Psychological Well Being of Junior High School Student. *J Pendidikan Humaniora*. 2018;6(1):17-23.
23. Marrero RJ, Mónica A. The Contribution of Personality To Psychological Well-Being: An Exploratory Study. *Psychol of Satisfaction*. 2012; 41-65.
24. Turashvil, T., Turashvili, M. (2015). Structural Equation Model of Psychological Well-Being: A Georgian Exploration. *Proceeding - Social and Behavioral Sciences*. (2015) Vol. 4 (9).
25. Kong F, Zhao J, You X. Self-Esteem as Mediator and Moderator of the Relationship between Social Support and Subjective Well-Being among Chinese University Students. *Social Indicator Research*. 2013;112(1):151-61.

**Cite this article as:** Patricia H, Rahmatika C, Apriyeni E. Psychological well being toward adolescents in disaster-prone areas in Padang city. *Int J Community Med Public Health* 2020;7:4301-6.