Jurnal Psikologi Teori dan Terapan (JPTT)
2024, Vol. 15, No.03, 247-255
p-ISSN: 2087-1708; e-ISSN: 2597-9035
doi: https://doi.org/10.26740/jptt.v15n03.p247-255

The Resurgence of Cianjur Earthquake Adolescent Survivors: The Role of Coping Mechanisms and Resilience

Fanisya Triputri Zahrani*[1], Silvia Aini[1], Clarista Tertia Firjatullah[1], Fida Salimah Al Faizah[1], Shafia Islaha[1]

[1] *Departement of Psychology, University of Padjadjaran, Indonesia*

Corresponding author:
* Fanisya Triputri Zahrani
fanisya21001@mail.unpad.ac.id

Article History
Submitted : June 10th, 2024

Final Revised : October 6th, 2024

Accepted : October 7th, 2024

Abstract

Background: Indonesia's location on three major tectonic plates, makes it highly susceptible to earthquakes. These disasters can cause significant material and psychological damage. Coping mechanisms are crucial for dealing with the stress following an earthquake, influencing positive psychological changes. Research also shows that resilience affects psychological recovery after disasters. **Objective:** This study aims to examine the mediating role of resilience in the relationship between coping mechanisms and post-traumatic growth among adolescent earthquake survivors. **Method**: A regression-based mediation analysis was used with 201 senior high school students from the Cianjur District, selected through purposive sampling. Data were collected using the Brief-COPE for coping mechanisms, RS-14 for resilience, and PTGI-SF for post-traumatic growth. **Results**: No significant mediation effect of resilience was found in this relationship. The results show a significant direct effect of coping mechanisms on post-traumatic growth, accounting for 42.4%, while resilience accounted for 10.9%. **Conclusion**: Resilience does not mediate the relationship between coping mechanisms and post-traumatic growth. The study highlights the importance of focusing on coping mechanisms to foster post-traumatic growth in adolescent earthquake survivors.

Keywords: Adolescent; coping mechanism; earthquake; resilience; post-traumatic growth

Abstrak

Latar Belakang: Indonesia terletak di atas tiga lempeng tektonik utama, membuatnya sangat rentan terhadap gempa bumi. Bencana ini dapat menyebabkan kerusakan material dan psikologis yang signifikan. Mekanisme *coping* penting untuk mengatasi stres setelah gempa bumi, karena mempengaruhi perubahan psikologis positif. Penelitian juga menunjukkan bahwa resiliensi mempengaruhi pemulihan psikologis setelah bencana. **Tujuan:** Penelitian ini bertujuan menguji peran mediasi resiliensi dalam hubungan antara mekanisme *coping* dan pertumbuhan pasca-trauma pada remaja penyintas gempa bumi. **Metode**: Analisis mediasi berbasis regresi digunakan terhadap 201 data siswa SMA Kabupaten Cianjur yang dipilih melalui *purposive sampling*. Data dikumpulkan menggunakan Brief-COPE untuk mekanisme *coping*, RS-14 untuk resiliensi, dan PTGI-SF untuk *post-traumatic growth*. **Hasil**: Tidak ada efek mediasi signifikan dari resiliensi yang ditemukan dalam hubungan ini. Hasilnya menunjukkan pengaruh langsung yang signifikan dari mekanisme *coping* terhadap pertumbuhan pasca-trauma, yaitu sebesar 42,4%, sedangkan resiliensi menyumbang 10,9%. **Simpulan**: Resiliensi tidak memediasi hubungan antara mekanisme *coping* dan pertumbuhan pasca-trauma. Penelitian ini menekankan pentingnya fokus pada mekanisme *coping* untuk meningkatkan pertumbuhan pasca-trauma pada remaja penyintas gempa bumi.

Keywords: Remaja; mekanisme koping; gempa bumi; resiliensi; *post-traumatic growth*

Introduction

The Indonesian territory highly susceptible to geological and hydro-climatological disasters (Mahanani, 2020). One of these geological disasters is earthquakes. According to National Agency for Disaster Management (2022), during 2022, 17 regions in Indonesia experienced earthquakes. The earthquake in Cianjur regency on 21 November 2022, was one of the most severe earthquakes (National Agency for Disaster Management, 2022). The earthquake resulted in 334 fatalities, 593 individuals sustaining serious injuries, and 114,683 people being displaced (Ulya, 2022). Among these numbers, 11,062 were adolescents aged between 13 and 17 years old (Health Crisis Center, 2022).

The earthquake that struck Cianjur resulted in estimated losses reaching 4 trillion Indonesian rupiah (Selamet, 2022). Besides material losses, individuals and groups affected by earthquakes may experience mental instability, potentially leading to post-traumatic disorder, anxiety disorders, or depression (Makwana, 2019). According to Peek, Abramson, Cox, Fothergill, and Tobin (2018), the vulnerability factors affecting an individual's psychological condition after disaster experience include loss of family members, socio-economic losses, environmental losses, lack of social support, and negative coping mechanisms. Natural disasters, such as earthquake are unexpected events that cannot be controlled by anyone. Earthquake victims must confront many factors that can trigger post-disaster stress. In such situations, coping mechanism can assist victims in coping with existing stressors. According to Lazarus and Launier (1978), coping mechanism involve regulating stressor that are perceived to exceed an individual's capacity, as well as efforts to manage demands from both the environment and within oneself. Folkman and Lazarus (1980) categorized coping strategies into two types: problem-focused coping (PFC) and emotion-focused coping (EFC). In the context of natural disaster, coping strategies most commonly used in emotion-focused coping because this coping strategy is effective in situations that cannot be controlled (Jensen, Ellestad, & Dyb., 2013).

Numerous studies have endeavored to explore the relationship between coping mechanism and various mental health factors, one of which is resilience. Resilience is typically represented as a process that effectively mobilizes internal and external resources when individuals are initially confronted with adverse life events (Surzykiewicz, Konaszewski, & Wagnild, 2019). Pratiwi and Humaningsih (2017) discovered a positive correlation between coping abilities and resilience. Resilience stands as a protective factor among various others, which has been evidenced to mitigate psychological distress in individuals who have experienced unexpected events (Rou, Janković, & Bogaerts, 2022; Lau, Khoo, Ho, & Tan, 2021).

The reduction of psychological distress after trauma and the return of an individual to a normal state can be the beginning of the post-traumatic growth process. Tedeschi and Calhoun (2014) define post-traumatic growth (PTG) as significant positive changes in an individual's life after experiencing traumatic events. Post-traumatic growth is associated with positive coping (Kalaitzaki & Rovithis, 2021). High levels of resilience and positive coping strategies have also been found to enhance personal growth (Finstad et al., 2021). Coping also has a direct impact in the form of a positive correlation with post-traumatic growth (Vanhooren, Leijssen, & Dezutter, 2018). Furthermore, resilience is a protective factor for individuals who experience undesired events by assisting them in transforming traumatic experiences into positive developmental experiences (Hart, Brannan, & De Chesnay, 2014). Based on several existing studies, it is evident that there is a relationship between coping mechanism, resilience, and post-traumatic growth, the researcher interested in proving empirically that resilience is a mediator in the relationship between coping mechanism and post-traumatic growth in adolescent survivors of the Cianjur earthquake.

The researcher selected adolescents as the target population for this research because adolescents are among the most vulnerable populations to experience mental health problem after disasters due to their lack of experience and knowledge on how to cope (Wang, Chan, Ho, 2013). After researcher conducting a literature review, studies that discuss about coping mechanism, resilience, and their relationship with post-traumatic growth after disaster in children and adolescents were found to be more difficult compared to those focusing on adults, especially in Indonesia.

Based on previous explanation, this study aims to find out whether resilience can mediate the relationship between coping mechanism and post-traumatic growth, and to determine which coping mechanism are more effective for adolescent to apply after natural disasters occur. The benefit of this research is that it can serve as initial data that can be used as a reference for the formulation of psychological intervenons for adolescent earthquake survivors.

Method

This study is non-experimental research, which means the researcher did not administer any specific treatment or intervention to the research participants (Christensen, 2007). The research approach utilized descriptive quantitative methods with offline survey methodology (providing printed questionnaires) directly to the participants for data collection.

Sample or Population

Participant in this study were adolescents with an age range of 14—17 years old who were in grade 1 and 2 of high school. To determine partner schools, this study used a purposive sampling method because this sampling technique aims to select samples based on knowledge of a population, its elements, and research objectives (Babbie, 2008). The researcher chose SMAN 1 Cianjur and SMKN 1 Cianjur as the data collection sites because they fit the research criteria, that is: 1) The two high schools and the sub-district were included in one of the areas affected by the Cianjur earthquake in November 2022; and 2) The two schools have resumed normal offline operations this semester (July-September 2023). The total population is 2051 students. Based on the sample size formula from Krejcie and Morgan (1970), a sample size of 201 participants was required.

A total of 201 participants (120 female, 81 male) were recruited through purposive sampling from State Senior High School 1 Cianjur (87 students) and State Vocational Senior High Schol 1 Cianjur (114 students). The participants ranged in age from 14 to 17 years old (M = 15.67, SD = 0.67). Inclusion criteria required participants to reside in Cianjur during the earthquake on 21 November 2022. Therefore, 18 cases were eliminated.

Data Measurement

The coping mechanism measuring instrument used is Carver's Brief-COPE (1997) which has been adapted into Indonesian by Adikusumah (2023). This measuring instrument consists of 16 items and has a reliability of = 0.803 and a validity of each item more than r_{table} (r_{table} = 0.139). To measure post-traumatic growth, the PTGI-SF measuring instrument was used. It was adapted by Cann et al. (2010). The PTGI-SF is a shortened version of the PTGI that was first introduced by R. G. Tedeschi & Calhoun (1996) which consists of 10 items. The reliability of this measure was calculated after being translated into Indonesian and amounted to 0.952 (very good). The validity of the adaptation of this measuring instrument was obtained through the expert review method. The resilience measuring instrument used is RS-14 by Wagnild & Young (1990) which has been adapted into Indonesian by Valentino in 2021. This measuring instrument has 14 items and a reliability of 0.890 (very good).

Data collection was carried out offline at two partner schools using survey method in the form of a questionnaire. The questionnaire was preceded by informed consent, then followed by three measuring instruments, and ended with the identity and demographic information of the participants (gender, age, district). After all questionnaires were collected, the researchers proceeded to digitally archived the data for subsequent analysis.

Data Analysis

Regression analysis is used as a data analysis technique to test the hypothesis model between coping mechanisms and post-traumatic growth mediated by resilience. To perform regression analysis, it is required to perform a classic assumption test first. The classic assumption tests used are normality test, multicollinearity test, linearity test, and heteroscedasticity test (Ghozali, 2018). Data analysis was carried out with IBM SPSS 26 and JASP. Based on the results of the previous prerequisite test, the data distribution on the three research variables is normally distributed, there are no symptoms of heteroscedasticity or multicollinearity. Therefore, regression analysis was completed using the parametric analysis method. The conclusion of this study will be formulated based on the interpretation of statistical analysis of coping mechanism, resilience, and post-traumatic growth questionnaire data that has been obtained from the on-site data collection.

Result

The total data obtained was 201 data. Subsequent to that, data cleaning was carried out, leaving only 183 data that met the qualifications. The demographic information of the participants is presented in Table 1.

Table 1. Participants demographic information descriptive statistics

Category	Frequency	Percentage (%)
Gender		
Male	72	39.3
Female	111	60.7
School		
State Senior High School 1 Cianjur	74	40.4
State Vocational Senior High School 1 Cianjur	109	59.6
TOTAL	183	100

On Table 1, there is a categorization of 183 participants. Based on the gender, most of the participants were female (60,7%) followed by male participants (39,3%). Based on the school category, there are 40,4% participants who attended State Senior High School 1 Cianjur and 59,6% who attended State Vocational Senior High School 1 Cianjur.

Table 2. Participants age demographic

Age	Frequency	Percentage (%)
14	5	2.7
15	66	36.1
16	97	53
17	15	8.2
TOTAL	183	100

Participants had an age range of 14—17 years old with the most frequent age of 16 years (53%), then 15 years (36.1%), 17 years (8.2%), and 14 years (2.7%).

Table 3. Linear regression of coping mechanism on resilience

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	60,093	5,246		11.454	.000
	BC	.363	.116	.226	3.125	.002

a. Dependent Variable: RS

Based on Table 3 the Sig. value is listed as 0.002 < 0.05. Therefore, it can be concluded that there is a direct relationship between coping mechanisms and resilience with an effect size of 0.363.

Table 4. Linear regression of coping mechanism on post-traumatic growth

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	9.735	3.754		2.593	.010
	BC	.534	.083	.430	6.415	.000

a. Dependent Variable: PTG

Based on Table 4, the Sig. value is listed as 0.000 < 0.05. Therefore, it can be concluded that there is a direct relationship between coping mechanism and post-traumatic growth with an effect size of 0.534.

Table 5. Linear Regression of Resillience on Post-Traumatic Growth

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	6.122	3.901		1.569	.118
	BC	.360	.051	.467	7.099	.000

a. Dependent Variable: PTG

Based on Table 5, the Sig. value is listed as 0.000 < 0.05. Therefore, it can be conclude that there is a direct relationship between resilience and post-traumatic growth with an effect size of 0.360.

Table 6. Indirect Relationship between coping mechanism and post-traumatic growth

					95% Confidence Interval	
	Estimate	Std. Error	z-value	p	Lower	Upper
BC → RS → PTG	0.109	0.039	2.808	0.005	0.033	0.185

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Based on Table 6., it is observed that the lower limit of the confidence interval (LLCI) is 0.033 and the upper limit (ULCI) is 0.185. Thus, it can be inferred that coping mechanisms indirectly influence post-traumatic growth through resilience with an effect size of 0.109.

Table 7. Indirect relationship between coping mechanism and post-traumatic growth

					95% Confidence Interval	
	Estimate	Std. Error	z-value	p	Lower	Upper
BC → PTG	0,109	0.039	2,808	0,005	0,033	0,185

Note. Delta method standard errors, normal theory confidence intervals, ML estimator.

Based on Table 7., it can be seen that the direct effect of coping mechanisms on post-traumatic growth is greater compared to through resilience (0.424 > 0.109).

Table 8. Direct relationship of problem-focused coping to post-traumatic growth

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.378	.143	.138	6.25947

a. Predictors: (Constant), PFC_MEAN

Based on Table 8., it can be seen that the value of R is 0.378. This indicates that problem-focused coping contributes 37.8% to post-traumatic growth.

Table 9. Direct Relationship of Emotion-Focused Coping to Post-Traumatic Growth

Model Summary	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.424	.180	.175	6.12173

a. Predictors: (Constant), PFC_MEAN

Based on Table 9., the direct relationship effect is 0.424. These findings suggest that the direct relationship has a stronger impact than the indirect relationship (0.424 > 0.109). This implies that resilience has not functioned as a mediator variable in the connection between coping mechanisms and post-traumatic growth.

Discussion

The statistical tests in this study reveal that coping mechanisms exert a direct influence of 36.3% on resilience. These findings align with research conducted by Wahidah (2019), which suggests that enhanced coping abilities correspond to improved resilience. As indicated by Stenhardt and Dolbier (in Bastian, 2012), an increase in coping abilities leads to an increase in resilience for individuals.

The results of this research analysis are reinforced by previous studies indicating that the better individuals' stress coping abilities, the better their resilience capabilities as well (Pratiwi & Hirmaningsih, 2017). Furthermore, other researchers have also stated that there is a significant positive relationship between stress coping and resilience (Irzalinda & Sofia, 2019). Coping mechanisms in dealing with crises can positively influence individuals when influenced by resilience, although there are still other variables that can affect this (Anggayani & Hartawan, 2019).

Statistical analysis results in this study indicate a direct relationship between coping mechanisms and post-traumatic growth with an effect size of 53.4%. These findings are consistent with previous research. One

such study conducted by Rajandram, Jenewein, McGrath, and Zwahlen (2011) found that positive coping mechanisms consistently correlate with effective post-traumatic growth development. Additionally, Kalaitzaki and Rovithis (2021) reinforce this statement by revealing that coping strategies affect post-traumatic growth.

Several factors influence the coping process in significantly enhancing post-traumatic growth, including adaptive coping within religion (Lelorain, Bonnaud-Antignac, & Florin, 2010), spirituality (Smith et al., 2008), and positive affectivity, which also shows a significant relationship in post-traumatic growth development (Sears, Stanton, and Danoff-Burg, 2003).

This research reveals a direct influence of resilience on post-traumatic growth by 36%. This is supported by several previous studies stating that there is a significant relationship between resilience and post-traumatic growth (Hyun, Kim, & Lee, 2021). Furthermore, another study conducted by (Fino et al., 2023) strengthens the findings of this research, indicating that high levels of resilience can increase post-traumatic growth beyond the average. Post-traumatic growth can develop beyond resilience when traumatic experiences occur to create positive outlooks in individuals (Ballenger-browning & Johnson, 2010).

Based on statistical analysis results, it was found that resilience did not mediate the relationship between coping mechanisms and post-traumatic growth. This can be seen from the direct effect of coping mechanisms on post-traumatic growth (0.424), which is larger than the effect of coping mechanisms on post-traumatic growth through resilience (0.109). This may be due to significant differences between the impacts of coping mechanisms and resilience on post-traumatic growth. From previous regression analysis, it was found that coping mechanisms contribute by 53.4% to post-traumatic growth, while the effect of coping mechanisms on resilience only contributes by 36.3%, and resilience only contributes by 36% to post-traumatic growth.

One factor that could explain this is that many factors influence resilience beyond coping mechanisms, such as self-efficacy, hope, optimism, perceived social support, lifestyle, exercise, and others (Lau et al., 2021). These factors may vary among respondents, affecting their resilience levels, so coping mechanisms, which are adaptation strategies immediately after stressors occur, have a greater impact on post-traumatic growth than resilience.

Further research may be needed to explain why resilience actually reduces the impact of coping mechanisms on post-traumatic growth. Additionally, subsequent research could also interchange the roles of coping mechanism and resilience, placing coping mechanism as a mediator variable and resilience as an independent variable.

Based on the results of statistical analysis, it was found that the problem-focused coping variable has an R value of 0.378. This indicates that problem-focused coping positively contributes to post-traumatic growth by 37.8%. Meanwhile, the emotion-focused coping variable shows an R value of 0.424. In other words, emotion-focused coping positively contributes to post-traumatic growth by 42.4%. The statistical analysis results show that emotion-focused coping strategy contributes 4.6% more than problem-focused coping strategy to post-traumatic growth. Thus, it can be concluded that emotion-focused coping strategy is more effective in achieving post-traumatic growth in adolescent earthquake survivors.

This is consistent with Folkman and Lazarus (1985) statement that the use of coping mechanism strategies depends on who uses them, when, and how they are used. The proportion of using these coping strategies varies depending on an individual's assessment of the situation they are facing. And in line with Folkman and Lazarus (1985) statement as well, emotion-focused coping has a greater impact on their PTG because emotion-focused coping tends to be used by individuals when they believe there is nothing more they can do to change the dangerous or threatening environmental conditions, in this context, the Cianjur earthquake. Unlike problem-focused coping strategies, individuals who use this strategy believe that the situation can still change.

Conclusion

The objective of this research is to investigate resilience as a mediator between coping mechanisms and post-traumatic growth, and the result shows that there is no significant mediation effect of resilience. However, we found that coping mechanisms have a direct and significant impact on post-traumatic growth, positively influencing post-traumatic psychological changes. In the context of earthquakes, which events are beyond control, the more frequently and effectively used coping mechanism technique is emotion-focused coping, meaning individuals reconcile with their current situation by managing their emotions, thereby

fostering acceptance of the situation. This implies that individuals do not necessarily need to have high resilience levels to experience positive changes post-trauma; the crucial factor is when individuals know how to employ healthy and effective coping mechanisms for themselves. Thus, interventions for adolescent earthquake survivors could be more focused on how they cope (behavioral domain).

For future research, it is suggested to measure the stress levels of each participant beforehand to obtain more specific data and to collect data from a broader range of participants. Further research may be needed to explain why resilience actually reduces the impact of coping mechanisms on post-traumatic growth. Additionally, subsequent research could also interchange the roles of coping mechanism and resilience, placing coping mechanism as a mediator variable and resilience as an independent variable.

Acknowledgment

We extend our deep gratitude to all parties who have supported the implementation of this research. This research would not have been possible without the innovative opportunities provided by the Ministry of Education, Culture, Research, and Technology (Kemdikbud) and the Directorate General of Research and Development of Technology (Ditjen Diktiristek), which launched the PKM-RSH program managed by Simbelmawa, which funded this research. Furthermore, we would like to express our gratitude to Universitas Padjadjaran for providing research grants and facilities that have been the main pillars in the smooth conduct of our research. We also thank the Faculty of Psychology, Universitas Padjadjaran, for their trust, support, and assistance. Special thanks to State Senior High School 1 Cianjur and State Vocational Senior High School 1 Cianjur and all parties who have helped facilitate this research. We hope this research can contribute significantly to understanding coping mechanisms, resilience, and post-traumatic growth among adolescent earthquake survivors, as well as be useful in the development of scientific knowledge in Indonesia.

Referencesi

Adikusumah, R. (2023). *Hubungan antara Rumination dan Coping Stress pada Individu Emerging Adulthood yang Mengalami Perpisahan Hubungan Romantis*. Universitas Padjadjaran.

Anggayani, L., & Hartawan, I. G. M. D. (2019). The Relationship Between Self Reliance, Proactive Attitude, and Optimism with Coping Stress. *Bisma The Journal of Counseling*, *3*(2). https://doi.org/10.23887/bisma.v3i2.22532

Babbie, E. R. (2008). *The basics of social research*. Thomson, Cop.

Badan Nasional Penanggulangan Bencana (BNPB). (2022). *Data Informasi Bencana Indonesia (DIBI) Gempa Bumi Tahun 2022*. Retrieved from https://dibi.bnpb.go.id/kbencana2

Ballenger-browning, K., & Johnson, D. C. (2010). Key Facts on Resilience. *Cosc*, *56*(June). Retrieved from https://www.researchgate.net/publication/266057319

Bastian, D. S. (2012). *Hubungan antara Resiliensi dan Coping pada Istri yang Mengalami Kekerasan dalam Rumah Tangga*. University of Indonesia.

Cann, A., Calhoun, L. G., Tedeschi, R. G., Taku, K., Vishnevsky, T., Triplett, K. N., & Danhauer, S. C. (2010). A short form of the posttraumatic growth inventory. *Anxiety, Stress and Coping*, *23*(2). https://doi.org/10.1080/10615800903094273

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine*, *4*(1). https://doi.org/10.1207/s15327558ijbm0401_6

Christensen, L. B. (2007). *Experimental methodology*. Pearson.

Fino, E., Bonfrate, I., Fino, V., Bocus, P., Russo, P. M., & Mazzetti, M. (2023). Harnessing distress to boost growth in frontline healthcare workers during COVID-19 pandemic: The protective role of resilience, emotion regulation and social support. Dalam *Psychological Medicine* (Vol. 53, Nomor 2). https://doi.org/10.1017/S0033291721000519

Finstad, G. L., Giorgi, G., Lulli, L. G., Pandolfi, C., Foti, G., León-Perez, J. M., Cantero-Sánchez, F. J., & Mucci, N. (2021). Resilience, coping strategies and posttraumatic growth in the workplace following covid-19: A narrative review on the positive aspects of trauma. *International Journal of Environmental Research and Public Health*, *18*(18). https://doi.org/10.3390/ijerph18189453

Folkman, S., & Lazarus, R. S. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*, *21*(3). https://doi.org/10.2307/2136617

Folkman, S., & Lazarus, R. S. (1985). If It Changes It Must Be a Process. Study of Emotion and Coping During Three Stages of a College Examination. *Journal of Personality and Social Psychology*, *48*(1). https://doi.org/10.1037/0022-3514.48.1.150

Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25* (9th ed.). Badan Penerbit Universitas Diponegoro.

Hart, P. L., Brannan, J. D., & de Chesnay, M. (2014). Resilience in nurses: An integrative review. *Journal of Nursing Management*, *22*(6). https://doi.org/10.1111/j.1365-2834.2012.01485.x

Hyun, H. S., Kim, M. J., & Lee, J. H. (2021). Factors Associated With Post-traumatic Growth Among Healthcare Workers Who Experienced the Outbreak of MERS Virus in South Korea: A Mixed-Method Study. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.541510

Irzalinda, V., & Sofia, A. (2019). Pengaruh Koping Strategi terhadap Resilience Keluarga Rawan Bencana. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, *4*(1). https://doi.org/10.31004/obsesi.v4i1.312

Jensen, T. K., Ellestad, A., & Dyb, G. (2013). Children and adolescents' self-reported coping strategies during the Southeast Asian Tsunami. *British Journal of Clinical Psychology*, *52*(1). https://doi.org/10.1111/bjc.12003

Kalaitzaki, A., & Rovithis, M. (2021). Secondary traumatic stress and vicarious posttraumatic growth in healthcare workers during the first COVID-19 lockdown in Greece: The role of resilience and coping strategies. *Psychiatrike = Psychiatriki*, *32*(1). https://doi.org/10.22365/jpsych.2021.001

Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, *30*(3). https://doi.org/10.1177/001316447003000308

Lau, J., Khoo, A. M. G., Ho, A. H. Y., & Tan, K. K. (2021). Psychological resilience among palliative patients with advanced cancer: A systematic review of definitions and associated factors. *Psycho-Oncology*, *30*(7). https://doi.org/10.1002/pon.5666

Lazarus, R. S., & Launier, R. (1978). Stress-Related Transactions between Person and Environment. Dalam *Perspectives in Interactional Psychology*. https://doi.org/10.1007/978-1-4613-3997-7_12

Lelorain, S., Bonnaud-Antignac, A., & Florin, A. (2010). Long term posttraumatic growth after breast cancer: Prevalence, predictors and relationships with psychological health. *Journal of Clinical Psychology in Medical Settings*, *17*(1). https://doi.org/10.1007/s10880-009-9183-6

Makwana, N. (2019). Disaster and its impact on mental health: A narrative review. *Journal of Family Medicine and Primary Care*, *8*(10). https://doi.org/10.4103/jfmpc.jfmpc_893_19

Peek, L., Abramson, D. M., Cox, R. S., Fothergill, A., & Tobin, J. (2018). Children and Disasters BT - Handbook of Disaster Research. *Handbook of Disaster Research*, *4*(1). https://doi.org/10.1007/978-3-319-63254-4_13

Pratiwi, A. C., & Hirmaningsih, H. (2017). Hubungan Coping dan Resiliensi pada Perempuan Kepala Rumah Tangga Miskin. *Jurnal Psikologi*, *12*(2). https://doi.org/10.24014/jp.v12i2.321

Pusat Krisis Kesehatan. (2022, Desember 6). *Update Penanganan Bencana Gempa Bumi di Kabupaten Cianjur 6 Desember 2022 Pukul 17.00 WIB*. Retrieved from https://pusatkrisis.kemkes.go.id/update-penanganan-bencana-gempa-bumi-di-kabupaten-cianjur-6-desember-2022-pukul-170

Rajandram, R. K., Jenewein, J., McGrath, C., & Zwahlen, R. A. (2011). Coping processes relevant to posttraumatic growth: An evidence-based review. *Supportive Care in Cancer*, *19*(5). https://doi.org/10.1007/s00520-011-1105-0

Rou, C., Janković, M., & Bogaerts, S. (2022). The Moderating Roles of Resilience and Coping Strategy on Well-Being of Victimized Forensic Workers. *International Journal of Offender Therapy and Comparative Criminology*. https://doi.org/10.1177/0306624X221124834

Sears, S. R., Stanton, A. L., & Danoff-Burg, S. (2003). The yellow brick road and the Emerald City: Benefit finding, positive reappraisal coping, and posttraumatic growth in women with early-stage breast cancer. *Health Psychology*, *22*(5). https://doi.org/10.1037/0278-6133.22.5.487

Selamet, I. (2022, Desember 14). *Bupati Cianjur: Kerugian Akibat Gempa Capai Rp 4 Triliun*. detikjabar. Retrieved from https://www.detik.com/jabar/berita/d-6461122/bupati-cianjur-kerugian-akibat-gempa-capai-rp-4-triliun#:~:text=Gempa%20bumi%20berkekuatan%20magnitudo%205

Smith, B. W., Dalen, J., Wiggins, K., Tooley, E., Christopher, P., & Bernard, J. (2008). The brief resilience scale: Assessing the ability to bounce back. *International Journal of Behavioral Medicine*, *15*(3). https://doi.org/10.1080/10705500802222972

Surzykiewicz, J., Konaszewski, K., & Wagnild, G. (2019). Polish version of the Resilience Scale (RS-14): A validity and reliability study in three samples. *Frontiers in Psychology*, *9*(1). https://doi.org/10.3389/fpsyg.2018.02762

Tedeschi, R., & Calhoun, L. (2014). Trauma & Transformation: Growing in the Aftermath of Suffering. Dalam *Trauma & Transformation: Growing in the Aftermath of Suffering*. https://doi.org/10.4135/9781483326931

Tedeschi, R. G., & Calhoun, L. G. (1996). The posttraumatic growth inventory: Measuring the positive legacy of trauma. *Journal of Traumatic Stress*, *9*(3). https://doi.org/10.1002/jts.2490090305

Ulya, F. N. (2022, Desember 5). *Update Korban Gempa Cianjur: 334 Jiwa Meninggal, 8 Orang Masih Hilang, 593 Orang Luka Berat*. KOMPAS.com. Retrieved from https://nasional.kompas.com/read/2022/12/05/18011371/update-korban-gempa-cianjur-334-jiwa-meninggal-8-orang-masih-hilang-593

Valentino. (2021). *Gambaran Resiliensi Mahasiswa Universitas Padjadjaran*. Universitas Padjadjaran.

Vanhooren, S., Leijssen, M., & Dezutter, J. (2018). Coping Strategies and Posttraumatic Growth in Prison. *Prison Journal*, *98*(2). https://doi.org/10.1177/0032885517753151

Wahidah, E. Y. (2019). Pembinaan Masyarakat pada Perempuan Tulang Punggung Keluarga dengan Strategi Koping Mekanisme dalam Upaya Peningkatan Resiliensi. *Jurnal Pengembangan Masyarakat Islam*, *3*(1). https://doi.org/10.21043/cdjpmi.v3i1.5622

Wang, C. W., Chan, C. L. W., & Ho, R. T. H. (2013). Prevalence and trajectory of psychopathology among child and adolescent survivors of disasters: A systematic review of epidemiological studies across 1987-2011. Dalam *Social Psychiatry and Psychiatric Epidemiology*, *48*(11). https://doi.org/10.1007/s00127-013-0731-x