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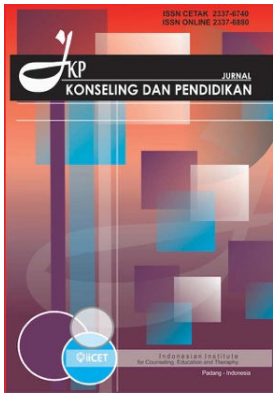

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Article

Post-traumatic stress disorder and prolonged grief disorder among adolescents after the cianjur earthquake: prevalence and mental health implications

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ABSTRACT

The Cianjur earthquake on November 21, 2022, caused severe psychological impacts, particularly among adolescents who experienced significant loss or direct exposure to the disaster. This study aimed to analyze the prevalence of Post-Traumatic Stress Disorder (PTSD) and Prolonged Grief Disorder (PGD), and to examine their respective effects on the mental health of adolescent disaster survivors. The research employed a descriptive and correlational quantitative design using a survey approach. A total of 551 adolescents aged 13–17 were selected through purposive sampling based on their exposure to the disaster's impact. Three instruments were used to collect data: the PTSD Checklist for DSM-5 (PCL-5) to assess post-disaster trauma symptoms; the PGD-13-R to measure prolonged grief severity; and the Mental Health Continuum-Short Form (MHC-SF) to evaluate emotional, psychological, and social well-being. Data were analyzed using descriptive statistics, t-tests, ANOVA, Pearson correlations, and multiple linear regression. Results showed that 18.5% of respondents met the criteria for PTSD and 6.9% for PGD. Regression analysis indicated that PTSD had a significant negative impact on mental health ($\beta = -0.250$; $p < 0.001$), while PGD was not a significant predictor ($\beta = 0.046$; $p = 0.312$). These findings suggest that post-disaster trauma contributes more substantially to mental health deterioration than prolonged grief. Therefore, evidence-based interventions such as Ego State Therapy are recommended to address PTSD symptoms effectively among adolescents affected by the earthquake.

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Introduction

Indonesia is widely recognized as one of the most disaster-prone countries in the world, facing frequent natural calamities such as volcanic eruptions, earthquakes, tsunamis, floods, and landslides. This vulnerability is largely due to its geographic location at the convergence of three major tectonic plates: the Indo-Australian Plate in the south, the Pacific Plate in the east, and the Eurasian Plate in the north. The interaction among these plates results in intense tectonic and volcanic activity, making Indonesia highly susceptible to natural disasters (Rahma, 2018). The impact of natural disasters in Indonesia is multifaceted, including human casualties, environmental damage, economic losses, and

long-term social and psychological consequences. Psychologically, disaster survivors often experience stress, anxiety, depression, and prolonged trauma, particularly due to the loss of loved ones and homes (Rachma & Febrianti, 2021). For instance, the Cianjur earthquake on November 21, 2022, with a magnitude of 5.6, resulted in 602 fatalities, 8 missing persons, thousands injured, and mass displacement. Critical infrastructure, including 142 schools, suffered severe damage (Badan Nasional Penanggulangan Bencana, 2022).

Sudden disasters often trigger denial mechanisms among survivors, worsening their psychological condition and increasing the risk of severe stress and anxiety (Makwana, 2019). Post-disaster life undergoes drastic changes, demanding survivors to adapt to new physical, economic, and emotional challenges. Thus, beyond physical rehabilitation, psychological recovery becomes crucial to help them rebuild their lives. Coping with the loss of a significant person is a deeply emotional experience. Not everyone can manage grief effectively, especially when the loss is sudden or traumatic. Recovery requires individuals to rise again, strengthen themselves, and use the experience as a foundation for rebuilding their lives (Johnson et al., 2022).

Traumatic experiences can adversely affect emotional well-being, leading to anxiety, depression, hypervigilance, or emotional numbness (Regel & Joseph, 2017). In natural disaster contexts, trauma frequently arises from intense fear during life-threatening events such as earthquakes or tsunamis (Salma & Hidayat, 2016). If untreated, prolonged stress may develop into trauma that disrupts daily functioning, impairs emotional development, and affects social interactions (Glawing et al., 2024). Severe trauma is also associated with chronic illnesses such as asthma, depression, and cardiovascular disorders (Pinquart, 2021). Failure to manage trauma may lead to PTSD, which hampers productivity and increases the risk of other psychological disorders (Alves et al., 2024). Therefore, appropriate psychosocial interventions are essential to support individual recovery.

PTSD is a psychological disorder commonly experienced by natural disaster survivors. It is characterized by recurrent traumatic memories, emotional numbness, and difficulties in daily functioning (Rahmadian et al., 2016). The disorder emerges from experiences that threaten physical or mental safety, such as disasters, accidents, or violence, and has long-term psychological effects (Nawangsih, 2014). According to DSM-5, PTSD manifests in three core symptoms: re-experiencing (e.g., flashbacks or nightmares), avoidance (avoiding trauma-related thoughts or situations), and hyperarousal (e.g., exaggerated startle response or sleep disturbances). If these symptoms persist for more than a month, they can lead to emotional dysregulation, impulsivity, aggression, or depression (Sugara, 2017).

Symptoms of PTSD may last for years if untreated and can significantly impair an individual's social functioning (Howie, 2022). Treatment for PTSD includes cognitive-behavioral therapy (CBT), exposure therapy, and social support to facilitate recovery (Sugara et al., 2025). In addition to PTSD, individuals are also at risk of experiencing grief-related disorders that interfere with daily life (Reed et al., 2022). Grief is a natural emotional response to significant losses, such as the death of a loved one, divorce, or other major separations (Markovic, 2024). It encompasses not only sadness but also anger, guilt, confusion, and isolation (Mortazavi et al., 2020). Grief is multidimensional, involving emotional, cognitive, physical, and social aspects. Due to its complexity, many individuals struggle to understand and manage their grief (Guldin & Leget, 2024). The impact of grief extends beyond psychological aspects to physical health and social relationships (Merino et al., 2024). Worden (2018) noted that grieving individuals often undergo major changes in their social interactions. Lack of family or peer support can further intensify feelings of isolation, impeding recovery (Barboza et al., 2025).

If not adequately addressed, grief can evolve into Prolonged Grief Disorder (PGD), a condition marked by persistent sorrow that disrupts daily functioning (Stroebe et al., 2005). Individuals with PGD struggle to accept the loss and adjust to life afterward, especially when lacking coping mechanisms or emotional support (Smith et al., 2024). Grief can also trigger physical health issues, including cardiovascular disorders, insomnia, and weakened immunity (Cunningham et al., 2025). Therefore, providing sufficient emotional and social support is essential to manage loss healthily and

mitigate long-term negative effects. Adolescents, due to their developmental stage, often experience more severe psychological stress compared to other age groups (Makwana, 2019).

Numerous studies have documented signs of PTSD and other psychological disorders in children and adolescents who have experienced natural disasters. This age group is highly vulnerable to chronic stress and adaptation difficulties, which may impair their social interactions, heighten anxiety levels, and lead to emotional distress. Traumatized children and adolescents are also more prone to depressive symptoms and various psychological impacts that hinder their overall development (Rahmadian et al., 2016).

School-aged children typically respond to trauma with disruptions in thought and emotional patterns, including persistent memories of the traumatic event, sleep disturbances, nightmares, exaggerated startle responses, and difficulty concentrating (Herzog et al., 2022). These emotional instabilities affect not only academic performance but also social relationships with peers and their environment (Rachma & Febrianti, 2021). Psychological problems stemming from natural disasters tend to persist long-term and may worsen without appropriate intervention. Early detection through psychological screening is crucial for implementing timely and effective recovery measures (Doba et al., 2022).

Although numerous studies have documented the psychological effects of natural disasters, research focusing specifically on PTSD and PGD among adolescent earthquake survivors in Indonesia remains scarce. Adolescents represent a uniquely vulnerable population due to their developmental stage and evolving coping capacities. The Cianjur earthquake provides a critical context for exploring these issues. Therefore, this study aims to (1) determine the prevalence of PTSD and PGD among adolescents affected by the Cianjur earthquake, and (2) assess how PTSD and PGD impact their overall mental health. By addressing this gap, the study seeks to inform targeted interventions for adolescent survivors in culturally relevant settings.

Methods

Participants

This study employed a descriptive quantitative method to analyze the level of trauma among adolescent survivors of a natural disaster. The participants included 551 adolescents aged 13 to 17 years who were directly affected by the Cianjur earthquake. Participants were selected using a stratified random sampling technique to ensure balanced representation across key characteristics, including age group, gender, and level of disaster exposure (such as loss of a home, family member, or physical injury). Only those who had directly experienced significant impacts from the earthquake and were willing to participate voluntarily were considered. All participants received detailed information regarding the research objectives and procedures prior to data collection. Informed consent was obtained from each participant and their legal guardians. This stratified approach allowed the study to more accurately reflect the diversity of adolescents' psychological experiences in the disaster-affected population, enhancing the study's external validity.

Measure

PTSD Checklist for DSM-5 (PCL-5)

The PCL-5, developed by Weathers et al. (2013) and adapted to the Indonesian cultural context by Sugara et al. (2024), was used to assess PTSD symptoms. It consists of 20 items measuring four symptom clusters according to the DSM-5: (1) intrusion (e.g., flashbacks and nightmares), (2) avoidance (e.g., avoiding thoughts or reminders of the trauma), (3) negative alterations in cognition and mood (e.g., guilt, loss of interest), and (4) hyperarousal (e.g., irritability, difficulty concentrating). Responses are rated on a 5-point Likert scale ranging from 0 (not at all) to 4 (extremely), based on experiences in the past month. A total score ≥33 indicates a probable diagnosis of PTSD. The instrument demonstrated excellent internal consistency (Cronbach's Alpha = 0.91).

Prolonged Grief Disorder-13 Revised (PGD-13-R)

The PGD-13-R, developed by Prigerson et al. (2021) and adapted for Indonesian adolescents by Muhtadi & Ahman (2024), measures prolonged grief symptoms based on ICD-11 and DSM-5-TR criteria. It includes 13 items grouped into three categories: persistent and disruptive grief (e.g., yearning), emotional and cognitive difficulties (e.g., disbelief, guilt), and functional impairment in daily life. Items are rated on a 5-point Likert scale from 1 (never) to 5 (very often). Higher scores indicate more severe grief symptoms. The instrument showed high reliability (Cronbach's Alpha = 0.888).

Mental Health Continuum-Short Form (MHC-SF)

The MHC-SF, developed by Keyes (2002) and culturally adapted by Fatimah et al. (2025), was used to measure overall mental well-being. It consists of 14 items across three dimensions: subjective well-being (SWB), psychological well-being (PWB), and social well-being (SoWB). Responses are rated on a 6-point Likert scale from 1 (never) to 6 (every day). Internal consistency for each subscale was satisfactory (Cronbach's Alpha = 0.811 for SWB, 0.809 for PWB, and 0.729 for SoWB).

Procedure

The research was conducted in several systematic stages. First, administrative preparations and coordination with schools and local authorities in the affected areas were carried out. Prior to data collection, enumerators (field researchers) underwent structured training, which included in-depth orientation on the research objectives, detailed review of the questionnaire content, techniques for communicating sensitively with adolescent respondents, and simulation sessions for questionnaire administration to ensure consistency across data collectors. Standard operating procedures (SOPs) were developed and distributed to guide field implementation and minimize variation in how information was conveyed. During the data collection phase, eligible participants received clear explanations about the study's objectives and procedures, and provided informed consent. To minimize misunderstanding, enumerators assisted participants individually within group settings, offering clarification when needed without leading responses. After data collection, verification procedures were carried out to check for completeness and accuracy. Statistical analyses were then conducted to examine trauma patterns and their impact on adolescent mental health. Finally, the findings were compiled into a scientific report intended to inform psychological intervention programs for disaster survivors.

Data Analysis

Quantitative analyses were employed to evaluate trauma, grief, and mental health among disaster-affected adolescents. Descriptive statistics were used to describe participant characteristics (e.g., age, gender, loss experience). PTSD and PGD prevalence were calculated based on diagnostic criteria from the DSM-5. Independent samples t-tests and one-way ANOVA were applied to compare PTSD, PGD, and mental health across demographic groups, with post-hoc tests as needed. Pearson correlation was used to assess relationships among trauma, grief, and mental health. Finally, multiple linear regression was conducted to identify predictors of trauma severity and mental health outcomes. These analyses provided a comprehensive understanding of the psychological impact of the earthquake and informed recommendations for targeted mental health interventions.

Results and Discussion

Prevalence of Post-Traumatic Stress Disorder (PTSD) Among Adolescent Earthquake Survivors in Cianjur

Table 1 presents the analysis of 551 respondents who had experienced traumatic events. Among them, 102 individuals (18.5%) met the criteria for PTSD, while 449 individuals (81.5%) did not display PTSD symptoms. A significant difference was found based on educational level ($\chi^2 = 13.327$; $p = 0.001$), where junior high school students exhibited a higher PTSD prevalence (20.8%) compared to vocational high school students (12.5%). This suggests that students at lower educational levels are more vulnerable to post-traumatic disorders.

Table 1. Sociodemographic and Psychopathological Factors Associated with PTSD

Variable	No PTSD (n = 449)	%	PTSD (n = 102)	%	x^2	df	p-value
Education Level					13.327	2	0.001
Junior High School	316	79.2	83	20.8			
Vocational High School	133	87.5	19	12.5			
Gender					14.514	1	<0.001
Male	222	88.5	29	11.5			
Female	227	75.7	73	24.3			
Age (Years)					9.803	5	0.081
13	17	85.0	3	15.0			
14	154	75.9	49	24.1			
15	128	81.5	29	18.5			
16	39	90.7	4	9.3			
17	97	85.1	17	14.9			
18	14	100.0	0	0.0			
Trauma Experience					1.342	3	0.719
Repeatedly heard/saw event	15	83.3	3	16.7			
Witnessed event in others	23	76.7	7	23.3			
Heard about event in family	19	76.7	6	23.3			
Experienced it personally	392	82.0	86	18.0			
Cause of Death					3.557	2	0.169
Accident/Violence	92	82.9	19	17.1			
Natural Cause	160	78.0	45	22.0			
Others	197	83.8	38	16.2			

Gender also showed a highly significant association with PTSD ($\chi^2 = 14.514$; $p < 0.001$), with females (24.3%) being more likely to experience PTSD than males (11.5%), indicating a greater psychological vulnerability among female adolescents. Although age was not statistically associated with PTSD prevalence ($\chi^2 = 9.803$; $p = 0.081$), adolescents aged 14 had the highest PTSD rate (24.1%), followed by 15-year-olds (18.5%) and 17-year-olds (14.9%). No cases of PTSD were identified among 18-year-olds, suggesting early adolescence may be a particularly sensitive period emotionally. Experiences of trauma did not show a significant association with PTSD occurrence ($\chi^2 = 1.342$; $p = 0.719$), but descriptively, those who heard or witnessed trauma in others (23.3%) had a higher PTSD prevalence compared to those who experienced it firsthand (18%). This indicates that indirect trauma exposure can also have a substantial psychological impact. Furthermore, the cause of death (natural vs. unnatural) was not significantly related to PTSD prevalence ($\chi^2 = 3.557$; $p = 0.169$), although descriptively, deaths from natural causes were associated with a slightly higher PTSD prevalence (22%) compared to accidents or violence (17.1%). Overall, these findings highlight that social-demographic factors such as gender and educational level significantly influence adolescents' vulnerability to PTSD, while trauma experience and cause of death mainly show descriptive trends rather than statistically significant differences.

Table 2 presents the descriptive and inferential analysis evaluating differences in PTSD symptom severity based on educational level between junior high school and vocational high school students. The analysis revealed that the mean total PTSD score for junior high school students was M = 24.38 (SD = 13.60), while for vocational high school students it was M = 24.94 (SD = 11.96). ANOVA results indicated that this difference was not statistically significant (F = 0.188, p = 0.664), suggesting that overall PTSD symptom severity did not differ significantly between the two educational groups.

When examining specific PTSD symptom clusters, similar patterns emerged. For intrusion symptoms, junior high school students had a mean score of M = 7.08 (SD = 4.45), while vocational high school students scored M = 7.56 (SD = 3.94), with no statistically significant difference (F = 1.317, p = 0.252). In terms of avoidance symptoms, the mean score was M = 2.09 (SD = 1.84) for junior high school students and M = 2.20 (SD = 1.78) for vocational high school students, which was also not statistically significant (F = 0.362, p = 0.548). For negative alterations in cognition and mood, junior high school students had a mean score of M = 6.93 (SD = 5.38), compared to M = 6.84 (SD = 4.61) among vocational high school students, again showing no significant difference (F = 0.031, p = 0.860). Finally, for hyperarousal symptoms, the mean score for junior high school students was M = 8.39 (SD = 4.68) and for vocational high school students was M = 8.89 (SD = 4.56), with the difference remaining statistically non-significant (F = 1.166, p = 0.281).

Overall, these findings suggest that there are no significant differences in the severity of overall PTSD symptoms or in the specific symptom domains between junior high school and vocational high school students. Nonetheless, understanding subtle variations across educational levels remains important for identifying groups that may be at higher risk for post-traumatic stress symptoms.

Table 2. PTSD Symptom Scores and Severity by Educational Level

	SMP		SMK			
PTSD Criteria	**M**	**SD**	**M**	**SD**	**F**	**p**
Total PTSD Score	24.38	13.59	24.94	11.95	0.188	0.664
Intrusion Symptoms	7.08	4.35	7.56	3.94	1.317	0.252
Avoidance Symptoms	2.09	1.84	2.20	1.78	0.362	0.548
Negative Alterations in Cognition and Mood	6.93	5.37	6.84	4.61	0.031	0.860
Hyperarousal Symptoms	8.39	4.60	8.89	4.58	1.166	0.281
Category	SMP (n = 399)	%	SMK (n = 152)	%		
PTSD	83	20.8	19	12.5		
No PTSD	316	79.2	133	87.5		
Severity Level	SMP (n = 83)	%	SMK (n = 19)	%		
Mild	56	67.46	16	84.21		
Moderate	24	28.92	3	15.79		
Severe	3	3.62	0	0.00		

Note: SMP = Junior High School, SMK = Vocational High School

In terms of prevalence, a total of 83 junior high school students (20.8%) were identified as experiencing PTSD, which was higher compared to 19 vocational high school students (12.5%). Conversely, 316 junior high school students (79.2%) and 133 vocational high school students (87.5%) were categorized as not experiencing PTSD. Regarding severity distribution, the majority of junior high school students with PTSD were classified in the mild category (67.46%), followed by the moderate category (28.92%), and a smaller proportion in the severe category (2.62%). Among vocational high school students with PTSD, the majority were also classified in the mild category (84.21%), with the remainder in the moderate category (15.79%), and none falling into the severe category. Overall, these findings indicate that there are no significant differences in PTSD symptom severity or sub-symptom clusters between junior high school and vocational high school students. However, proportionally, the prevalence of PTSD tends to be higher among junior high school students. This suggests that while educational level may not directly influence the intensity of PTSD symptoms, it remains a relevant factor for identifying populations that are more vulnerable to post-traumatic stress disorders.

Prevalence of Prolonged Grief Disorder (PGD) Among Earthquake Survivors in Cianjur

Table 3 presents the statistical analysis of respondents' characteristics in relation to grief symptoms. Based on the data, 6.90% of participants were identified as meeting the criteria for Prolonged Grief Disorder (PGD), while 93.10% did not exhibit symptoms indicative of the disorder. A chi-square (χ^2) test was conducted to examine the associations between several independent variables and the occurrence of PGD.

Table 3. Sociodemographic and Psychopathological Factors Associated with the Risk of Prolonged Grief Disorder (PGD)

Variable	PGD (n = 38)	%	No PGD (n = 513)	%	x^2	df	p-value
Overall	38	6.90	513	93.10			
Educational Level					1.716	1	0.190
Junior High School	31	5.63	368	66.79			
Vocational High School	7	1.27	145	26.32			
Gender					0.608	1	0.435
Male	15	2.72	236	42.83			
Female	23	4.17	277	50.27			
Age at Time of Loss (Years)					2.654	5	0.753
13	0	0.00	20	3.63			
14	17	3.09	186	33.76			
15	11	2.00	146	26.50			
16	3	0.54	39	7.08			
17	6	1.09	108	19.60			
18	1	0.18	14	2.54			
Cause of Death					2.505	1	0.113
Natural	26	4.72	407	73.87			
Unnatural	12	2.18	106	19.24			
Relationship with Deceased					37.802	5	<0.001
Grandparent	13	2.36	309	56.08			
Others	4	0.73	93	16.88			
Parent	12	2.18	36	6.53			
Close Friend	5	0.91	18	3.27			
Sibling	4	0.73	55	9.98			
Friend	0	0.00	2	0.36			
Time Since Death					1.199	3	0.753
1–2 years	6	1.09	97	17.60			
6–12 months	2	0.36	27	4.90			
More than 2 years	27	4.90	367	66.61			
Less than 6 months	3	0.54	22	3.99			
Psychological Support					24.876	4	<0.001
Family	31	5.63	320	58.08			
Psychologist	1	0.18	5	0.91			
Peer	2	0.36	95	17.24			
School Counselor	0	0.00	9	1.63			
No Support Received	20	3.63	68	12.34			

The analysis revealed that educational level ($\chi^2 = 1.716$; $p = 0.190$), gender ($\chi^2 = 0.608$; $p = 0.435$), and age at the time of loss ($\chi^2 = 2.654$; $p = 0.753$) were not statistically associated with the occurrence of PGD. These findings indicate that these demographic factors did not significantly contribute to predicting the risk of developing prolonged grief disorder. Similarly, the cause of death (natural vs. unnatural) was not significantly associated with PGD ($\chi^2 = 2.505$; $p = 0.113$), although there was a preliminary indication that losses due to natural causes were more frequently associated with PGD than losses resulting from unnatural causes. Furthermore, the time elapsed since the death event also showed no significant association with PGD symptoms ($\chi^2 = 1.199$; $p = 0.753$), suggesting that the duration of bereavement alone does not directly influence the emergence of prolonged grief symptoms.

However, two variables demonstrated statistically significant associations with PGD. First, the nature of the relationship with the deceased had a highly significant correlation with PGD occurrence ($\chi^2 = 37.80$; $p < 0.001$). Loss of a parent or grandparent was strongly associated with a higher prevalence of PGD, which is consistent with previous findings indicating that losses involving high emotional closeness increase the risk of complex grief reactions (Shear et al., 2011). Second, psychological support showed a significant association with PGD ($\chi^2 = 24.876$; $p < 0.001$). Respondents who did not receive psychological support from family members, mental health professionals (such as psychologists or school counselors), or peers were more likely to experience PGD. These findings highlight the critical role of psychosocial interventions in facilitating adjustment after loss and underscore the protective function of social support within the grieving process. Overall, these results emphasize the importance of considering relational and psychosocial dimensions in both preventive efforts and intervention strategies aimed at mitigating the risk of prolonged grief disorder, particularly among adolescents who have experienced significant loss.

Table 4 presents the descriptive and inferential analysis used to identify differences in symptoms and severity levels of Prolonged Grief Disorder (PGD) between junior high school and vocational high school students. Overall, the mean PGD score among vocational high school students ($M = 21.691$, $SD = 8.456$) was slightly higher than that of junior high school students ($M = 20.447$, $SD = 8.528$), although this difference was not statistically significant ($F = 2.347$, $p = 0.126$). Among students who met the clinical criteria for PGD, there was no significant difference between the two groups ($F = 0.006$, $p = 0.938$), with nearly identical mean scores. Interestingly, in the group that did not meet the criteria for PGD (No PGD), a significant difference was observed ($F = 7.290$, $p = 0.007$), with vocational high school students showing higher grief symptom scores ($M = 20.938$) compared to junior high school students ($M = 19.003$). This finding suggests that even among adolescents who do not clinically qualify for PGD, vocational high school students may exhibit more pronounced grief symptoms than their junior high school counterparts.

Analysis of specific PGD symptoms–including intense yearning, preoccupation with the deceased, identity disruption, disbelief about the death, emotional numbness, and a sense of meaninglessness–revealed no significant differences between the two educational groups (all p-values > 0.05). Thus, the intensity of specific grief experiences appeared relatively similar between junior high school and vocational high school students. The severity of PGD was categorized into three levels: mild, moderate, and severe. Among junior high school students, a higher proportion were classified in the severe category (38.71%) compared to vocational high school students (28.57%), whereas vocational high school students showed a greater proportion in the moderate category (42.86%). Although inferential testing was not conducted for severity distribution, these patterns suggest that junior high school students may experience a more intense emotional form of grief than vocational high school students.

Overall, these results indicate that educational level does not directly affect the severity of prolonged grief disorder or its specific symptoms. However, the higher grief scores among vocational high school students without clinical PGD and the greater proportion of severe grief cases among junior high school students provide preliminary insights into possible differences in grief vulnerability, potentially influenced by developmental stage and psychosocial environment.

Table 4. Descriptive Analysis of Prolonged Grief Disorder (PGD) Symptoms and Severity by Educational Level

	SMP		SMK			
PGD Criteria	**M**	**SD**	**M**	**SD**	**F**	**p**
Overall PGD Score	20.447	8.528	21.691	8.456	2.347	0.12
PGD	37.452	5.111	37.286	4.957	0.006	0.938
NO PGD	19.003	7.075	20.938	7.846	7.290	0.007
PGD Symptom						
Intense yearning	3.703	1.322	3.717	1.480	0.012	0.913
Preoccupation with the deceased	1.806	1.026	1.921	1.064	1.339	0.248
Identity disruption	2.054	1.206	2.073	1.178	0.026	0.872
Strong disbelief about the death	2.465	1.351	2.500	1.381	0.072	0.789
Avoidance of reminders	1.649	1.033	1.658	1.105	0.009	0.926
Intense emotional pain	2.378	1.249	2.454	1.371	0.379	0.538
Difficulty moving on with life	1.478	0.914	1.599	0.972	1.834	0.176
Emotional numbness	1.602	0.959	1.776	1.135	3.241	0.072
Feeling life is meaningless	1.587	0.976	1.763	1.138	3.244	0.072
Deep loneliness	2.207	1.373	2.243	1.437	0.076	0.783
Severity Level	n	%	n	%		
Mild	9	29.03	2	28.57		
Moderate	10	32.26	3	42.86		
Severe	12	38.71	2	28.57		

Note: SMP = Junior High School, SMK = Vocational High School

The Impact of Post-Traumatic Stress Disorder (PTSD) and Prolonged Grief Disorder (PGD) on the Mental Health of Earthquake Survivors

This section aims to examine the impact of Post-Traumatic Stress Disorder (PTSD) and Prolonged Grief Disorder (PGD) on individuals' mental health. The analysis was conducted using hierarchical linear regression with two models: a baseline model (M_0) without predictors and a second model (M_1) that included PTSD and PGD as predictor variables.

Table 6 presents the results of the analysis. The baseline model (M_0) was unable to explain any variation in mental health outcomes, as indicated by an R value of 0.000, an R^2 value of 0.000, and a Root Mean Square Error (RMSE) of 12.104. After incorporating PTSD and PGD into the model (M_1), the R value increased to 0.236, and the R^2 value rose to 0.056, with an adjusted R^2 of 0.052. This suggests that approximately 5.6% of the variance in mental health could be explained by the combination of these two predictor variables. Additionally, the RMSE decreased to 11.783 in model M, indicating an improvement in the model' s predictive accuracy.

Table 5. Summary of Linear Regression Models Predicting Mental Health

Model	R	R^2	Adjusted R^2	RMSE
M_0 (Baseline)	0.000	0.000	0.000	12.104
M_1 (PTSD, PGD)	0.236	0.056	0.052	11.783

Table 5 presents the ANOVA results for model M_1, indicating that the model is statistically significant ($F(2, 548) = 16.211$, $p < 0.001$). This finding suggests that PTSD and PGD, when considered together, have a significant effect on mental health outcomes.

Table 6 shows the results of the regression coefficient analysis, indicating that PTSD has a significant negative effect on mental health ($B = -0.230$, $p < 0.001$), with a standardized β coefficient of -0.250. This finding suggests that higher levels of PTSD are associated with lower levels of mental health. Conversely, PGD was not found to have a statistically significant effect ($B = 0.064$, $p = 0.312$),

with a standardized β coefficient of 0.046. Therefore, in this model, only PTSD emerged as a significant predictor of mental health, while PGD did not.

Table 6. ANOVA Results for Regression Model (M_1)

Model		Sum of Squares	df	Mean Square	F	p
M_1	Regression	4501.338	2	2250.669	16.211	< .001
	Residual	76079.791	548	138.832		
	Total	80581.129	550			

Note. M_1 includes PTSD, PGD
Note. The intercept model is omitted, as no meaningful information can be shown.

Discussion

The findings of this study indicate that junior high school students exhibit a higher prevalence of PTSD compared to vocational high school students. This discrepancy may be attributed to the psychosocial developmental stage of early adolescence, which is characterized by increased vulnerability to stress and trauma. Adolescents at this stage undergo significant hormonal and emotional changes, potentially affecting their ability to cope with traumatic events. Research by Tamir et al. (2024) demonstrated that the prevalence of PTSD among junior high school students is notably high, reflecting the heightened vulnerability of this age group to trauma. Similarly, a study by Kataoka et al. (2012) found that students with lower educational levels are more likely to possess limited coping mechanisms, thereby increasing their risk for PTSD. Pinto et al. (2015) also highlighted that limited social support among adolescents can exacerbate PTSD symptoms. Furthermore, Bartlett & Smith (2019) emphasized that education plays a crucial role in the development of effective coping strategies against trauma. Finally, Williamson et al. (2021) stressed the importance of parental support in helping adolescents cope with traumatic experiences, which may be more accessible to vocational high school students compared to their junior high counterparts. In the context of developmental psychology, early adolescence is marked by a neurobiological imbalance between the emotionally reactive limbic system and the underdeveloped prefrontal cortex responsible for executive functioning. This imbalance heightens emotional reactivity and reduces the capacity for impulse control and rational decision-making during stress (Blakemore, 2022). Consequently, adolescents in this stage are more prone to emotional dysregulation and maladaptive coping when faced with trauma, which explains the higher PTSD prevalence among junior high school students in this study.

The study also revealed that female students exhibit a higher prevalence of PTSD than their male counterparts. This difference can be explained by biological, psychological, and social factors. Rønning et al. (2025) indicated that females are more likely to experience intense PTSD symptoms following trauma. Lehner et al. (2021) found that hormonal differences, such as estrogen levels, may influence stress responses in females. Additionally, Gomis-Pomares et al. (2025) noted that females are more likely to employ emotion-focused coping strategies, which can prolong PTSD symptoms. Gomis-Pomares et al. (2025) further argued that social norms encouraging emotional expression among females may contribute to their increased vulnerability to PTSD. Females are also more likely to internalize distress, which can manifest as anxiety and depressive symptoms that overlap with PTSD criteria. These patterns underscore the need for gender-sensitive trauma interventions that address both biological predispositions and sociocultural expectations.

Although age did not show a significant association with PTSD prevalence in this study, data indicated that students around 14 years old exhibited the highest rates of PTSD. Adolescence is a sensitive developmental period during which individuals are particularly susceptible to intense emotional and social experiences. Doba et al. (2022) suggested that adolescents are more vulnerable to trauma due to their limited coping and emotional regulation skills. Doba et al. (2022) found that trauma experienced at a younger age increases the likelihood of developing PTSD compared to trauma occurring later in life. Cruz et al. (2022) emphasized the importance of developmental factors in

understanding adolescents' responses to trauma. Additionally, McKay et al. (2021) showed that traumatic experiences at a young age could have long-term mental health consequences. Comtesse et al. (2021) also highlighted the role of parental support in mitigating PTSD risk among traumatized adolescents. This aligns with the developmental traumatology framework, which posits that early trauma exposure disrupts the maturation of brain regions involved in stress regulation and cognitive control (De Bellis, 2005).

Regarding traumatic experiences, the study found that direct exposure to traumatic events did not significantly correlate with PTSD, while exposure to trauma experienced by close others had a stronger impact. Claxton et al. (2021) revealed that vicarious trauma, such as witnessing or hearing about others' traumatic experiences, can elicit PTSD symptoms of similar intensity to those experienced through direct trauma. This finding suggests that social factors and interpersonal relationships play crucial roles in vulnerability to PTSD, particularly when individuals feel powerless to support or protect loved ones. Neuner et al. (2015) noted that strong social support can help individuals cope with trauma. Gomis-Pomares et al. (2025) also emphasized that effective coping strategies can reduce PTSD risk. Finally, Cruz et al. (2022) underscored the importance of early interventions to prevent PTSD development among individuals exposed to vicarious trauma. Adolescents who identify strongly with peers or family members affected by trauma may experience empathetic distress and internalize their suffering, which is known as secondary traumatic stress (Figley, 1995).

The study also revealed that the cause of death of a loved one did not significantly affect PTSD prevalence. Nevertheless, findings suggested that deaths due to natural causes might have a greater psychological impact than deaths resulting from accidents or violence, contrary to the general assumption that sudden deaths are more traumatic. McKay et al. (2021) highlighted that the type of loss event can influence emotional impact depending on the relationship quality and the individual's emotional preparedness. Mukherjee et al. (2024) suggested that slow losses, such as those due to chronic illness, may exert a heavier psychological burden due to prolonged stress during the caregiving period. Stroebe et al. (2017) discussed how anticipatory grief can extend mourning and increase PTSD risk. Worden (2018) found that children and adolescents who experience gradual deaths often struggle with confusion and prolonged psychological distress. Comtesse et al. (2021) stressed that uncertainty and helplessness during gradual loss processes may exacerbate grief reactions. Thus, understanding the context of the loss and relational dynamics is crucial in assessing PTSD impact. Clinically, adolescents who experience prolonged exposure to a terminal illness in loved ones may suffer from cumulative stress and ambiguous loss, a condition where grief is experienced in the absence of clear closure (Boss, 2006).

The study also found that only 6.90% of respondents met criteria for Prolonged Grief Disorder (PGD), while the majority (93.10%) did not. This aligns with findings by Bonanno & Malgaroli (2020), who stated that most individuals experience emotional recovery following loss, with only a minority developing PGD. Stroebe et al. (2017) also reported that most individuals adapt well after a loss, with PGD being relatively rare despite grief being a natural response. Prigerson et al. (2021) emphasized that although PGD can significantly impair quality of life, it affects only a small portion of bereaved individuals, particularly those who experience profound loss without adequate support. Shear et al. (2011) found that PGD is more likely among those who had particularly close emotional ties with the deceased. Persistent grief symptoms are often linked to difficulties in accepting the reality of the loss (Sugara et al., 2021). According to the Dual Process Model (Stroebe & Schut, 2010), PGD results from an imbalance between loss-oriented and restoration-oriented coping, especially when individuals are unable to disengage from the emotional pain of the loss.

Consistent with these findings, the study indicated that the loss of a parent or grandparent was associated with a higher prevalence of PGD. Shear et al. (2011) highlighted the role of emotional closeness in determining PGD severity, which tends to be greater among those who lost a close family member. Mikulincer & Shaver (2022) similarly found that the loss of a close figure, such as a parent or spouse, is more likely to result in prolonged grief due to its deep emotional impact. Bonanno et al.

(2020) noted that the loss of protective or life-companion figures increases vulnerability to PGD. Cacciatore et al. (2021) stated that the loss of a parent or close figure increases the risk of prolonged grief, especially in the absence of strong social support. Stroebe et al. (2017) also demonstrated that losing a parent or spouse often leads to more intense grief, frequently necessitating psychological intervention. Moreover, the findings showed that psychological support plays a crucial role in reducing PGD risk, particularly among those lacking familial, peer, or professional support. Boelen & Smid (2017) argued that strong social support helps individuals adapt to bereavement and prevents prolonged grief. Stroebe et al. (2017) similarly indicated that a robust support network facilitates recovery and reduces PGD severity. Diaz et al. (2021) highlighted the importance of professional support for individuals struggling with adaptation to loss. Bonanno et al. (2020) also found that individuals receiving psychological assistance tend to recover faster and avoid developing PGD. Prigerson et al. (2021) emphasized the role of close friends and family support in mitigating PGD symptoms and accelerating bereavement recovery. From a clinical standpoint, group-based grief counseling and culturally adapted rituals may provide adolescents with a sense of belonging and meaning, buffering the isolating effects of grief (Neimeyer, 2019).

The study further revealed that demographic variables such as gender, age, and education level were not significantly associated with PGD prevalence. Sirrine et al. (2023) suggested that individuals with higher education levels are often better equipped to manage grief and stress. However, McNally (2011) noted that gender differences in grief responses exist, with females tending to express emotions more openly, potentially mitigating PGD severity. Boelen & Smid (2017) found that age may influence grief responses, with older individuals more likely to accept death as a natural part of life, thereby reducing PGD symptoms. Nevertheless, Stroebe & Schut (2017) observed that not all older individuals recover quickly, as some still face significant difficulties in grieving. Regarding cause of death, Hardt (2022) suggested that deaths due to illness or old age are often perceived as more natural and less likely to lead to PGD compared to sudden or tragic deaths such as suicide or accidents. These observations underscore the complex interplay of cultural narratives, emotional regulation capacity, and developmental maturity in shaping the grief trajectory.

Finally, the study showed that the time elapsed since death did not significantly influence PGD development. Diaz et al. (2021) stated that PGD symptoms can persist over time, especially when individuals lack adequate psychological support. Shear et al. (2011) similarly noted that PGD sufferers might not experience symptom improvement even years after the loss. Bonanno et al. (2024) suggested that while time facilitates the grieving process, factors such as social support and acceptance of the loss play a more critical role. Prigerson et al. (2021) reported that individuals with PGD tend to exhibit persistent symptoms over extended periods. Stroebe et al. (2007) highlighted that external factors such as social support and psychological interventions have a greater influence on recovery from PGD than the mere passage of time.

The study also found that PTSD has a significant negative impact on individuals' mental health. This finding is consistent with numerous previous studies emphasizing PTSD as a complex disorder that can result in emotional dysfunction, cognitive impairment, and severe psychological burdens (Jellestad et al., 2021). Individuals with PTSD often experience symptoms such as traumatic flashbacks, hypervigilance, sleep disturbances, and difficulties in emotional regulation, all of which directly compromise mental well-being. Psychologically, PTSD leads to increased anxiety, depression, and social withdrawal, stemming from disruptions in emotional regulation and stress response processes (Jellestad et al., 2021). Emphasized that unresolved trauma can maintain individuals in a state of hyperarousal, undermining their ability to lead peaceful and balanced lives.

From a neurocognitive perspective, PTSD is associated with brain dysfunction, particularly in the amygdala, prefrontal cortex, and hippocampus. The amygdala becomes hyperactive in threat processing, while the prefrontal cortex–responsible for decision-making and emotional regulation–becomes hypoactive. This imbalance results in emotional dysregulation and cognitive distortions such as excessive guilt or persistent negative thoughts (Deperrois & Combalbert, 2022). Furthermore, PTSD frequently co-occurs with other mental health disorders, including major depression,

generalized anxiety, and substance use disorders. A meta-analysis by Eisma et al. (2025) indicated that such comorbidities exacerbate symptom severity and prolong recovery, creating layered psychological burdens that further deteriorate mental health. Another exacerbating mechanism is impaired cognitive processes such as concentration and decision-making, which hinder social and occupational functioning. Punski-Hoogervorst et al. (2023) demonstrated that individuals with PTSD exhibit significant declines in cognitive performance, particularly in tasks requiring sustained attention and working memory. Considering the various dimensions of emotional dysfunction, neurocognitive impairment, and psychological comorbidities, it can be concluded that PTSD substantially contributes to the decline in mental health. Therefore, early detection, evidence-based psychotherapeutic interventions, and robust social support are critical in preventing the long-term consequences of PTSD on mental health. In post-disaster counseling practice, integrative therapeutic models such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Narrative Exposure Therapy, and Ego State Therapy should be tailored to adolescents' developmental needs and cultural contexts to facilitate recovery and resilience.

Implication

The present study demonstrates that PTSD serves as a significant predictor of diminished mental health among earthquake survivors, whereas PGD does not exhibit a statistically significant effect. These findings underscore the critical need for evidence-based psychological interventions specifically designed to address post-traumatic disorders. Although PGD was not identified as a primary predictor of mental health deterioration, it remains essential to consider the influence of social support and local cultural factors in facilitating the recovery process. In this regard, reinforcing community-based approaches and enhancing social engagement are imperative for promoting adaptive psychological functioning in post-disaster contexts. The treatment of PTSD and PGD should incorporate evidence-supported counseling modalities such as Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Emotional Freedom Technique (Azizah et al., 2024), and Narrative Exposure Therapy (Hunafa et al., 2024), each of which has demonstrated efficacy in mitigating trauma-related symptoms. Furthermore, ego state therapy represents a promising alternative, particularly for individuals presenting with complex trauma histories (Sugara et al., 2021; Asyraf et al., 2024). This therapeutic approach emphasizes the integration of dissociated self-states resulting from traumatic experiences, thereby fostering emotional regulation and facilitating the management of trauma-related psychological responses. Taken together, the findings affirm that post-disaster trauma interventions must adopt a multimodal and contextually sensitive framework, integrating diverse therapeutic approaches tailored to the specific psychological needs of both individuals and communities.

Conclusion

This study highlights that 18.5% of adolescents affected by the Cianjur earthquake met the diagnostic criteria for Post-Traumatic Stress Disorder (PTSD), while 6.9% experienced Prolonged Grief Disorder (PGD). Among these, PTSD emerged as a statistically significant predictor of diminished mental health ($\beta = -0.250$; $p < 0.001$), whereas PGD showed no significant effect ($p = 0.312$). The prevalence of PTSD was notably higher among junior high school students (20.8%) and female adolescents (24.3%), indicating specific subgroups at greater psychological risk. Although PGD was less prevalent, it was significantly associated with the loss of close family members and the absence of psychological support. These findings underscore the need for targeted trauma-informed interventions, particularly focusing on PTSD among early adolescents. Integrating early detection mechanisms and culturally sensitive counseling models such as Ego State Therapy and TF-CBT can be instrumental in mitigating the long-term psychological impact of natural disasters on adolescents. Therefore, future mental health programs must be empirically grounded, demographically targeted, and contextually relevant to foster effective post-disaster recovery.

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References

Alves, A. C., Leitão, M., Sani, A. I., & Moreira, D. (2024). Impact of sexual abuse on post-traumatic stress disorder in children and adolescents: A systematic review. *Social Sciences, 13*(4), 189. https://doi.org/10.3390/socsci13040189

Asyraf, M. Q., Isti'adah, F. N. L., & Sugara, G. S. (2024). Ego state counseling to increase gender awareness in LGBT adolescents. *Jurnal Konseling dan Pendidikan*, *12*(4), 165-185. https://doi.org/10.29210/1128600

Azizah, M. A. N., Sugara, G. S., & Rahimsyah, A. P. (2024). Counseling for Victims of Dating Violence with Emotional Freedom Technique: Single Case Research Design. *Jurnal Konseling dan Pendidikan*, *12*(4), 68-84. https://doi.org/10.29210/1127100

Badan Nasional Penanggulangan Bencana. (2022, Desember 4). *Update Korban Meninggal Dunia Pasca Gempabumi Cianjur 321 Orang*. BNPB. https://www.bnpb.go.id/berita/-update-korban-meninggal-dunia-pasca-gempabumi-cianjur-321-orang-

Barboza, J., Seedall, R., Hooghe, A., Kaplow, J., & Bradshaw, S. (2025). Forming our grief rhythm: The relational window of tolerance for bereaved parents. *Family Process*, *64*(1), e13048. https://doi.org/10.1111/famp.13048

Bartlett, J. D., & Smith, S. (2019). The role of early care and education in addressing early childhood trauma. *American journal of community psychology*, *64*(3-4), 359-372. https://doi.org/10.1002/ajcp.12380

Boelen, P. A., & Smid, G. E. (2017). Disturbed grief: Prolonged grief disorder and persistent complex bereavement disorder. *BMJ, 357*, j2016. https://doi.org/10.1136/bmj.j2016

Bonanno, G. A., & Malgaroli, M. (2020). Trajectories of grief: Comparing symptoms from the DSM-5 and ICD-11 diagnoses. *Depression and Anxiety, 36*(6), 564–572. https://doi.org/10.1002/da.22902

Bonanno, G. A., Chen, S., Bagrodia, R., & Galatzer-Levy, I. R. (2024). Resilience and disaster: flexible adaptation in the face of uncertain threat. *Annual review of psychology*, *75*(1), 573-599. https://doi.org/10.1146/annurev-psych-011123-024224

Cacciatore, J., Thieleman, K., Fretts, R., & Jackson, L. B. (2021). What is good grief support? Exploring the actors and actions in social support after traumatic grief. *PLOS ONE, 16*(5), e0252324. https://doi.org/10.1371/journal.pone.0252324

Cacciatore, J., Thieleman, K., Fretts, R., & Jackson, L. B. (2021). What is good grief support? Exploring the actors and actions in social support after traumatic grief. *PloS one*, *16*(5), e0252324. https://doi.org/10.1371/journal.pone.0252324

Claxton, J., Vibhakar, V., Allen, L., Finn, J., Gee, B., & Meiser-Stedman, R. (2021). Risk factors for depression in trauma-exposed children and adolescents: A systematic review and meta-analysis. *Journal of affective disorders reports*, *5*, 100150. https://doi.org/10.1016/j.jadr.2021.100150

Comtesse, H., Ertl, V., Hengst, S. M., Rosner, R., & Smid, G. E. (2021). Ecological grief as a response to environmental change: a mental health risk or functional response?. *International journal of environmental research and public health*, *18*(2), 734. https://doi.org/10.3390/ijerph18020734

Cruz, D., Lichten, M., Berg, K., & George, P. (2022). Developmental trauma: Conceptual framework, associated risks and comorbidities, and evaluation and treatment. *Frontiers in psychiatry*, *13*, 800687. https://doi.org/10.3389/fpsyt.2022.800687

Cunningham, J., Shevlin, M., Cerda, C., & McElroy, E. (2025). ICD-11 Prolonged Grief Disorder, Physical Health, and Somatic Problems: A Systematic Review. *Clinical Psychology in Europe*, *7*(1), e14351. https://doi.org/10.32872/cpe.14351

Deperrois, R., & Combalbert, N. (2022). Links between cognitive distortions and cognitive emotion regulation strategies in non-clinical young adulthood. *Cognitive Processing*, *23*(1), 69-77. https://doi.org/10.1007/s10339-021-01057-y

Diaz, K., Staffileno, B. A., & Hamilton, R. (2021). Nursing student experiences in turmoil: A year of the pandemic and social strife during final clinical rotations. *Journal of Professional Nursing*, *37*(5), 978-984. https://doi.org/10.1016/j.profnurs.2021.07.019

Doba, K., Saloppé, X., Choukri, F., & Nandrino, J. L. (2022). Childhood trauma and posttraumatic stress symptoms in adolescents and young adults: The mediating role of mentalizing and emotion regulation strategies. *Child Abuse & Neglect*, *132*, 105815. https://doi.org/10.1016/j.chiabu.2022.105815

Eisma, M. C., Janshen, A., & de Haan, N. (2025). Rumination, Hopelessness, Behavioural Avoidance and Psychopathology Symptoms After Bereavement: Serial Mediation Analyses. *Clinical Psychology & Psychotherapy, 32*(2), e70053. https://doi.org/10.1002/cpp.70053

Fatimah, S. D. D., Isti'adah, F. N., & Sulistiana, D. (2025). Adaptasi Alat Ukur Mental Health Continuum-Short Form (MHC-SF) Untuk Siswa SMA Sederajat. *Jurnal Bimbingan Konseling dan Psikologi, 5*(1), 11-26. https://doi.org/10.56185/jubikops.v5i1.904

Glawing, C., Karlsson, I., Kylin, C., & Nilsson, J. (2024). Work-related stress, stress reactions and coping strategies in ambulance nurses: A qualitative interview study. *Journal of advanced nursing*, *80*(2), 538-549. https://doi.org/10.1111/jan.15819

Gomis-Pomares, A., Lacomba-Trejo, L., & Villanueva, L. (2025). Using Avoidant Emotion-Focused Coping and being a Woman with Adverse Childhood Experiences as the Worst-Case Scenario for Internalising Problems. *Journal of Child & Adolescent Trauma*, 1-11. https://doi.org/10.1007/s40653-025-00688-z

Guldin, M. B., & Leget, C. (2024). The integrated process model of loss and grief-An interprofessional understanding. *Death Studies*, *48*(7), 738-752. https://doi.org/10.1080/07481187.2023.2272960

Hardt, M. M., Williams, J. L., & Jobe-Shields, L. (2022). The role of experiential avoidance in the relationship between traumatic distress and yearning in sudden and unexpected bereavement. *Journal of Clinical Psychology*, *78*(4), 559-569. https://doi.org/10.1002/jclp.23261

Herzog, P., Barth, C., Rief, W., Brakemeier, E. L., & Kube, T. (2022). How expectations shape the formation of intrusive memories: An experimental study using the trauma film paradigm. *Cognitive Therapy and Research*, *46*(4), 809-826. https://doi.org/10.1007/s10608-022-10290-4

Howie, J. H. (2022). *Determinants of Perceived Social Support in Individuals with Serious Mental Illness: A Secondary Analysis*. University of Missouri-Kansas City.

Hunafa, S., Sugara, G. S., & Muhajirin, M. (2024). Enhancing resilience in sexual harassment victims using narrative exposure therapy: a single case research. *Jurnal Konseling dan Pendidikan*, *12*(3), 139-155. https://doi.org/10.29210/1121000

Jellestad, L., Vital, N. A., Malamud, J., Taeymans, J., & Mueller-Pfeiffer, C. (2021). Functional impairment in posttraumatic stress disorder: A systematic review and meta-analysis. *Journal of psychiatric research*, *136*, 14-22. https://doi.org/10.1016/j.jpsychires.2021.01.039

Johnson, K. F., Ieva, K., & Byrd, J. (2022). Introduction to the Special Issue on School Counselors Addressing Education, Health, Wellness, and Trauma Disparities. *Professional School Counseling, 26*(1b). https://doi.org/10.1177/2156759X221105451

Kataoka, S., Langley, A., Wong, M., Baweja, S., & Stein, B. (2012). Responding to students with PTSD in schools. *Child and adolescent psychiatric clinics of North America*, *21*(1), 119. https://doi.org/10.1016/j.chc.2011.08.009

Keyes, C. L. (2002). From languishing to flourishing in life. *Journal of Health and Social Research*, *43*, 207-222. https://doi.org/10.2307/3090197

Lehner, M., Skórzewska, A., & Wisłowska-Stanek, A. (2021). Sex-related predisposition to post-traumatic stress disorder development–the role of neuropeptides. *International journal of environmental research and public health*, *19*(1), 314. https://doi.org/10.3390/ijerph19010314

Makwana, N. (2019). Disaster and Its Impact on Mental Health: A Narrative Review. *Journal of Family Medicine and Primary Care, 8*(10), 3090. https://doi.org/10.4103/jfmpc.jfmpc_893_19

McKay, M. T., Cannon, M., Chambers, D., Conroy, R. M., Coughlan, H., Dodd, P., ... & Clarke, M. C. (2021). Childhood trauma and adult mental disorder: A systematic review and meta-analysis of longitudinal cohort studies. *Acta Psychiatrica Scandinavica, 143*(3), 189-205. https://doi.org/10.1111/acps.13268

Merino, M., Tornero-Aguilera, J. F., Rubio-Zarapuz, A., Villanueva-Tobaldo, C. V., Martín-Rodríguez, A., & Clemente-Suárez, V. J. (2024). Body Perceptions and Psychological Well-Being: A Review of the Impact of Social Media and Physical Measurements on Self-Esteem and Mental Health with a Focus on Body Image Satisfaction and Its Relationship with Cultural and Gender Factors. *Healthcare*, *12*(14), 1396. https://doi.org/10.3390/healthcare12141396

Mikulincer, M., & Shaver, P. R. (2022). An attachment perspective on loss and grief. *Current opinion in psychology*, *45*, 101283. https://doi.org/10.1016/j.copsyc.2021.11.003

Mortazavi, S. S., Assari, S., Alimohamadi, A., Rafiee, M., & Shati, M. (2020). Fear, loss, social isolation, and incomplete grief due to COVID-19: a recipe for a psychiatric pandemic. *Basic and clinical neuroscience*, *11*(2), 225. https://doi.org/10.32598/bcn.11.covid19.2549.1

Muhtadi, H. F., & Ahman, A. (2024). Adaptation of the PG-13-R Instrument to Measure Prolonged Grief Disorder in Adolescents. *Buletin Konseling Inovatif*, *4*(2), 85-90. https://doi.org/10.17977/um059v4i22024p85-90

Mukherjee, U., Sehar, U., Brownell, M., & Reddy, P. H. (2024). Mechanisms, consequences and role of interventions for sleep deprivation: Focus on mild cognitive impairment and Alzheimer's disease in elderly. *Ageing Research Reviews*, *100*, 102457. https://doi.org/10.1016/j.arr.2024.102457

Nawangsih, E. (2014). Play Therapy Untuk Anak-Anak Korban Bencana Alam yang Mengalami Trauma (Post Traumatic Stress Disorder/PTSD). *Psympathic: Jurnal Ilmiah Psikologi, 1(2)*, 164-178. https://doi.org/10.15575/psy.v1i2.475

Neuner, F., Schauer, M., Karunakara, U., Klaschik, C., Robert, C., & Elbert, T. (2015). Psychological trauma and evidence for enhanced vulnerability for posttraumatic stress disorder through previous trauma among West Nile refugees. BMC Psychiatry, 4, 34. https://doi.org/10.1186/1471-244X-4-34

Pinquart, M. (2020). Posttraumatic stress symptoms and disorders in children and adolescents with chronic physical illnesses: a meta-analysis. *Journal of Child & Adolescent Trauma*, *13*(1), 1-10. https://doi.org/10.1007/s40653-018-0222-z

Pinto, R. J., Morgado, D., Reis, S., Monteiro, R., Levendosky, A., & Jongenelen, I. (2017). When social support is not enough: Trauma and PTSD symptoms in a risk-sample of adolescents. *Child abuse & neglect*, *72*, 110-119. https://doi.org/10.1016/j.chiabu.2017.07.017

Prigerson, H. G., Boelen, P. A., Xu, J., Smith, K. V., & Maciejewski, P. K. (2021). Validation of the new DSM-5-TR criteria for prolonged grief disorder and the PG-13-Revised (PG-13-R) scale. *World Psychiatry, 20*(1), 96–106. https://doi.org/10.1002/wps.20823

Punski-Hoogervorst, J. L., Engel-Yeger, B., & Avital, A. (2023). Attention deficits as a key player in the symptomatology of posttraumatic stress disorder: A review. *Journal of neuroscience research, 101*(7), 1068-1085. https://doi.org/10.1002/jnr.25177

Rachma, H., & Febrianti, T. (2021). Social Determinants of Risk Post Traumatic Stress Disorder (PTSD) after The Sunda Strait Tsunami Disaster. *Jurnal Kesehatan*, *12*(2), 280–286. https://doi.org/10.26630/jk.v12i2.2148

Rahma, A. (2018). Implementasi program pengurangan risiko bencana (PRB) melalui pendidikan formal. *Jurnal Varidika*, *30*(1), 1-11. https://doi.org/10.23917/varidika.v30i1.6537

Rahmadian, A. A., LN, S., Rusmana, N., & Downs, L. L. (2016). Prevalensi PTSD dan Karakteristik Gejala Stres Pascatrauma pada Anak dan Remaja Korban Bencana Alam. *Edusentris, 3*(1), 1-17

Reed, G. M., First, M. B., Billieux, J., Cloitre, M., Briken, P., Achab, S., ... & Bryant, R. A. (2022). Emerging experience with selected new categories in the ICD-11: Complex PTSD, prolonged grief disorder, gaming disorder, and compulsive sexual behaviour disorder. *World Psychiatry, 21*(2), 189-213. http://dx.doi.org/10.1002/wps.20960

Regel, S., & Joseph, S. (2017). Post-traumatic stress. Oxford University Press.

Rønning, L., Shor, R., Anyan, F., Hjemdal, O., Jakob Bøe, H., Dempsey, C. L., & Espetvedt Nordstrand, A. (2025). The prevalence of sexual harassment and bullying among Norwegian Afghanistan veterans: does workplace harassment disproportionately impact the mental health and life satisfaction of female soldiers?. *Journal of interpersonal violence*, *40*(1-2), 465-488. https://doi.org/10.1177/08862605241248432

Salma, S., & Hidayat, R. (2016). Pengembangan Instrumen Asesmen untuk Mendeteksi Pengalaman Traumatis Penyintas Erupsi Gunung Berapi. *Jurnal Psikologi*, *15*(1), 1-10. https://doi.org/10.14710/jpu.15.1.1-10

Shear, M. K., Simon, N., Wall, M., Zisook, S., Neimeyer, R., Duan, N., ... & Keshaviah, A. (2011). Complicated grief and related bereavement issues for DSM-5. Depression and Anxiety, 28(2), 103–117. https://doi.org/10.1002/da.20780

Sirrine, E. H., Kliner, O., & Gollery, T. J. (2023). College student experiences of grief and loss amid the COVID-19 global pandemic. *OMEGA-Journal of Death and Dying*, *87*(3), 745-764. https://doi.org/10.1177/00302228211027461

Smith, K. V., Wild, J., & Ehlers, A. (2024). From loss to disorder: The influence of maladaptive coping on prolonged grief. *Psychiatry research*, *339*, 116060. https://doi.org/10.1016/j.psychres.2024.116060

Stroebe, M., Schut, H., & Stroebe, W. (2017). Attachment in coping with bereavement: A theoretical integration. *Review of general psychology*, *9*(1), 48-66. https://doi.org/10.1037/1089-2680.9.1.48

Sugara, G. S. (2017). Konseling Traumatik Menggunakan Ego State Therapy (Traumatic Counseling Using Ego State Therapy). PROCEEDING IAIN Batusangkar, 1(1), 160-170.

Sugara, G. S., Yulianingsih, Y., Isti' adah, F. N., Adiputra, S., Muhajirin, M., Fadli, R. P., & Ifdil, I. (2021). Ego state therapy for the treatment of grief and loss after death. *Addictive Disorders & Their Treatment*, *20*(3), 151-158. https://doi.org/10.1097/ADT.0000000000000215

Sugara, G. S., Muhajirin, M., & Rahimsyah, A.P. (2024). *Manual adaptasi PCL-5 Indonesia version*. [Manual]. Department of Guidance and Counseling. Universitas Muhammadiyah Tasikmalaya

Sugara, G. S., Masfufah, D. D., Arumsari, C., Muhajirin, M., & Rahimsyah, A. P. (2025). Effect of Dialectical Behavior Therapy on Psychological Well-Being with Adolescent Body Image Dissatisfaction. *Journal of Contemporary Psychotherapy*, 1-11. https://doi.org/10.1007/s10879-025-09673-x

Tamir, T. T., Yimer, B., Gezahgn, S. A., Mekonnen, F. A., Teshome, D. F., & Angaw, D. A. (2024). Prevalence and associated factors of post-traumatic stress disorder in pediatric populations in Africa: a systematic review and meta-analysis. *BMC psychiatry*, *24*(1), 643. https://doi.org/10.1186/s12888-024-06106-2

Weathers, F.W., Litz, B.T., Keane, T.M., Palmieri, P.A., Marx, B.P., & Schnurr, P.P. (2013). The PTSD Checklist for DSM-5 (PCL-5). Scale available from the National Center for PTSD at www.ptsd.va.gov.

Williamson, V., Creswell, C., Butler, I., Christie, H., & Halligan, S. L. (2019). Parental experiences of supporting children with clinically significant post-traumatic distress: A qualitative study of families accessing psychological services. *Journal of Child & Adolescent Trauma*, *12*, 61-72. https://doi.org/10.1007/s40653-017-0158-8

Worden, J. W. (2018). *Grief counseling and grief therapy: A handbook for the mental health practitioner*. springer publishing Company.