



Coping Strategies and Resilience as Predictors of Post Traumatic Growth in Youth with Post Traumatic Stress Disorder: A Cross-Sectional Study from Kashmir Valley in North India

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KEYWORDS

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ABSTRACT:

Introduction: Traumatic events can cause stress, which can have a wide range of psychological, emotional, and physical effects. PTSD is a mental health disorder that arises from witnessing or experiencing traumatic event. Any person, regardless of age, ethnicity, nationality, or culture, can develop PTSD. Adolescents between the ages of 13 and 18 have an 8% lifetime prevalence of PTSD. One in eleven persons is predicted to receive a PTSD diagnosis at some point in their lives. PTSD affects women twice as frequently as it does men. However various psychological factors such as coping and resilience can promote to positive growth after experiencing the trauma.

Objectives: The objective of the study is to understand and explore Coping Strategies and Resilience, as predictors of Post Traumatic Growth in the youth of Kashmir with PTSD.

Methods: A cross-sectional study, and a sample of 100 participants (male=50; female=50) diagnosed with PTSD by using a purposive sampling method. All the participants were screened on the basis of inclusion and exclusion criteria. Brief cope scale, Post-traumatic Growth Inventory, PCL-5, and The Resiliency Scale were used in this study.

Results: The study revealed significant Gender difference in emotional focused coping style, resilience and post-traumatic growth among youth with PTSD. Multiple regression analysis revealed that 16 percent of contribution in post-traumatic growth can be attributed to predictors i.e. is coping and resilience. The resilience (Beta =0.30, p<0.01), emerged as a only significant predictor and have positive impact on post traumatic growth among youth with PTSD

Conclusions: The study aims to explore and understand coping strategies resilience and PTG and impact of coping and resilience on PTG among Kashmiri youth with PTSD. It was concluded that gender differences influences significantly in emotional focused coping style, resilience and post traumatic growth. The resilience has shown strong positive impact on post traumatic growth and promoting resilience could increase the positive growth after trauma.

Introduction

People encounter specific traumatic stresses under a variety of circumstances or settings. Traumatic stress is a response to specific circumstances in one's life. Certain types of traumatic stress, such as violent crimes,

the death of a close relative, and atrocities, are not easily changed or eliminated once they have become ingrained in a person's behaviour. Traumatic stress is generally considered undesirable to growth; following exposure to traumatic events, individuals may develop



posttraumatic stress disorder (PTSD), a chronic impairment disorder. Posttraumatic stress disorder is linked to significant psychiatric morbidity. Psychological factors such as coping, resilience and posttraumatic growth are thought to be more significant in the context of analysing and exploring the youth of Kashmir with PTSD. In terms of coping mechanisms and trauma relation to traumatic life experiences. The literature has a remarkable coherence in most cases, despite the area's breadth and the complexity of the coping process. This coherence is founded on two ideas—approach and avoidance—that are essential to comprehending trauma-related coping. The lack the experience, coping and understanding necessary to deal with these stressors, children and adolescents are among those who are most susceptible to mental health issues following the traumatic event. Studies have also suggested that emotional expression, acceptance, and cognitive reframing could lessen the psychological effects of a trauma on youth (Pfefferbaum et al, 2015, Gil-Rivas, 2001) On the other hand, social disengagement, blame and anger, and avoidant coping mechanisms have all been linked to increased rates of depression and symptoms of post-traumatic stress disorder in youth. (An et al, 2013, La Greca et al, 2013) presumably "because trying to ignore a problem and denying its importance could result in more frequent and bothersome memories of the trauma. (Tiet et al., 2006). Further It has been unclear how active coping techniques and PTSD are related. (Alim et al., 2008; Gil, 2005; Najdowski & Ullman, 2009; Wright, Crawford, & Sebastian, 2007). Almqvist and Hwang (1999) investigated the range of emotion- and problem-focused coping strategies that the parents and children of Iranian refugees utilised while residing in Sweden. Children and parents employed diverse coping mechanisms to address various issues for example children primarily described emotion-focused coping, like daydreaming and positive thinking, while parents typically described problem-focused coping, like moving to a better area.

Resilience is another factor closely associated with traumatic event or experience. A ability to flourish in the face of difficulty is known as resilience. According to Bonanno (2004) resilience lacks a consensus definition and is interpreted differently by different people. as a characteristic where people who have

experienced trauma feel mild, transient distress (Luthar, Cicchetti, & Becker, 2000; Meredith, Sherbourne, & Gaillet, 2011). According to Meredith et al., (2011) Being a dynamic process, resilience can be shaped over time and allows one to experience stressful situations. High resilience is essential for preventing negative consequences like posttraumatic stress disorder (PTSD) and number of cross-sectional studies have demonstrated that after experiencing a traumatic event, resilient people are less likely to experience symptoms of PTSD (Lee, Ahn, Jeong, Chae, & Choi, 2014; Tugade & Fredrickson, 2004; Wrenn et al., 2011). Examining resilience as a predictor in the emergence of PTSD symptoms following trauma exposure is made easier by longitudinal designs. Low resilience measured at either 1-2 weeks or 5-7 weeks post-trauma predicted increased PTSD symptom severity at 4-6 weeks and 3-months post-trauma, according to one of the few previous studies to prospectively measure resilience and PTSD (Daniels et al., 2012). However Contrary to these results, low resilience was not predictive of increased PTSD at 3-months post-trauma in another study (Powers et al., 2014). According to (Reich, Zautra, & Hall (2010) when faced with adversity, resilience has been linked to other protective factors, especially with coping skill. investigated the idea that resilience is a product of numerous diverse factors in addition to a small number of dominant ones. According to Bonanno et al. (2011). those with high resilience levels have a great potential for development. It has been observed that people who are resilient use more active coping mechanisms (Feder, Nestler, & Charney, 2009; Li & Nishikawa, 2012) and social support-seeking behaviours (Wu et al., 2013). Furthermore, whereas coping strategies can have either positive or negative outcomes, resilience is a collection of protective factors (such as strong bonds with family and the community, an upbeat outlook, and embracing challenges) that enable a person to respond positively to unfavorable events. (Connor & Davidson, 2003; Meredith et al., 2011). Both resilience and Coping influences post traumatic growth among those youth who developed post traumatic disorder by experiencing a stressor or traumatic event. According to Tedeschi & Calhoun, (2004) positive changes that trauma survivors go through during the post trauma adaptation phase are referred to as posttraumatic growth. Studies found that



reduced levels of psychological issues and the intensity of PTSD symptoms are associated with higher growth experiences. (Frazier, Conlon, & Glaser, 2001; Frazier et al., 2009; McMillen, \Smith, & Fisher, 1997; Park, Cohen, & Murch, 1996). According to Park & Fenster (2004) following trauma, improved adjustment and a positive mental state are associated with posttraumatic growth. Arpawonga et al. (2014) investigated the relationship between the amount of stressful life events and substance use behavior and post-traumatic growth. When the frequency of substance use was examined in relation to PTG and the amount of stressful life events, it was discovered that a decrease in the use of drugs, alcohol, and marijuana among high school students was associated with an increase in PTG. posttraumatic growth (PTG). In a study conducted by McClatchey (2018) investigated the relationship and effects of trauma-informed care on PTG in youth who had lost a guardian grandparent, sibling, or parent by attending a healing camp. The results demonstrated that the children who had attended the camp had increased their PTG scores to a statistically significant degree. Thus both coping and resilience are very important factors in promoting the post traumatic growth among youth with PTSD and also these factors are assumed to decrease the symptoms of PTSD .

In addition to types of traumatic stress experienced by youth of Kashmir in high- and low-risk situations, the most crucial question that has to be addressed is to explore what are the coping mechanisms the youth of Kashmir with ptsd used to manage post-traumatic stress, how much resilient the youth is to bounce back to traumatic event and also post traumatic growth after experiencing the trauma.

1. Objectives

1. To understand and explore Coping Strategies, Resilience, and Post Traumatic Growth in the youth of Kashmir with PTSD.
2. To explore coping and resilience as predictors of post traumatic growth among the Youth of Kashmir
3. To explore the gender differences on Resilience, coping and Post Traumatic Growth among the Youth of Kashmir.

Hypothesis

H1: There will be significant gender differences on coping, Resilience, and Post Traumatic Growth among the Youth of Kashmir.

H2: Coping and Resilience will come out to be as significant predictors of PTG among the Youth of Kashmir.

2. Methods

This present is study is cross-sectional in nature. The sampling technique of purposive sampling employed to collect data. 100 youth between the ages of 18 and 25 who have been clinically diagnosed with traumatic stress will make up the study's sample. Gender-wise, the sample split into 50 males and 50 females' participants were taken for study from Kashmir Advanced scientific Research centre (KASRC) ,

Inclusion Criteria:

- Those who gave consent for the study.
- Patients diagnosed with post-traumatic stress disorder.
- Age 18-25years
- Both the gender will be included

Exclusion Criteria

- Individuals with a history of epilepsy or severe neurological impairments
- Individuals with serious health conditions
- Individuals with severe co-occurring mental disorders, with the exception of symptoms of anxiety and depression.
- Individuals with a history of developmental disabilities

Tools used for data collection

- 1) Self-structured socio-demographic datasheet
A semi-structured socio-demographic data sheet was created to gather information. Name, age, sex, family type, residence, marital status, socioeconomic status, employment, education, and the patient's and family's income were among the sociodemographic details include
- 2) PTSD Checklist for DSM-5 (PCL-5) 20-item is a self-report instrument that assesses the presence and severity of PTSD symptoms in relation to the individual's most distressing and upsetting current event or stressor (Weathersetal., 2013).



3) The Resilience Scale™ (RS™)

In 1993, Wagner and Young published the Resilience Scale consists of 25 items. Each item has seven numbers to the right of it, ranging from "1" (strongly disagree) to "7" (strongly agree), representing your opinion of that statement. The scores fall between 25 and 175. Scores above 145 indicate moderately high to high resilience, scores between 125 and 145 indicate moderately low to moderate levels of resilience, and scores of 120 and below indicate low resilience. The Resilience Scale is the most effective tool for measuring resilience and has been used with people of all ages and backgrounds.

4) Brief cope Inventory Carver.

To investigate coping mechanism in the context of conversion disorder The wide range of coping mechanisms was measured with the Brief Cope Scale. There are 28 items on the scale. Every measurement consists of two components. Likert scales with four possible scores range from "I have not been doing this at all" (score one) to "I have been doing this a lot" (score four), for each item on the scale. The higher score indicates that the study participants employed more excellent coping mechanisms.

5) Post-Traumatic Growth Inventory

The most popular and thoroughly validated questionnaire is the PTGI, which is used to assess positive psychological change. Todeschini & Calhoun created this scale in 1996. The PTGI consists of 21 items that indicate the extent to which the crisis affected the participants' lives. Responses to these items are given on a scale from 0 to 5, meaning that the responses range from (I did not experience this change as a result of my crisis) to (I experienced this change to a very great degree as a result of my crisis). The Post Traumatic Inventory is scored by adding up all of the responses (PTGI). After that, the factors are indicated and the scores for each factor are calculated by adding the responses to the items on each other.

3. Results

Table 1: Frequency Distribution of Male and Female Gender .

GENDER	Frequency (N=100)
MALE	50
FEMALE	50

Table 1 shows description of gender among youth with post-traumatic stress disorder. From a total of 100 sample, 50 participants, corresponding to 50 per cent, represent males, and 50 participants, corresponding to 50 per cent represent females. This shows both Genders were equally divided into two groups, i.e. males and females.

Table 2: Frequency Distribution of Socio-Demographic variables

Variable	Frequency (N=100)	Percentage (%)
Marital Status		
Unmarried	86	86
Married	14	14
Area of Residence		
Rural	82	82
Urban	18	18
Occupational Status		
Employee	20	20
Student	54	54
Unemployed	26	26
Family type		
Joint	15	15
Nuclear	85	85

Table 2 shows frequency distribution of Socio-demographic variables marital status, area of residence, occupational status and family type. With respect to marital status, 86 out of 100 that is 86% were unmarried whereas 14 out of 100 patients that is 14% were married this shows that most of the participants in our study were unmarried. With respect to area of residence, 82 out of 100 patients corresponding to 82 % belonged to the rural area, whereas 18 out of 100 patients that is 18% belonged to the urban areas. This shows most of the participants belongs to urban area. With respect to Occupation 54 participants are students, 26 participants are unemployed and 20 participants are unemployed. With respect to family 85 participants corresponding to



85 percent belongs to nuclear family whereas 15 corresponding to 15 percent belongs to joint family type. This indicates majority of the sample belongs to nuclear family type.

Table 3: Frequency Distribution of Resilience.

Variable	Levels	Range	Frequency	Percentage (%)
Resilience	Low	1-125	70	70
	Moderate	126-145	19	19
	High	146-175	11	11

Table 3 shows frequency distribution of Resilience among youth with PTSD. From a total of 100 youth 70(70%) has low level of resilience, 19 (19%) has moderate level of resilience and only 11(11%) has show high level of resilience

Table 4: Description of Coping, Resilience, Post traumatic growth and Post-traumatic Stress among youth.

Variables	MEAN±SD (N=100)	Minimum	Maximum
Coping			
Problem-Focused coping	19.48±3.61	14.00	28.00
Emotional-Focused coping	27.05±2.67	21.00	33.00
Avoidance coping	11.94±2.64	9.00	21.00
Coping Total	58.48±7.40	48.00	84.00
Resilience	111±25.29	57.00	172.00
Post traumatic growth			
New possibilities	13.76±4.98	5.00	25.00
Relating to others	13.98±5.89	5.00	30.00
Personal strength	12.35±3.10	4.00	18.00
Spiritual change	6.66±1.63	2.00	11.00
Appreciation	12.10±2.78	4.00	15.00

of life			
PTG Total	66.71±18.77	20.00	106.00
PCL-5	32.05±15.35	6.00	70.00

Table 4 shows description of Coping, Resilience, Post traumatic growth and Post-traumatic Stress among youth. In problem focused coping the mean score and standard deviation is 19.48±3.61 where as the minimum and maximum score is 14 and 28. The mean and standard deviation of emotion focused coping in youth is 27.05±2.67 with minimum and maximum scores of 21 and 33. Mean and standard deviation of avoidance is 11.94±2.649 with minimum and maximum scores of 9 and 21 and overall mean and standard deviation of total coping in youth is 58.48±7.40 with maximum and minimum of 48 and 84. In terms resilience the mean and standard deviation is 111±25.29 with maximum and minimum score of 57 and 172. In new possibilities factors measured by post traumatic growth the mean and standard deviation is 13.76±4.98 with maximum and minimum scores of 5 and 25. Relating to other factors in PTG the mean and standard deviation is 13.98±5.89 with maximum and minimum scores is 5 and 30. In personal strength the mean and standard deviation is 12.35±3.10 with minimum and maximum scores of 4 and 18. Spiritual factor in PTG, the mean and standard deviation is 6.66±1.63 with maximum and minimum scores of 2 and 11. The mean and standard deviation of appreciation in life corresponding to PTG is 12.10±2.78 with maximum and minimum scores 4 and 15. Over all total mean of PTG is 66.71±18.77 with maximum and minimum scores of 20 and 106. In terms of post-traumatic stress symptoms among youth, the mean and standard deviation is 32.05±15.35 with minimum and maximum scores of 6 and 70.

Table 5: Comparison of mean scores of coping among youth with respect to gender (N=100).

Variables	Gender	N	Mean	S.D	df	t-value
Problem-Focused coping	Male	50	19.58	3.79	2	0.27
	Female	50	19.38	3.46		
Emotional-Focused coping	Male	50	27.90	4.70	2	3.15*
	Female	50	29.20	2.61		
Avoidance	Male	50	12.00	2.86		



coping	Female	50	11.88	2.42	2	0.23
Coping Total	Male	50	58.50	7.81	2	0.02
	Female	50	57.46	7.06		

Table 5 shows the comparison of mean scores of coping among youth with respect to gender. There was significant difference in Emotional focused coping style with respect to gender at $p < 0.05$ level of significance.

Table 6: Comparison of mean scores of Resilience among youth with respect to gender (N=100).

Variables	Gender	N	Mean	S.D	df	t-value
Resilience	Male	50	109	27.55	2	2.13*
	Female	50	114	23.09		

Table 6 shows the comparison of mean scores of Resilience among youth with respect to gender. The mean scores of male is 109 with standard deviation of 27.55 while as means score of female is 114 with standard deviation of 23.09. Thus mean score of female with in terms of resilience is higher as compare to males. There is also significant difference found between and female at $p < 0.05$ level of significance

Table 7: Comparison of mean scores of Post traumatic growth among youth with respect to gender (N=100).

Variables	Gender	N	Mean	S.D	df	t-value
New possibilities	Male	50	12.96	5.34	9	1.78
	Female	50	14.56	6.29		
Relating to others	Male	50	12.94	4.48	9	1.62
	Female	50	15.02	5.35		
Personal strength	Male	50	12.28	2.99	9	0.22
	Female	50	12.42	3.23		
Spiritual change	Male	50	6.86	1.59	9	1.22
	Female	50	6.46	1.66		

Appreciation of life	Male	50	12.08	2.60	9	0.07
	Female	50	12.12	2.98		
PTG Total	Male	50	62.40	20.83	9	2.38*
	Female	50	71.02	15.48		

Table 7 shows comparison of mean scores of Post traumatic growth among youth with respect to gender. The mean scores of female on total post traumatic growth is higher as compare males There is significant difference found between male and female in terms of post traumatic growth at $p < 0.05$ level of significance, indicating higher PTG among female gender.

Table 8: Multiple Regression Analysis For Post Traumatic Growth as a Criterion Variable And Resilience, Self-Efficacy And Emotional Intelligence as a Predictors

R	R ²	Adjusted R square	Std error of the estimate	F	Significance
0.411a	0.16	0.13	17.56	3.83	.003a
Variables	B-value	Std.error	t-value	Significance	
Constant	41.73	19.236	2.16	0.03	
Problem focused coping	-1.44	10.51	-0.13	0.89	
Emotional-Focused coping	-1.07	10.29	-0.10	0.917	
Avoidance focused coping	-.732	10.43	0.07	0.94	
Total coping	.98	10.39	.094	0.92	
Resilience	.30	.070	4.28	.000	

b. Dependent Variable: Post traumatic growth



a. Predictors: (Constant), Reliance, Problem focused coping, Emotional focused coping, Avoidance focused and, Total coping .

Table 8 shows multiple Regression Analysis For Post Traumatic Growth as a Criterion Variable and coping and Resilience, as a Predictors . From table 8 R is 0.41, indicates positive relationship among all the variables. The value of R^2 is 0.16 implying that 16 percent of contribution in post-traumatic growth can be attributed to predictors i.e. is coping and resilience. Thus in above multiple regression analysis revealed that resilience (Beta =0.30, $p<0.01$), emerged as a only significant predictors and have positive impact on post traumatic growth among youth with PTSD.

Discussion

The present study consists of 100 participants 50 males and 50 females both Genders were equally divided into two groups. With respect to marital status, 86 out of 100 that is 86% were unmarried whereas 14 out of 100 patients that is 14% were married this shows that most of the participants in our study were unmarried. With respect to area of residence, 82 out of 100 patients corresponding to 82 % belonged to the rural area, whereas 18 out of 100 patients that is 18% belonged to the urban areas. This shows most of the participants belongs to urban area. With respect to Occupation 54 participants are students, 26 participants are unemployed and 20 participants are unemployed. With respect to family 85 participants corresponding to 85 percent belongs to nuclear family whereas 15 corresponding to 15 percent belongs to joint family type. This indicates majority of the sample belongs to nuclear family type. From a total of 100 youth 70(70%) has low level of resilience, 19 (19%) has moderate level of resilience and only 11(11%) has show high level of resilience .In problem focused coping the mean score and standard deviation is 19.48 ± 3.61 where as the minimum and maximum score is 14 and 28. The mean and standard deviation of emotion focused coping in youth is 27.05 ± 2.67 with minimum and maximum scores of 21 and 33. Mean and standard deviation of avoidance is 11.94 ± 2.649 with minimum and maximum scores of 9 and 21 and overall mean and standard deviation of total coping in youth is 58.48 ± 7.40 with maximum and minimum of 48 and 84. In terms resilience the mean and standard deviation is

111 ± 25.29 with maximum and minimum score of 57 and 172. In new possibilities factors measured by post traumatic growth the mean and standard deviation is 13.76 ± 4.98 with maximum and minimum scores of 5 and 25. Relating to other factors in PTG the mean and standard deviation is 13.98 ± 5.89 with maximum and minimum scores is 5 and 30. In personal strength the mean and standard deviation is 12.35 ± 3.10 with minimum and maximum scores of 4 and 18. Spiritual factor in PTG, the mean and standard deviation is 6.66 ± 1.63 with maximum and minimum scores of 2 and 11. The mean and standard deviation of appreciation in life corresponding to PTG is 12.10 ± 2.78 with maximum and minimum scores 4 and 15. Over all total mean of PTG is 66.71 ± 18.77 with maximum and minimum scores of 20 and 106. In terms of post-traumatic stress symptoms among youth, the mean and standard deviation is 32.05 ± 15.35 with minimum and maximum scores of 6 and 70. There was significant difference in Emotional focused coping style with respect to gender at $p<0.05$ level of significance. Thus our findings highlights that females use emotion coping strategies as compare to males. This pattern of results is consistent with the previous findings in which females tends to use more emotional coping strategies when it comes to face the stressor (Mezulis et al., 2002 Bennett et al., 2005; Cohen, 2002) . The mean score of female with in terms of resilience is higher as compare to males. There is also significant difference found between and female at $p<0.05$ level of significance. Our findings highlights that the mean scores of female on total post traumatic growth is higher as compare males There is significant difference found between male and female in terms of post traumatic growth at $p<0.05$ level of significance , indicating higher PTG among female gender. Our findings are in line with studies were they found that females gender has higher post traumatic growth as compare to male gender. (Levy, & Cohen-Louck. 2021., Jin., Xu, , & Liu, . 2014 ; Vishnevsk, Cann, , Calhoun, , Tedeschi, & Demakis, 2010) Finally from multiple Regression Analysis for Post Traumatic Growth as a Criterion Variable and coping and Resilience, as Predictors. From table 8 R is 0.41, indicates positive relationship among all the variables. The value of R^2 is 0.16 implying that 16 percent of contribution in post-traumatic growth can be attributed to predictors i.e. is coping and resilience. Thus in above multiple regression



analysis revealed that resilience (Beta =0.30, $p < 0.01$), emerged as a only significant predictors and have positive impact on post traumatic growth among youth with PTSD. Taken together our findings are consistent with study of Garrido , Murphy, & Alonso ,2017, Jielsing, & Xinchun, 2017, Boullion et al ,2020, Ikizer, G., & Ozel, E. P. 2021).

Conclusions: The study aims to explore and understand coping strategies resilience and PTG and impact of coping and resilience on PTG among Kashmiri youth with PTSD. It was concluded that gender differences influences significantly in emotional focused coping style , resilience and post traumatic growth . The resilience has shown strong positive impact on post traumatic growth and promoting resilience could increase the positive growth after trauma.

References

1. Alim, T. N., Feder, A., Graves, R. E., Wang, Y., Weaver, J., Westphal, M., ... & Charney, D. S. (2008). Trauma, resilience, and recovery in a high-risk African-American population. *American Journal of Psychiatry*, 165(12), 1566-1575.
2. Almqvist, K., & Hwang, P. (1999). Iranian refugees in Sweden: Coping processes in children and their families. *Childhood*, 6(2), 167-188.
3. Bennett, K. M., Smith, P. T., & Hughes, G. M. (2005). Coping, depressive feelings and gender differences in late life widowhood. *Aging & Mental Health*, 9(4), 348-353.
4. Bonanno, G. A., Westphal, M., & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual review of clinical psychology*, 7, 511-535.
5. Bonanno, G. A., Westphal, M., & Mancini, A. D. (2011). Resilience to loss and potential trauma. *Annual review of clinical psychology*, 7, 511-535.
6. Boullion, G. Q., Pavlacic, J. M., Schulenberg, S. E., Buchanan, E. M., & Steger, M. F. (2020). Meaning, social support, and resilience as predictors of posttraumatic growth: A study of the Louisiana flooding of August 2016. *American Journal of Orthopsychiatry*, 90(5), 578.
7. CERÍT, E., & KAPLAN, V. (2022). Post traumatic growth during COVID-19 outbreak and the affecting factors: Results of a cross-sectional study among Turkish nursing students. *Black Sea Journal of Health Science*, 5(2), 199-205.
8. Cohen, M. (2002). Coping and emotional distress in primary and recurrent breast cancer patients. *Journal of Clinical Psychology in Medical Settings*, 9, 245-251.
9. Cohen-Louck, K., & Levy, I. (2023). Happiness during a mass trauma: Predicting happiness during the COVID-19 pandemic through function, stress, anxiety, and coping. *Psychological Trauma: Theory, Research, Practice, and Policy*, 15(3), 493.
10. Connor, K. M., Davidson, J. R., & Lee, L. C. (2003). Spirituality, resilience, and anger in survivors of violent trauma: A community survey. *Journal of traumatic stress*, 16, 487-494.
11. Feder, A., Nestler, E. J., & Charney, D. S. (2009). Psychobiology and molecular genetics of resilience. *Nature Reviews Neuroscience*, 10(6), 446-457.
12. Frazier, P., Anders, S., Perera, S., Tomich, P., Tennen, H., Park, C., & Tashiro, T. (2009). Traumatic events among undergraduate students: Prevalence and associated symptoms. *Journal of counseling psychology*, 56(3), 450.
13. Frazier, P., Conlon, A., & Glaser, T. (2001). Positive and negative life changes following sexual assault. *Journal of consulting and clinical psychology*, 69(6), 1048.
14. Garrido-Hernansaiz, H., Murphy, P. J., & Alonso-Tapia, J. (2017). Predictors of resilience and posttraumatic growth among people living with HIV: a longitudinal study. *AIDS and Behavior*, 21, 3260-3270.
15. Gil-Rivas, V., Silver, R. C., Holman, E. A., McIntosh, D. N., & Poulin, M. (2007). Parental response and adolescent adjustment to the September 11, 2001 terrorist attacks. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, 20(6), 1063-1068.
16. Ikizer, G., & Ozel, E. P. (2021). Examining psychological resilience and posttraumatic growth following terrorist attacks in Turkey. *Traumatology*, 27(2), 236.
17. Jielsing, C., & Xinchun, W. (2017). Post-traumatic stress symptoms and post-traumatic growth among



- children and adolescents following an earthquake: A latent profile analysis. *Child and Adolescent Mental Health*, 22(1), 23-29.
18. Jin, Y., Xu, J., & Liu, D. (2014). The relationship between post traumatic stress disorder and post traumatic growth: gender differences in PTG and PTSD subgroups. *Social psychiatry and psychiatric epidemiology*, 49, 1903-1910.
 19. La Greca, A. M., Lai, B. S., Llabre, M. M., Silverman, W. K., Vernberg, E. M., & Prinstein, M. J. (2013, August). Children's postdisaster trajectories of PTS symptoms: Predicting chronic distress. In *Child & youth care forum* (Vol. 42, pp. 351-369). Springer US.
 20. Lee, J. S., Ahn, Y. S., Jeong, K. S., Chae, J. H., & Choi, K. S. (2014). Resilience buffers the impact of traumatic events on the development of PTSD symptoms in firefighters. *Journal of affective disorders*, 162, 128-133.
 21. Li, M. H., & Nishikawa, T. (2012). The relationship between active coping and trait resilience across US and Taiwanese college student samples. *Journal of College Counseling*, 15(2), 157-171.
 22. Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development*, 71(3), 543-562.
 23. Meredith, L. S., Sherbourne, C. D., Gaillet, S. J., Hansell, L., Ritschard, H. V., Parker, A. M., & Wrenn, G. (2011). Promoting psychological resilience in the US military. *Rand health quarterly*, 1(2).
 24. Meredith, L. S., Sherbourne, C. D., Gaillet, S. J., Hansell, L., Ritschard, H. V., Parker, A. M., & Wrenn, G. (2011). Promoting psychological resilience in the US military. *Rand health quarterly*, 1(2).
 25. Mezulis, A. H., Abramson, L. Y., & Hyde, J. S. (2002). Domain specificity of gender differences in rumination. *Journal of Cognitive Psychotherapy*, 16(4), 421-434.
 26. Najdowski, C. J., & Ullman, S. E. (2009). PTSD symptoms and self-rated recovery among adult sexual assault survivors: The effects of traumatic life events and psychosocial variables. *Psychology of Women Quarterly*, 33(1), 43-53.
 27. Park, C. L., Cohen, L. H., & Murch, R. L. (1996). Assessment and prediction of stress-related growth. *Journal of personality*, 64(1), 71-105.
 28. Pfefferbaum, B., Pfefferbaum, R. L., & Van Horn, R. L. (2015). Community resilience interventions: Participatory, assessment-based, action-oriented processes. *American Behavioral Scientist*, 59(2), 238-253.
 29. Reich, J. W., Zautra, A. J., & Hall, J. S. (Eds.). (2010). *Handbook of adult resilience*. Guilford Press.
 30. Tedeschi, R. G., & Calhoun, L. G. (2004). Posttraumatic growth: Conceptual foundations and empirical evidence. *Psychological inquiry*, 1-18.
 31. Tiet, Q. Q., Ilgen, M. A., Byrnes, H. F., & Moos, R. H. (2006). Suicide attempts among substance use disorder patients: an initial step toward a decision tree for suicide management. *Alcoholism: Clinical and Experimental Research*, 30(6), 998-1005.
 32. Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of personality and social psychology*, 86(2), 320.
 33. Vishnevsky, T., Cann, A., Calhoun, L. G., Tedeschi, R. G., & Demakis, G. J. (2010).
 34. Gender differences in self-reported posttraumatic growth: A meta-analysis. *Psychology of women quarterly*, 34(1), 110-120.
 35. Wright, M. O. D., Crawford, E., & Sebastian, K. (2007). Positive resolution of childhood sexual abuse experiences: The role of coping, benefit-finding and meaning-making. *Journal of Family Violence*, 22, 597-608.