

## **Resilience and Terrorism Catastrophizing: Mediating Role of Religious Coping Strategies**

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In the current era, terrorism has become a biggest global concern. Educational institutions are the most vulnerable places being targeted by terrorist attacks. The increased security measures and the risk of being targeted have aroused the feelings of catastrophizing and distress among students. The present research aimed at studying the relationship between resilience, terrorism catastrophizing, and coping strategies among university students. Furthermore, it aimed at exploring the mediating role of religious coping in relation between resilience and terrorism catastrophizing. Employing the technique of convenience sampling, data was collected from 400 university students of Rawalpindi and Islamabad. The results indicated that there was a significant negative relationship between ego resilience, terrorism catastrophizing, and its dimensions, that is, rumination, magnification, and helplessness. Significant positive relationship was observed between maladaptive coping strategies (venting, denial, behavioral disengagement, self-distraction, self-blame, and substance use) and terrorism catastrophizing. On the contrary, significant negative relationship was found between maladaptive coping strategies (venting, denial, behavioral disengagement, self-distraction, self-blame, and substance use) and ego resilience. Results further showed that ego resilience had significant positive relationship with adaptive coping strategies (instrumental support, planning, active coping, religious coping); whereas terrorism catastrophizing was negatively associated with the adaptive coping strategies. Results further showed that religious coping mediated the relationship between resilience and terrorism catastrophizing. Implications and suggestions were given based upon the research conducted for future researches in this area of concern.

*Keywords.* Terrorism catastrophizing, coping strategies, ego resilience, religious coping

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The intention behind terrorism was to transform the positions, but it seldom had this impact (Mickolus, 2002). Both direct and indirect exposure to terrorism leads to anxieties and fear among survivors (DeRoma et al., 2003). Frenzy, trouble, displeasure, anxiety, dread, helplessness, malaise, depression, lack of hunger, sleeping more or less than usual, shying away from responsibility and circumstance, are the common emotions felt after being exposed to the terrorist activities (Durand & Barlow, 2005). Thinking patterns like magnification, rumination, and feelings of helplessness are common reactions to trauma (Garnefski, Teerds, Kraaij, Legerstee, & Vanden Kommer, 2004; Nacos, Bloch-Elkon, & Shapiro, 2007). Coping styles play a significant role in dealing with trauma; if adaptive, would act as a buffer against the possible negative reactions, and if maladaptive, it further adds to the trauma and makes the process of accepting and moving on slow (Bleich, Gelkopf, & Solomon, 2003). After the terror attacks, it has been observed that individuals who are more resilient, catastrophize the situation less and feel less distressed. Evidence indicate that in this case most of the individuals use adaptive coping strategies (Butler, Koopman, Azarow, Blasey, & Magdalene, 2009). Ego resiliency is a factor, which has its impacts on psychological health and it may cause psychopathological reactions towards stressing situations (Matt & Vázquez, 2008). Ego resiliency refers to an extent to which an individual can modify his or her attitude in a given situation or may able to change his level of rigidity to solve a given problem (Block & Block, 1980). Earlier it has been thought that it might be a personality characteristic or a personality trait that may over last for long time but later researches showed that this is not only a personality trait but also process that is modifiable and may be changed regarding a situation (Luthar, Cicchetti, & Becker, 2000). It is evident that deliberate acts of violence are more impactful as compared to the natural disasters. However, researchers agree that resilience is the psychological outcome of the communities instead of psychopathology (Galea et al., 2002; Schenlger et al., 2002).

Great exposure to the traumatic event and a continuous violence and threat to life has an adverse effect on the psychological health of the people. Pakistani people, especially students are particularly facing these adversities and manmade disasters (Khalily, 2011; Husain, Iqbal, Taj, & Khan, 2012; Poushter, 2016). In the context of current sociopolitical situation, educational institutions are at a risk of being targeted by terrorists. According to the report based on data compiled by the Global Terrorism Database more than 753 terrorist attacks have been done in Pakistan killing 315 schoolchildren, teachers, and principals of different schools besides causing injuries to 400 others

between 1970 and 2014 (Javed, 2015). Terrorist attacks such as incidents of Army Public School, Peshawar and International Islamic University, Islamabad had horrifying impacts. Likewise, terrorist's attacks on Bacha Khan University resulted in killing of 20 people including 14 students (Akbar, 2016). Due to these attacks, the institutions remained closed for a long time in the country. These incidents were followed by news related to possible terrorist attacks on other schools and universities. Consequently, this led to increase in security measures at schools and colleges. This further enhanced the feeling of insecurity among students and academic staff (Nijs et al., 2014).

Bonanno, Brewin, Kaniasty, and LaGreca (2010) stated that people vary considerably in their behavioral reactions to traumatic experiences. However, within this heterogeneity, a handful of reaction examples seemed to have surfaced. Firstly, there are people who had chronic stress and anxiety symptoms, which frequently do not lessen after some time. Secondly, there are individuals who initially exhibit little or no symptoms of psychopathological manifestations, but they recreate them later on. Thirdly, there are gatherings of individuals who at first exhibit abnormal amount of side effects; however, later on they display a full recovery (and this presumably represents the larger population). Lastly, there are people who, in general, exhibit resilience and good adjustment in response to traumatic or stressful situations.

Psychological wellbeing can be greatly crippled by the terrorist attacks (Somer, Tamir, Maguen, & Litz, 2005). In the light of current scenario, cognitive behavioral theory has been used in understanding the fundamental mechanisms behind terrorism. The term catastrophizing has diverse meanings and is an overstated negative perception toward some harmful stimulus (Sullivan, Bishop, & Pivik, 1995). However, there has been little investigation into the impact of newer and more sophisticated acts of terrorism in the current scenario. According to Young, Weinberger, and Beck (2001), maladaptive cognitive processes are reflective of a cognitive triad. Depressed people, generally, have a pessimistic opinion about themselves, their environment, and the future. Information is construed in all-or-nothing and catastrophic terms; wherein, people are often overwhelmed by a state of powerlessness and inability to stop focusing on the threat (rumination). In context of terrorism, effects of terror attacks rely on how people's core assumptions or schemas about themselves and the world are disrupted and the extent to which people have come to distort new information as a result. Literature is evident that ruminating on these threats, catastrophizing is the primary core cognitive process which ignites the various forms of psychopathology

inhibits the normal functioning and lead to emotional distress (Garnefski et al., 2004).

It has been seen that coping is one of the dynamic processes that tend to function as a strong mediator between stressors and the individual's mental health outcomes (Celestin & Celestin-Westreich, 2006). Lazarus (as cited in Butler et al., 2005) referred coping as the ability of individual to overcome the challenging and harmful situations. People using active coping strategies tend to be more resilient, have positive attitude, and are able to find meanings in their life events. Active coping has been negatively related to distress; while substance use, giving up, and denial are positively related with distress and posttraumatic symptoms (Butler et al., 2005). Most of the studies (Ai et al., 2005; Hobfoll et al., 2008) have shown that religion is significantly related to the high levels of resilience and low levels of psychological distress. According to Holman and Silver (2005), fear of future terrorism are associated with greater frequency of adulthood trauma, more television watching immediately after the attacks, and using more religion-based coping strategies immediately following the attacks. An indigenous study (Ahmed et al., 2011) showed that the most common coping strategy used by students in universities is religious coping. Likewise, religious coping strategies have been commonly used as a mediator in the context of terrorism (Phillips & Ano, 2015).

Mediational analyses showed that positive emotions in the aftermath of crises buffer resilient people against depression and fuel thriving, consistent with the broaden-and-build theory (Fredrickson, Tugade, Waugh, & Larkin, 2003). Religion is a factor that plays a very effective role in decreasing psychological feelings of distress and increasing coping during stressful situations (Ano & Vasconcelles, 2005). After suffering from trauma, the discrepancy between prior beliefs and the new trauma related beliefs is reduced by either assimilation (by changing the trauma related meaning), accommodation (by altering the beliefs), or over accommodation (extreme alterations or overgeneralizations of beliefs). This results in the process of either conserving or transforming faith. This can result in the negative religious coping strategies in case of maladaptive over accommodation and assimilation; while, adaptive accommodation processes would result in positive coping such as finding meaning and purpose in life (Resick et al., 2008).

Researchers have explored the impacts of terrorism attacks on people. Fear, concerns, emotional disturbances, and low psychological wellbeing were key factors identified in qualitative analysis (Malik, Hassan, & Perveen, 2010). In another Pakistani research, it has been

found that people who experience the attacks have more anxiety and stress (Nayab & Kamal, 2010). There are relatively few researches (Ahmed et al., 2011; Haq & Kausar, 2010) on resilience and coping after the terrorist attacks. Most of them explored the negative after effects of the terrorism including terrorism associated fears and psychological distress; thereby, lacking the information related to the coping and resilience mechanisms (Hussain et al., 2012; Nayab & Kamal, 2010). Therefore, the present study aimed at highlighting the role of adaptive coping strategies especially religious coping.

The major objectives of the present study were to explore the relationship between ego resilience, terrorism catastrophizing, and coping strategies among university students. It also intended to determine the mediating role of religious coping between ego resilience and terrorism catastrophizing. Although previous literature has established the importance of the variables in question, but further exploration is required to understand this phenomenon. The present research is an addition to the vast existence of knowledge particularly in the context of Pakistan, greatly affected by terrorist activities.

## Hypotheses

1. There will be a negative relationship between terrorism catastrophizing and ego resilience.
2. There will be a positive relationship between adaptive coping strategies (planning, instrumental support, active coping, religious coping) and ego resilience.
3. There will be a negative relationship between maladaptive coping strategies (venting, denial, behavioral disengagement, self-distraction, humor, self-blame, substance use) and ego resilience.
4. Religious coping will mediate the relationship between ego resilience and terrorism catastrophizing.

## Method

### Sample

By employing the technique of convenience sampling ( $N = 400$ ), data was collected from different public and private universities of Islamabad and Rawalpindi. Age of the sample ranged from 18-27 years ( $M = 22.4$ ,  $SD = 2.8$ ) and included 200 male and 200 female students. Respondents were approached from Quaid-i-Azam

University ( $n = 75$ ), Allama Iqbal Open University ( $n = 50$ ), National University of Science and Technology ( $n = 38$ ), Humdard Institute ( $n = 54$ ), Bahria University ( $n = 25$ ), International Islamic University ( $n = 54$ ), National University of Modern Languages ( $n = 36$ ), Iqra University ( $n = 34$ ), and Foundation of Advancement of Science and Technology ( $n = 34$ ).

## Instruments

**Ego Resiliency Scale.** The present study used the Ego-Resiliency Scale (Block & Kremen, 1996) to assess the capability to modify the control of oneself over the situation. Individuals who have more resiliency have more self-confidence, more positive affect, and better psychological adjustment (Block & Kremen, 1996). The English version of the scale comprising 14 items to be rated on a 4-point scale ranging from 1 (*does not apply at all*) to 4 (*applies very strongly*). The sample statements are: *I enjoy dealing with new and unusual situation; Most of the people I met are likeable*. High scores on this scale reflect higher levels of resiliency and Block and Kremen (1996) reported alpha coefficient of .76 for Ego Resilience Scale, while alpha reliability of .88 was achieved in the present study.

**Terrorism Catastrophizing Scale.** The present study used 13 item Terrorism Catastrophizing Scale (Sinclair & Lo Cicero, 2007) which could be rated on a 5-point scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*). It is an exaggerated negative orientation towards noxious stimuli (such as terrorism in this study). It is an elementary feeling of defenselessness and incapability to cope (Sinclair & Lo Cicero, 2007). The scale constituted of three subscales that is, Rumination (5 items; e.g., *I have difficulty keeping terrorism out of my mind*), Magnification (3 items; e.g., *I worry that terrorism will only get worse as time passes*), and Helplessness (5 items; e.g., *There is little I can do to protect myself from terrorism*) with alpha coefficients of .89, .80 and .88; respectively (Sinclair & Lo Cicero, 2007). However, in the present study alpha coefficients of .75, .86, and .75 were achieved for the subscales of Rumination, Magnification, and Helplessness; respectively.

**Brief Cope Scale.** The present study used 28 items Brief Cope Scale (Carver, 1997) to be rated on 4-point scale ranging from 1 (*I have not been doing this at all*) to 4 (*I have been doing this a lot*). It is

defined as the course of generating a potential reaction to the threat (Carver, Scheier, & Weintraub, 1989). There are fourteen subscales, namely Self Distraction, Active Coping, Denial, Substance Use, Instrumental Support, Emotional Support, Behavioral Disengagement, Venting, Positive Reframing, Planning, Humor, Acceptance, Religious Coping and Self Blame. Each subscale comprises of two items. Alpha reliability of the subscales ranged from .50 to .90 (Carver, Scheier, & Weintraub, 1989); whereas, the reliability of these subscales in the present study ranged from .67 to .85.

## **Procedure**

Informed consent from the participants was taken. They were approached personally in their University campus after taking permission from the concerned authorities. Students were asked to fill the questionnaires within the campus. They were briefed completely about the purpose and nature of the study. It was assured that information obtained would only be used for research purpose. Approximately 600 questionnaires were distributed, but the return rate was 400.

## **Results**

Pearson Product Moment correlation was tabulated to determine the relationship patterns between ego resilience and terrorism catastrophizing with adaptive and maladaptive coping strategies.

The results (Table 1) showed that there is a significant negative relationship between ego resilience and terrorism catastrophizing. Significant positive relationship is apparent between maladaptive coping strategies (venting, denial, behavioral disengagement, self-distraction, self-blame and substance use) and terrorism catastrophizing. Significant negative relationship is apparent between maladaptive coping (venting, denial, behavioral disengagement, self-distraction, self-blame and substance use) and Ego resilience. There is a negative relationship between adaptive coping strategies (acceptance, instrumental support, active coping, religious coping) and terrorism catastrophizing. Similarly, positive relationship is evident for acceptance, instrumental support, active coping, religious coping with ego resilience.

**Correlations among Variables**

**Table 1**

*Correlation between Terrorism Catastrophizing, Coping strategies & Ego Resilience of university students(N= 400)*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
1. TCS	-	.92**	.90**	.90**	-.60**	.33**	.70**	.32**	.41**	.36**	-.42**	.34**	.37**	.14**	-.65**	.28**	.54**	-.43**	.35**	
2. Rum		-	.76**	.73**	-.55**	.29**	.66**	.38**	.43**	.35**	-.37**	.33**	.39**	.15**	-.57**	.27**	.48**	-.42**	.34**	
3. Mag			-	.74**	-.55**	.35**	.64**	.29**	.37**	.34**	-.40**	.32**	.31**	.13**	-.59**	.28**	.53**	-.36**	.31**	
4. Help				-	-.54**	.27**	.63**	.21**	.33**	.31**	-.39**	.30**	.30**	.09**	-.61**	.22**	.48**	-.40**	.30**	
5. Ego					-	-.02	.63**	-.10*	-.26**	-.19**	.34**	-.18**	-.27**	.06**	.58**	-.17**	-.27**	.44**	-.20**	
6. SD						-	-.11*	.41**	.32**	.38**	-.16**	.35**	.32**	.38**	-.20**	.44**	.52**	.00	.31**	
7. AC							-	-.14**	-.36**	-.19**	.59**	-.24**	-.24**	.05**	.81**	-.27**	-.41**	.62**	-.22**	
8. DEN								-	.63**	.44**	-.03	.50**	.45**	.41**	-.17**	.62**	.40**	-.13**	.47**	
9. SU									-	.43**	-.20**	.51**	.46**	.28**	-.33**	.68**	.40**	-.33**	.50**	
10. ES										-	.15**	.53**	.53**	.45**	-.11*	.44**	.49**	.01	.49**	
11. IS											-	.01	.04	.20**	.66**	-.11*	-.23**	.55**	-.01	
12. BD												-	.49**	.35**	-.23**	.55**	.41**	-.14**	.54**	
13. Ven													-	.40**	-.20**	.52**	.44**	-.11*	.49**	
14. PR														-	.12*	.41**	.40**	.15**	.37**	
15. Plan															-	-.22**	-.35**	.67**	-.15**	
16. Hum																-	.49**	-.19**	.53**	
17. Acc																	-	-.09*	.41**	
18. Rel																		-	-.16**	
19. SB																			-	
20. N	13	.05	.03	.05	.14	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02	.02
21. $\alpha$	.94	.75	.86	.65	.88	.48	.82	.70	.75	.64	.53	.63	.51	.52	.84	.78	.74	.83	.58	.58
22. M	39.16	15.06	9.02	15.08	41.67	5.07	4.90	4.69	4.28	4.72	4.70	4.56	4.66	5.01	5.07	4.88	5.40	5.57	4.53	4.53
23. SD	11.34	4.55	3.68	4.20	7.41	1.58	2.18	1.72	1.89	1.46	1.60	1.49	1.34	1.37	2.22	2.06	1.83	1.65	1.46	1.46

Note. TCS=Terrorism Catastrophizing Scale; Rum=ruminatio; Mag=magnification; Help=helplessness; Ego=ego resilience; SD=self-distraction; AC=active coping; Den=denial; SU= substance use; ES= substance use; IS= instrumental support; BD= behavioral distraction; Ven = venting; PR=positive reframing; Plan=planning; Hum=humor; Ace=acceptance; Rel=religious coping; SB=self-blame.  
\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

Table 2

*Mediating Effect of Religious Coping in Predicting Terrorism Catastrophizing through Ego Resilience (N = 400)*

Variables	Terrorism Catastrophizing			95% CI	
	Model 1	Model 2	S.E	LL	UL
Constant	77.82***	79.82***	2.56	74.79	84.86
Ego Resilience	-.93***	-.78***	.07	-.91	-.65
Religious Coping		-.14*	.03	-.22	-.08
$R^2$	.36	.40			
$F$	228.67***	132.20***			

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

The mediation results show that resilience significantly predict religious coping and religious coping significantly predict terrorism catastrophizing. The  $R^2$  value shows that resilience explains 36% of the variance in relationship with religious coping. However, Model 2 explains 40% of the variance in relationship with terrorism catastrophizing; hence, as religious coping increases, terrorism catastrophizing decreases. It clearly represents that religious coping account for an additional 4% of variance in the model. The value of Sobel test ( $z = -4.31$ ,  $p < .00$ ) confirms the partial mediating role of religious coping.

## Discussion

The present research aimed at investigating the relationship between resilience, terrorism catastrophizing, and coping strategies among university students. It also focused on exploring the mediating role of religious coping between ego resilience and terrorism catastrophizing.

Findings showed that terrorism catastrophizing and ego resilience had been negatively linked with each other; while maladaptive coping strategies (venting, denial, behavioral disengagement, self-distraction, self-blame and substance use) displayed positive relationship with terrorism catastrophizing and negative relationship with ego resilience. In addition, adaptive coping strategies (e.g., active and religious coping) exhibited negative relationship with terrorism catastrophizing, and positive association with ego resilience. Religious coping is taking refuge in religion during stressful times as it may provide emotional support and serves as a vehicle for driving positive interpretation and progression. Religious coping is also a mechanism to trigger active coping, thereby both coping strategies have negative

relationship with terrorism catastrophizing and positive association with ego resilience. These findings were in line with the existing body of literature. People with higher levels of resilience experience less feelings of catastrophization and engage more frequently in adaptive coping strategies. On the contrary, individuals having low resilience are more likely to indulge in maladaptive coping strategies (Bleich et al., 2003; North et al., 2002). Cognitive behavior theorists argued that maladaptive thinking processes are often expressed in the form of cognitive triad (Young et al., 2001). Traumatic experience, such as the terrorism violence effects individuals' core schemas about safety, security, and potential threat. When activated, these schemas motivate an individual to indulge in maladaptive coping and consequently feelings of distress, depression, and anxiety increase. Behaviors like avoidance, denial, disengagement provide an individual escape from the feelings of distress experienced. In contrast, a person who is resilient gets involved in adaptive coping strategies, which reduces the feeling of distress, depression, and catastrophizing. Resilience, thus, acts as a buffer or protective factor that determines which type of coping the individual is likely to indulge in order to cope with the feelings of catastrophizing (Kelley & Chan, 2012).

Results further showed that religious coping strategy mediated the relationship between resilience and terrorism catastrophizing. Previous researches have also confirmed the mediating role of religious coping strategies (Bowland, Edmond, & Fallo, 2013; Kelley & Chan, 2012; Phillips & Ano, 2015; Wortmann, Park, & Edmondson, 2011). Researchers (Ali, Farooq, Bhatti, & Kuroiwa, 2012) argued that indulging in positive religious coping acts as a buffer or protective factors in feelings related to helplessness, magnification of trauma and ruminative thought processes. Moreover, high ego resilience is associated with secure attachment patterns with God and positive religious coping. It is a fact that after any traumatic event, people tend to indulge in finding meaning and reinterpreting the situation, in order to manage their grief processes. For this meaning and reinterpretation, most people rely on religious strategies. It has been observed that individuals who indulge in positive religious coping consider God as listening or available and this keeps the element of optimism intact. Furthermore, this religious coping positively lead to decreased feelings of distress and catastrophizing (Keller & Chan, 2012).

## **Limitations and Suggestions**

Following are the probable limitations of the present study. The sample of the study was taken only from the universities of Islamabad and Rawalpindi, which can be a potential threat to the external validity of the study. The study could be replicated with large sample, including the other cities of Pakistan. Moreover, comparative study could also be done to see the difference among the people living in cities, which are more prone to terrorist attacks, and the other less vulnerable cities. Overall, coping strategies were assessed as a general response to threats not particular to terrorism. As sample of the current study included only one university (International Islamic University, Islamabad) affected by terrorists attacks in 2009, results could be different if sample constitute of institutions affected by terrorism in recent times. However, coping strategies might be different in case of terrorist threats and attacks, which can be explored further. Similarly, it would be interesting to address in future the effects of other coping strategies in minimizing the traumatic events such as terrorism catastrophizing.

## **Implications**

The present research will be helpful in understanding the psychological impacts of terrorism, and coping by using religious strategies particularly in Pakistani context. Unlike many other researches, it has focused not only on the negative effects but also on the strategies that people use to deal with the feelings of catastrophizing. Moreover, resilience and coping strategies training workshops can be developed to help students deal with mechanism of catastrophizing.

## **Conclusion**

Pakistan has witnessed terrorist attacks in schools and universities in recent past. As a protective factor, the role of positive coping strategies like acceptance, positive reframing, emotional support, humor, planning, instrumental support, active coping, and religious coping cannot be underestimated. Programs need to be designed to elaborate the importance of these healthy coping strategies among students.

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