

Perceived Threat of Terrorism, Stress Appraisal and Psychological Distress in College and University Students

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The study aims to investigate the relationship of perceived threat of terrorism, stress appraisal and psychological distress in College and University students. Four hundred students of ages 19 to 22 years ($M = 20.01$, $SD = 1.05$) were recruited from different Colleges and Universities of Lahore. The research protocol consisted of Terrorism Catastrophizing Scale (Sinclair & LoCicero, 2007), Stress Appraisal Measure (Peacock & Wong, 1990) and Impact of Event Scale-Revised (Horowitz et al., 1979). The data was analyzed by using Pearson product moment correlation and multiple regression analysis. The findings revealed that threat challenge, centrality, uncontrollable and stressfulness (subscales of stress appraisal) had significant positive relationship with helplessness, rumination, psychological distress, intrusion, avoidance and arousal (subscales of psychological distress), negative relationship of perceived threat of terrorism with appraisal of challenge, controllability by self and controllability by other. Moreover, the results showed that threat, centrality and rumination were significant positive predictors of psychological distress. Findings of the study will help in developing interventions for students who feel high level of psychological distress because of perceived threat of terrorism.

Keyword. Perceived threat of terrorism, stress appraisal, psychological distress, college and university students

It is essential to know about perceived threat of terrorism and stress appraisal because terrorism is happening at huge level in Pakistan. It is perceived as intimidating and causes distress. On 16

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December, 2014, terrorists attacked Army Public School, Peshawar in which at least nine staff members and 132 students were brutally killed and 121 were badly injured. Likewise, on 20 January, 2016 the Bacha Khan University was attacked by terrorists, Charsadda, Khyber Pakhtunkhwa, killing at least 19 and injuring 6 people. Most recent one was observed on 27 March, 2016, in which at least seventy two people were killed and over 30 were injured in a suicide explosion in Gulshan-e-Iqbal Park, Lahore, Pakistan. According to Southern Association for Institutional Research fatalities in Pakistan because of terrorist violence are 831 till 17 April, 2016. Total number of fatalities from 2003 to 2016 is 60525. Psychological distress is being caused by perceived threat of terrorism and stress appraisal as academic institutions have been continuously under threat of terrorism. This research will help in finding out predictors of psychological distress in college and university students and will help in reducing it as their mental health and academic performance is affected because of perceived threat of terrorism.

Short (1984) defined threat as a “probability that an individual will experience danger”. Perceived threat can also be defined as idiosyncratic assessment of likelihood of occurrence and concern about its outcome (Sjöberg et al., 2004). Three components of threat perception are: Subjective assessment of risk, uncertainty and negative consequences of perceived threat. Threat perception is considered as an attitude to threats including terrorism (Taylor, 1998). Stress appraisal causes perceived threat.

According to the Cognitive Relational Theory of Stress, cognitive appraisal is fundamental notion in explaining stress. Lazarus and Folkman (1984) defined stress as “a process that regulates reason and extent of stressful interaction of the individual and the environment”. Cognitive appraisal involves evaluation of the situation and the possible responses of the individual for handling the situation (Folkman et al., 1986). According to this theory, the perception, management, and termination of stress are determined by the process of stress appraisal (Largo-Wight et al., 2005).

Lazarus and Folkman (1984) described two stages of cognitive appraisal: Primary appraisal and secondary appraisal. The primary appraisal takes place during the preliminary appraisal of a situation. Secondary appraisal follow primary appraisal. The primary appraisal is evaluation of a situation in which the event is appraised as threatening or not (Largo-Wight et al., 2005). There are three types of the primary appraisal, namely: Harm/loss, threat and challenge (Lazarus & Folkman, 1984). Secondary appraisal can be defined as evaluation of “availability of coping options and choosing appropriate

coping strategy” (Lazarus & Folkman, 1984). The process of secondary appraisal has three dimensions: Self-control, Other-control and Uncontrollability. The researchers indicated that overall perception is result of primary and secondary appraisal (Ferguson et al., 1999).

Psychological distress can be defined as “unpleasant state of anxiety and depression, which have psychological and emotional manifestations” (Mirowsky et al., 2003). Psychological distress is major issue for college students (Deckro et al., 2002). Students are more prone to stress particularly college students (Saipanish, 2003). Certain risk factors affect mental health of college students and psychological distress is one of them (Hunt & Eisenberg, 2010).

Hypotheses

1. There is likely to be a positive relationship of magnification, helplessness and rumination (perceived threat of terrorism) with appraisal of threat, uncontrollability, centrality, stressfulness, intrusion, avoidance and arousal (psychological distress) in college and university students.
2. There is likely to be a negative relationship of magnification, helplessness and rumination (perceived threat of terrorism) with controllability by self-appraisal of challenge, controllability by other in college and University students.
3. Perceived threat of terrorism (magnification, helplessness and rumination) and stress appraisal is likely to predict psychological distress in college and university students.
4. Stress appraisal is likely to moderate the relationship between perceived threat of terrorism and psychological distress in college and university students.

Method

Sample

Sample comprised of 400 college and university students. Two hundred students were recruited from government and private colleges and two hundred from government and private sector universities. Equal numbers of male and female students were recruited; they ranged in age between 19-22 years. Students registered in a regular program were recruited and students suffering from any major physical illness, psychological illness or physical disability were excluded.

Instruments

Demographic Sheet. It was constructed by the researcher for getting information about the demographic characteristics of the participant which included age, education, religion, family system, income, nature of residence, age, education, occupation, income of parents, exposure of the participant or his/relatives or friends to any terrorist activity, change in social relationships, change in educational performance, change in interest in news and any physical or psychological illness.

Terrorism Catastrophizing Scale (Sinclair & LoCicero, 2007)

It was used to assess perception of threat of terrorism. It was developed by Sinclair and LoCicero (2007). It measures effect of terrorism on psychological functioning of an individual. It measures extent of experience of anticipatory fear and catastrophes about terrorism. It consists of thirteen items and three subscales namely: *Magnification, Rumination and Helplessness*. Magnification is defined as catastrophic terrorism that will continue when situation will be worse despite contrary evidence. Items of the Magnification subscale are 6, 8 and 10. The Helplessness subscale measure the belief that respondent is vulnerable and nothing can be done to escape from threat of terrorism. The helplessness subscale consists of items 2, 4, 7, 11 and 13. The Rumination subscale measures the extent to which people ruminate about distorted interpretation of events and comprise of 1, 3, 5, 9 and 12. It employees five point Likert scale ranging from strongly agree to strongly disagree. Score ranges from 13 to 65. High score shows more Catastrophization. Items need to be reverse scored are 1, 2, 3, 4, 6, 7, 8, 9, 10, 12 and 13. Alpha reliability is .85 while test retest reliability is .89 (Sinclair & LoCicero, 2007).

Stress Appraisal Measure (Peacock & Wong, 1990)

Stress Appraisal Measure was used to assess different types of primary and secondary appraisal. It was developed by Peacock and Wong (1990). Urdu translation of questionnaire was used after taking permission from respective authors. It consists of 28 items. It has seven subscales: three for primary appraisal, three for secondary appraisal and one for stress. Subscales of primary appraisal are: *Threat, Challenge and Centrality*. The extent to which person feel threatened is measured by threat subscale. Items of threat subscale are 5, 11, 20 and 28. Challenge refers to expecting positive outcome after dealing with a problem and has items 7, 8, 10 and 19. Centrality is about perception of personal significance of event for wellbeing of respondent. Items which assess centrality are 6, 9, 13 and 27.

Secondary appraisal includes three subscales which are: *Controllable By Others*, *Controllable by Self* and *Uncontrollable*. Items of controllable by self are 12, 14, 22 and 25, while controllable by others subscale is assessed by item 4, 15, 17 and 23. Items of uncontrollable subscale are 1, 3, 18 and 21. Overall, stressfulness is assessed by one additional subscale and it is assessed by items 2, 16, 24 and 26. Ratings are taken on five-point Likert-type scale ranging from *not at all* (1) to *a great amount* (5). Overall score is computed by adding score of all items of respective scale. Maximum score is different for each subscale because of different number of items in each subscale. Alpha reliability for personality changes ranged from .71 to .89 and for physical changes ranged from .63 to .90. High score shows more stressfulness (Peacock & Wong, 1990).

Children's Revised Impact of Event Scale (Horowitz et al., 1979)

It is self-report measure, which will be used to assess stress due to disturbing events. It was developed by Horowitz et al. (1979). It comprise of thirteen items and three subscales. The subscales of Children's Revised Impact of Event Scale are Intrusion, Avoidance and Arousal. It consists of twelve items: four items measure Intrusion, four items measure avoidance and five items measure arousal. Items of intrusion subscale are 1, 4, 8 and 9. Avoidance subscale comprise of 2, 6, 7 and 10, while items of arousal are 3, 5, 11, 12, and 1. It uses 4-point Likert-type scale ranging (*Not at all* = 0, *Rarely* = 1, *Sometimes* = 3, *Often* = 5). Alpha reliability of the scale is .75 (Horowitz et al., 1979).

Procedure

After taking permission from college and university authorities initially pilot study was conducted on a sample of 30 students for checking comprehension level and time taken for completing the questionnaires. After taking consent and giving information about research, the participants were requested to fill research protocol consisting of demographic sheet and above mentioned scales. Feedback of participants was also taken on need to make changes. After that main study was conducted. Participants were briefed about nature and purpose of research. Instructions were given to them, informed consent was taken. Participants who were willing were requested to fill research protocols. They were asked to put a mark against response category which they found most appropriate. Moreover, they were requested to give honest answers to the questions being asked.

Results

Table 1
The Relationship among Studied Variables (N=400)

Vars.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.Th	-	.45***	.58***	.31***	.35***	.44***	.57***	.23**	.26**	.44***	.38***	.25**	.28***	.63***	.23***	.39**
2.Ch		-	.21***	.26***	.21***	.22***	.27***	-.08	-.07	-.27***	.32***	.21***	.25***	.67***	.32***	-.22**
3.Cen			-	.32***	.33***	.37***	.53***	.14***	.18***	.40***	.35***	.28***	.27***	.69***	.37***	.32**
4.S.Co				-	.49***	-.18**	-.15**	.20***	-.36**	-.01	-.14**	-.06	-.17***	.58***	.14**	-.14**
5.O.Co					-	.22***	.49***	.19***	.24***	-.007	.20***	.18***	.18***	.61***	.18***	-.15**
6.UnC						-	.42***	.30***	.35***	.34***	.24***	.19***	.24***	.65***	.39***	.44**
7.Stres							-	.21***	.17***	.40***	.33***	.22***	.28***	.74***	.31***	.34**
8.Mag								-	.41***	.41***	.17***	.17***	.20***	.13***	-.02	.76**
9.Help									-	.32***	.15**	.08	.15**	.12*	.15**	.63**
10.Rum										-	.35***	.31***	.38***	.47***	.43***	.73**
11.Intr											-	.46***	.58***	.44***	.84***	.29**
12.Av												-	.44***	.28***	.77***	.24**
13.Aro													-	.36***	.84***	.32**
14.SA														-	.43***	.34**
15.Psy.D															-	.35**
16.p.th																-

Note. Vars. = Variables; Th = Treat; Ch = Challenge; Cen = Centrality; S.Co = Self Control; O.Co=Other Control; UnC = Uncontrollable; Stres = Stressfulness; Mag = Magnification; Help = Helplessness; Rum = Rumination; Intr = Intrusion; Av = Avoidance; Aro = Arousal; SA = Stress Appraisal; Psy.D = Psychological Distress.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Results showed that perceived threat (magnification, haplessness and rumination) had significant positive relationship with threat, centrality, stressfulness and uncontrollability. Helplessness and rumination had significant positive relationship with psychological distress whereas rumination had negative relationship with psychological distress. The findings also revealed negative relationship of perceived threat of terrorism with appraisal of challenge, controllability by others and controllability by self (see Table 1).

The hierarchical regression was used for finding out predictors of psychological distress. Results are shown in Table 2 and Table 3.

Table 2
Hierarchical Regression Indicating Predictors of Psychological Distress (N=400)

Variables	Psychological Distress		
	ΔR^2	β	<i>B</i>
Block 1	.11***		
Constant		71.79***	-
Age		.38*	.03
Education		-2.62	-.19**
Change in Social Relationships		-.82	-.06

Change in Educational Performance		-2.03*	-.14**
Change in Outside Activities		-1.86*	-.13*
Change in Interest in Terrorism Related News		-1.59	-.08
Block 2	.10***		
Constant		32.22*	-
Age		.67	.05
Education		-2.10*	-.15*
Change in Social Relationships		-.03	-.00
Change in Educational Performance		-1.23	-.09
Change in Outside Activities		-.61	-.04
Change in Interest in Terrorism Related News		-1.55	-.07
Perceived Threat of Terrorism		-.16	-.10
Magnification		.37	.09
Helplessness		.16	.05
Rumination		1.26***	.38***

Note. β = Unstandardized Coefficient; B= Standardized Coefficient; $\Delta R^2 = R$ Square change.

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

The findings revealed that rumination was significant positive predictor of psychological distress.

Table 3
Hierarchical Regression Indicating Predictors of Psychological Distress (N=400)

Variables	Psychological Distress		
	ΔR^2	β	B
Block 1	.11***		
Constant		71.79	-
Age		.38	.03
Education		-2.62**	-.19**
Change in Social Relationships		-.82	-.06
Change in Educational Performance		-2.03**	-.14**

Continued...

Variables	Psychological Distress		
	ΔR^2	β	B
Change in Outside Activities		-1.86*	-.13*
Change in Interest in Terrorism Related News		-1.56	-.08
Block 2	.14***		
Constant		40.65***	-
Age		1.0	1.0
Education		-2.24**	-.16**
Change in Educational Performance		-1.42*	-.10*

Change in Social Relationships	-.07	-.01
Change in Outside Activities	-1.06	-.07
Change in Interest in Terrorism Related News	-1.37	-.06
Threat	.47*	.13*
Challenge	.31	.07
Centrality	.54*	.14*
Controllable by Self	.07	.02
Controllable by Others	.14	.04
Uncontrollable	.33	.09
Stressfulness	.35	.09

Note. β = Unstandardized Coefficient; B = Standardized Coefficient; ΔR^2 = R Square change

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

The findings revealed that threat and centrality were significant positive predictor of psychological distress. Process analysis was applied to check out stress appraisal as a moderator between perceived threat of terrorism and psychological distress.

Table 4

Process Analysis Showing the Stress Appraisal as Moderator between Relationship of Perceived Threat of Terrorism and Psychological Distress (400)

Variables	Psychological Distress		
	β	CI	
		LL	UL
Constant	28.03***	26.84	29.23
Stress Appraisal	.30***	.22	.39
Perceived Threat of Terrorism	.41***	.25	.57
Stress Appraisal x Perceived Threat of Terrorism	-.005	-.01	.004
R^2	.23***		
F	45.14***		
ΔR^2	.002		

Note. β = Unstandardized Co efficient; ΔR^2 = R Square change; CI=Confidence Interval.

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

It was also found that stress appraisal did not moderate the relationship between perceived threat of terrorism and psychological distress.

Discussion

The study aims to investigate the relationship among perceived threat of terrorism, stress appraisal and psychological distress in College and university students. The positive relationship of perceived

threat of terrorism (magnification, helplessness and rumination) with threat, challenge, stressfulness, uncontrollable, centrality and psychological distress (intrusion, avoidance and arousal) in College and University students was postulated. The findings indicated that threat, challenge, centrality, uncontrollable and stressfulness had significant positive relationship with helplessness, rumination, psychological distress, intrusion, avoidance and arousal in students of colleges and universities. These findings are consistent with previous literature, which indicated that perceived threat of disaster is related with more psychological distress (Gunthert et al., 1999). It could be reasoned that the person who perceive more threat is more likely to experience more psychological distress. Similarly, in another research significant positive relationship was reported of perceived stress with appraisal of threat and stressfulness (Kausar & Anwar, 2010). Likewise, the researchers found significant relationship among threat, stress and uncontrollability (Skinner & Brewer, 2002).

Moreover, negative relationship of perceived threat of terrorism (magnification, helplessness and rumination) with controllability by self, appraisal of challenge and controllability by other in College and University students was assumed. The results revealed negative relationship of perceived threat of terrorism with controllability by self, appraisal of challenge, controllability by other and resilience in College and University students. These results are in line with researches in which significant relationship of threat with challenge appraisal was obtained (Skinner & Brewer, 2002). Similarly, negative relationship was obtained between perceived stress and controllability by self (Kausar & Anwar, 2010). In the same way, negative relationship of threat perception with appraisal of challenge and appraisal of other control was found (Armstrong & Griffin, 2004). Results revealed that threat, centrality, and rumination are positive predictors of psychological distress. These findings are consistent with previous literature, perceived threat predict psychological distress (Saylor et al., 2003).

Implications

Findings of the study will help in developing interventions for students who feel high level of psychological distress because of perceived threat of terrorism. Moreover, skills can be taught to the students to appraise stressful situation as challenging than threatening. It will help in reducing stress.

Limitations and Suggestions

1. The data was collected from two government universities, two private universities and different campuses of one private college. This limit generalizability of findings. For generalizability data should be collected from different institutes and cities.
2. The participants reported that tools were lengthy; fatigue factor might have prevented the participants from giving appropriate responses. Short and reliable tools should be used.

Conclusion

Hence, it is concluded that threat, challenge, centrality, uncontrollable and stressfulness has significant positive relationship with helplessness, rumination, psychological distress, intrusion, avoidance and arousal in students of colleges and universities. The negative relationship of perceived threat of terrorism with appraisal of challenge, controllability by self, and controllability by other in College and University students was found. Moreover, threat, centrality and rumination are significant positive predictor of psychological distress. It was also found that stress appraisal did not moderate the relationship between perceived threat of terrorism and psychological distress.

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