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The present study examined the relationship between rumination patterns, death anxiety, and coping strategies among university students. Data of $N=304$ students (male $n = 163$ and female $n= 141$) was taken from different departments of Quaid-i-Azam University, Islamabad, Pakistan. Rumination was measured by using Event Related Rumination Inventory (ERRI). Brief Cope Scale was used to assess the coping strategies and Death anxiety was measured by using Templer's Death Anxiety Scale - Extended (DAS-E). Results showed that death anxiety was positively associated with intrusive and deliberate rumination. Moreover, death anxiety was positively associated with self-distraction coping, denial coping, instrumental support, emotional support, behavior disengagement, religion, and self-blame coping, whereas, it was negatively associated with active coping and acceptance coping. In addition, both intrusive and deliberate rumination were positively associated with the self-distraction, active coping, denial coping, instrumental support, emotional support, behavior disengagement, venting, positive reframing, planning, humor, acceptance, religious coping, whereas, self-blame coping was positively associated with intrusive rumination only not with the deliberate rumination. In addition, age was positively associated with deliberate rumination, problems solving coping. Female students scored significantly high on death anxiety, whereas, male students significantly scored high on deliberate rumination. Furthermore, male students scored significantly high on substance abuse coping and avoidance copings strategies whereas, female students scored significantly high on religious coping strategies. Utilization of the convenient sampling methodology and use of self-report measures were the main limitations of this study.

Keywords: Death anxiety, rumination, coping, terrorism, university students

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Pakistan is currently facing the worst threat at the moment that is stemming from terrorism. Facing terrorism is a constant source of public and personal distress and a perpetuating source of poor mental health outcomes (Abbas, Hassan, & Ali, 2017). It has not only affected the masses but also the university students (Khan, Watson, & Chen, 2016). In addition, the negative impacts of terrorism and its link with the physical and psychiatric health of survivors is well established (Bashir, Tahir, Bari, & Mumtaz, 2013; Nasim, Khan, & Aziz, 2014). It has been affecting not only the economy of the country but has also been affecting the political and social stability. The overall reputation of the country has been severely impaired due to the violence in the country. Besides, for the past few years, Pakistan has gained much global attention for *terrorism* and its role in the *war against terrorism* (Nasim, Khan, & Aziz, 2014).

However, overcoming the problem of terrorism is a big challenge for the state. The traumatic attack on Army Public School Peshawar, Pakistan and Bacha Khan University, Pakistan has intensified the concern about the security conditions of the educational institutes. Both these attacks left dozens of students wounded in critical condition. Due to these attacks the universities were considered an easy target and were at a high risk, because of the insufficient security arrangements or not having proper boundary walls. Due to these terrorist attacks, educational institutes like universities, school, and colleges become exposed to these threats and students studying under the unprotected and vast area of the institute have become alarmed about the current scenario of the country because of these threats while students endlessly thinking about these events have developed feelings of insecurity.

The definition of the term *terrorism* it changes with respect to its orientation and situation (Young & Findley, 2011). Currently, terrorism is a widely used term and has negative UN Security Council Resolution (1994) is that it is a criminal act committed with the intent

to cause death or serious bodily injury, or connotations (Whittaker, 2013). Terrorism is a use of force to create unrest in the country as well as to create an atmosphere of dread and fierceness (Sandler, 2011). The universal definition of terrorism according to the taking of hostages, with the purpose to provoke a state of terror in the general public or in a group of persons or particular persons, intimidate a population or compel a government or an international organization to do or to abstain from doing any act. Researchers have identified the various causes of terrorism that included the growing poverty, expanding illiteracy, increasing social injustice, derailing democracy, increasing religious intolerance, poor leadership, unmerited and unjust accountability system, crippling economy and corruption (Malik, Sandholzer, Khan & Akbar, 2015; Syed, Saeed, & Martin, 2015). Nasim, Khan, and Aziz, (2014) while discussing the causes of terrorism in Pakistan, have reported that it is a complicated interplay of geopolitical, historical, and psychosocial factors.

It has been observed the act of terrorism evokes certain thought processes. People intentionally or unintentionally think about the terrorist activities. Especially, after the terrorists acts on schools and universities, students start thinking about the factors surrounding these activities. They thus develop feelings of insecurity and death related thoughts. These thoughts are technically termed as ruminative thinking. This thinking may be more automatic, intrusive and brooding or purposeful and more deliberate in nature.

Rumination is known as a constant pattern of thinking in response to any stressful or distressing event that is constantly pondering over those events (Nolen-Hoeksema & Morrow, 1991). The term rumination can also be defined as persistent thoughts about the specific event. Rumination is thinking about the specific experiences for different stressful events instead of focusing only on one's internal mood state. These ruminative thoughts after an ample period make the person think about the situation deliberately

symptoms. So, the intrusive rumination is more related with the anxious thoughts while the deliberate rumination is more closely related to the problem-solving skills. Hence, the types of rumination effect the way person devises his or her ways to cope up with the diversities.

Coping styles are defined as the continuous alteration of thoughts and behavior to deal with different stressful situations. This in turn includes problem solving and extracting meanings out of those stressful situations which leads toward thinking deliberately or positively in order to handle the stressor or trauma (Calhoun, Cann, Tedeschi & McMillan, 2000).

An analysis was carried out which derived two types of ruminations (intrusive and deliberate rumination). The first one is brooding in nature and the other one is reflective in nature. Intrusive ruminations are recurrent, continuous, and repetitive thoughts about a particular stressful event or stressful situation. These unwanted thoughts and involuntary thoughts are not under the control of the individual (Treyner, Gonzalea, & Nolen-Hoeksema, 2003). Deliberate rumination is described as the thoughts which are meaningful on the aspect of the struggle with the event (Calhoun & Tedeschi, 2006; Michael & Snyder, 2005). The continuous meaningful thoughts after an ample time of stressful events indicate the person's enduring way of building the norms and views about the world towards the event. At this phase, deliberate thinking focuses on benefits and extracting meaning and identifying the positive changes with respect to having a problem-solving approach for handling the stressful situation (Helgeson, Reynolds, & Tomich, 2006).

The process of rumination can be best defined in the light of Response Styles Theory. Nolen-Hoeksema, (1991) explained the ways in which the theory works in four ways which affect the negative cognition of the person: 1) by recalling negative thoughts and images, which works to increase the already depressed mood; 2) meddling with problem solving; 3) interfering with the progress

of successful strategies that could potentially be used to overcome the mood, and; 4) worsening of social support. Individuals who engage in depressive rumination often do so with the belief that it will help them understand their depressive mood and symptoms, and therefore, will aid them in overcoming their mood and either in a positive way (problem solving) or avoiding the problems (Lazarus & Folkman, 1984). It is a process in which a person implements various personal resources to deal with different stressful situations. Individuals occupy themselves in coping responses naturally whenever they feel stressed or want to deal with tough situations in life. In other words, these are specific conscious efforts, both psychological and behavioral, which a person utilizes not only to counter the personal and interpersonal problems but also minimize conflicts (Folkman & Lazarus, 1980).

These may include *active coping* strategies such as exerting efforts to remove or block the stressor or behavioral disengagement, such as giving up the struggle to achieve the goal or use emotional support coping to get emotional support or seek assistance from significant others. It may also involve engagement in religious activities or acceptance or acknowledgement of the fact of the stressful situation or make a plan to confront the stressor. These coping strategies provide the basis for dealing with adversities and rationalize them such as terrorist attacks and their consequences like death anxiety.

Death anxiety is defined as an anxious feeling or fear of an individual related to his or her death in response to some stressful events (Goreja, 2000). It includes preoccupation with recurrent thoughts or excessive concern, fear and anxiety related to one's own death. It involves feelings of dread and terror when one thinks about death as the end of life, the process of dying and about what happens after death. Chelgren (2000) stated that age and gender are linked with death anxiety. Many studies determined that females exhibit more death anxiety as compared to men (Madnawat &

Kachhawa, 2007; Russac, Gatliff, Reece & Spottswood, 2007). Some studies however do not support these findings (Cicirelli, 2001; Fortner, Neimeyer, & Rybarczyk, 2001; Moreno, Solana, Rico & Fernández, 2009; Wu, Tang, & Kwok, 2002).

In the light of past literature, Missler, Geurtsen, Mastenbroek, and Chmoun (2009) reported a negative association between deliberate rumination and death anxiety. However, there is a positive relationship between the intrusive rumination pattern and death anxiety. It is being justified as it is connected with the fear of losing a loved one or having the fear of one's own death. This resulted in constant involvement in repeated thoughts about dying. Similarly, in the aftermath of the terrorist attack of 9/11 most individuals constantly indulged themselves in those daunting images of the attack. People ruminated intrusively of that particular event they have gone through. Studies also revealed that the more the individual was exposed in that stressful event, the more that individual was distressed and most of the individuals suffered from many psychological problems i.e. anxiety or depression. Young and Dietrich (2015) determined that rumination forces the individual to worry and that leads to death anxiety towards stressful events among the people. Patterns of stress, rumination and death anxiety are different among individuals. This means that the more the individual worries or ruminates about the stressful event, the more he has to face death anxiety and depression towards particular stressful event.

In a study that was aimed to see the relationship of coping strategies with death anxiety, the results showed strong leanings and thereby important results in terms of active coping in dealing with death anxiety (Hoelterhoff & Chung, 2013). Kumar and Parasha (2015) conducted a study on 'death anxiety, coping, and spirituality among the cancer patients. The result showed that mechanisms like religion, instrumental support, self-distraction, and planning were the most used coping strategies by the sample used in study. Most of the patients were also seen using venting, humor, and positive reframing to deal with death anxiety towards

this disease and also to deal with spirituality. In another study that was aimed at examining the relationship between religious coping and death anxiety among the college students concluded that those who employ heightened level of religious coping have low fear of death because of their strong religious belief that the death is inevitable. Consequently, they are thus more likely to engage themselves in accepting the fact that every entity has to die soon. So those who adapt religious coping had low death anxiety (Wen, 2012).

In a study, to see the predicting role of coping, rumination, and death anxiety in people affected by earthquake, it was found that rumination and the coping strategies reduced death anxiety among the sample population. Overall, the results of past research have concluded that it depends upon the severity of the traumatic experience in one's life that prompts rumination. Depending upon the intensity of the event, an individual shows different psychological experiences like emotional coping in order to get emotional support, behavioral responses such as problem-solving strategies, or even cognitive experiences with intrusive or deliberate rumination. Research showed that with the passage of time, intrusive rumination primed the process of deliberate rumination that activates the problem-solving skills (Gracia, ova, Rincòn, Vázquez & Páez, 2016).

To see the relationship between intrusive rumination and coping, Shipherd and Fordiani (2014) found that individuals had to struggle with the intrusive thoughts towards a negative experience in their life. Moreover, it was concluded, based on the findings that those individuals who show intrusive thoughts towards stressful events are more prone to developing problems and consequently exhibit more psychological distress. Moreover, most of the study sample used avoidant coping strategies to cope with the intrusive thoughts about the event. However, when they do not cope well with trauma related thoughts then they engage in mental or behavioral disengagement.

Stroebe et al. (2007) reported that when individuals lost their loved ones, they started to think negatively about the event. They start to cope with the situation with avoidant, denial, self-distraction, or self-blame coping strategies.

In another study that was carried out to see the gender difference on rumination patterns and coping strategies among adolescents, findings showed that the positive association of intrusive rumination with avoidant coping. Similarly, deliberate rumination is positively associated with the problem-solving approach. The results also showed that females scored higher on intrusive thoughts than males. Males used more problem solving and avoidant coping approaches towards the stressful event as compared to females (Cody, David, Glenwick, & Se-Kang, 2016).

Kamijo and Yukawa (2014) demonstrated the relationship of deliberate rumination with the stressful events. Two types of ruminative patterns of thinking i.e. intrusive and deliberate rumination were assessed. The results demonstrated that the context of self-evaluation was more likely related with deliberate rumination with problem focused coping strategies. These strategies include; planning, growth, instrumental support, religious coping etc. While, negative thoughts were more likely associated with negative adjustment, anxiety, and distress among the sample and most likely associated with avoidant coping.

In the light of above mentioned literature it can be concluded that terrorism is a major source of concern for Pakistani university students (Khan, Watson, & Chen, 2016). These attacks on the civilian population have dramatically increased over the last decade (Bashir, Tahir, Bari, & Mumtaz, 2013). It is also a constant source of distress and anxiety. It not only affects the people psychologically and physically, but it also disturbs the economic and political conditions of the country (Ismail & Amjad, 2014). No place seems to be safe to counter these attacks. There is constant

underlying threat of such attacks. Since, such attacks often occur at marketplaces, hotels, religious gatherings any other public venues, and now even in educational institutions. The terrorist's attacks in our country and threats of related attacks have raised important questions about psychological health of youth (Usman & Javed, 2015). Despite the fact that the state is playing its role to counter terrorism and mitigates its effects, the implications of these events are manifold. However, very limited little empirical research is available to understand the effects of terrorism in the Pakistani population (Bhui, Silva, Topciu, & Jones, 2016). Hence, current study is highly required at this time period.

These terrorist threats evoke certain thought processes. These repeated thoughts produce stress and anxiety. It may also cause death anxiety in them as they do not feel safe about the security arrangements and they feel that educational institutes especially the universities are at high risk to these terrorist threats. This terrorism related distress and anxiety develops recurrent repetitive thoughts (Nolen-Hoeksema & Morrow, 1991). These anxious, stressful, and depressive thoughts hinder the problem-solving coping of the students and trigger the death related thoughts that ultimately affects their overall coping skills. Hence, this study is designed to see the repetitive thoughts patterns and coping strategies among university students and it would clarify the nature of rumination patterns among university students and how they cope with this insecure situation.

Thus, the main objectives of the study are to see the prevalence of death anxiety among university students and understand the relationship between rumination styles, coping strategies and death anxiety among university students. Additionally, this also involves examining the role of demographic variables such as gender and age.

Following hypotheses were formulated after reviewing the literature:

1. Intrusive rumination is positively associated with death anxiety while deliberate rumination is negatively associated with death anxiety.
2. Intrusive rumination is positively associated with avoidant coping and is negatively associated with problem focused coping and emotion focused coping.
3. Deliberate rumination is negatively associated with avoidant coping and positively associated with problem focusing coping and emotional coping
4. Avoidant and emotional coping would be positively associated with death anxiety while problem focused coping would be negatively associated with death anxiety.
5. Female students would score high on intrusive rumination and death anxiety whereas male students would score high on deliberate rumination. Male students would score high on problem solving and avoidant coping whereas female students would score high on emotional coping.
6. Age would be positively associated with deliberate rumination and problem focused and emotion focused coping; whereas, it would be negatively associated with intrusive rumination, death anxiety and avoidant coping.

Method

Sample

The study was conducted on university students. The sample comprised of $N=304$ students that contained both male ($n = 163$) and female students ($n = 141$). The age range of the students was from 18 to 36 years ($M = 20.25$, $SD = 3.14$). The study comprised of students from different departments of the university. The non-probability sampling, purposive convenient sampling was used to approach the study sample. Students were taken from different departments of Quaid-e-Azam University (i.e. 41.4% were obtained from natural sciences, 50% were obtained from social sciences and 8.6% obtained from Biological sciences department). Moreover 35.5% students were living in hostels and

64.5% were day scholars. Almost, 42.4% students showed satisfaction for the security arrangements in university and 57.6% showed no satisfaction with the security arrangements in university.

Measures

Following scales were used for the study:

Brief Cope Scale Brief Cope Scale. This is a self-reported scale which is developed by Carver (1997) to evaluate different coping behaviors and thoughts of an individual and has been translated into Urdu and English languages. The English version of the scale has been used in the study. The scale consists of 14 subscales and further, these subscales were theoretically grouped into three coping categories by summing items accordingly (with high score indicating greater level of coping strategy. The three subscales were categorized as problem-focused coping (instrumental support, active coping, planning, and religious scale). Its alpha reliability is .80. The other subscale is emotion focused coping (venting, humor, acceptance, positive reframing, and emotional support scales). The alpha reliability of the subscale is .72. The third category is avoidant coping (denial behavioral disengagement, self-distraction, self-blame and substance use subscale) and alpha reliability of the subscale is .75. The scores have four response options: 1 is for *I haven't been doing this at all*, 2 for *I have been doing this a little bit*. 3 for *I have been doing this in a medium amount*, 4 is for *I have been doing this a lot*. All the items of the scale are positively worded.

Death Anxiety Scale. The Death Anxiety Scale was developed by Templer (1970). A 51-item Death Anxiety Scale–Extended (DAS-E) was constructed by (Sharif et al., 2014). In the current study, DAS-E was used. It has 27 items. It is a relatively brief scale and is one of the most frequently used scales to assess death anxiety. The DAS-E exhibited suitable validity and reliability. The concept of death anxiety is a multidimensional trait and which is comprehensively studied by using the shorter version

of the scale (scale of 1-5, strongly disagree to strongly agree). The instrument had a high internal consistency (Cronbach's $\alpha = 0.89$). Two DAS-E questions that have been scored inversely are item number 24 and 26. The four subscales are used in the study which consists of items related to (1) worrying about death (11 items) with alpha reliability of .83 (2) fear of destruction (7 items) with alpha reliability of .87 (3) Agony of death (5 items) with alpha reliability of .73 and (4) sense of ending (4 items) with alpha reliability of .75.

Event Related Rumination Inventory (ERRI). The scale is a 20 item measure of cognitive processing which is specified towards an event and is developed by Cann et al, (2011). Participants rated the degree to which they experienced certain thoughts on a 4-point Likert type scale (0= not at all; 3= often). The total score is calculated by adding up total items respectively. The measure comprises of two subscales intrusive rumination and deliberate rumination. Both the subscales have positive items. Alpha reliabilities of subscale deliberate, and intrusive rumination are said to be .93 and .83 respectively.

Procedure

For data collection, a permission letter was taken from the head of the department for the collection of the data. The nature and purpose of the study was explained to the participants. The students were provided with the questionnaires and were instructed to fill the questionnaire and based on their responses, findings were concluded. They were assured about the confidentiality that information provided will be kept private and will not be shared with anyone else. The respondents were assured that the information they had provided was to be used for the research purpose only.

Results

To assess the degree of relationship between the main variables, Pearson Product Moment Correlation was computed. Descriptive statistics and Independent sample *t*-test was computed to see the comparisons on the variables.

Table 1
Psychometric Properties and Descriptive Statistics of Brief Cope, Event Related Rumination Inventory, and Death Anxiety Scale (N=304).

Scale	No. of items	α	M	SD	Range		Sk
					Potentia	Actual	
DA	27	.74	78.60	12.65	27-135	44-125	-0.38
PES	11	.83	30.45	05.32	011-55	15-053	-0.32
FER	07	.83	18.32	03.56	07-035	07-035	-0.54
ANY	05	.73	13.53	02.12	05-025	06-024	-0.75
SNS	04	.75	12.34	01.89	04-020	04-019	-0.32
ERRI-I	10	.82	16.43	06.25	00-030	00-028	-0.07
ERRI-D	10	.80	14.56	04.23	00-030	00-029	-0.08
BCOPE	28	.79	63.79	10.34	27-108	027-93	-0.45

Note. BCOPE=Brief Cope Scale, ERRI-I = Event Related Rumination Inventory- Intrusive, ERRI-D = Event Related Rumination Inventory-Deliberative, DA = Death Anxiety scale, PES= Pessimistic Worry, FER= Fear of Destruction, ANY= Agony of Death, SNS= Sense of Ending.

Table 1 shows the mean, standard deviation, and alpha value of the scales. As indicated in the table, the value of Alpha ranged from satisfactory ($\alpha = .74$) to high ($\alpha = .83$) of all the instruments. Values of skewness show that data is normally distributed.

Table 2

Pearson Product Moment Correlation between the subscales of Rumination, Coping strategies and Death Anxiety Scale (N=304)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 DA	-																
2 INT	.33**	-															
3 DEL	.27**	.58**	-														
4 SEL	.19**	.21	.22**	-													
5 ACT	-.21**	.28**	.34**	.36**	-												
6 DEN	.11*	.19**	.18**	-.02*	.15**	-											
7 SUB	.02	.05	-.04	-.00	-.00	.25**	-										
8 INS	.23**	.20**	.21**	.32**	.22**	.09	.02	-									
9 EMO	.15**	.19**	.21**	.26**	.28**	.10	.00	.52**	-								
10 BEH	.20**	.19**	.12*	-.09	.06	.29**	.26**	.07	.17**	-							
11 VEN	.20**	.21	.23**	.30**	.20	.26**	.11*	.16**	.26**	.21**	-						
12 POS	-.02	.22	.31**	.26**	.43**	.13*	-.11	.11*	.21**	.00	.12*	-					
13 PLN	-.02	.22**	.36**	.20**	.39**	.06	-.10	.16**	.23**	.05	.09	.36**	-				
14 HMR	.05	.17**	.13*	.22	.29	.23**	.11*	.24**	.29**	.10	.16**	.36**	.07	-			
15 APT	-.19**	.20**	.18**	.21**	.28**	.15**	.12*	.21**	.25**	.16**	.21**	.30**	.32**	-			
16 REL	.20**	.28**	.34**	.27**	.37**	.04	-.15**	.19**	.23**	.04	.17**	.34**	.45**	.13*	-		
17 BLM	.14*	.15	.10	.12*	.17**	.23**	.32**	.12*	.21**	.28**	.16**	.15**	.42**	.28**	-.01	-	

Note. DA= Death Anxiety, INT= Intrusive Rumination, DEL= Deliberate Rumination, SEL= Self-Distracton, ACT= Active Coping, DEN= Denial Coping, SUB= Substance Use, INS= Instrumental Support, EMO= Emotional Support, BEH= Behavioral Disengagement, VEN= Venting of Emotions, POS= Positive Reframing, PLN= Planning, HMR= Humor, APT= Acceptance, REL= Religion, BLM= Self-Blame ** $p < .01$, * $p < .05$

Table 2 shows the Pearson correlation between intrusive and deliberate rumination, death anxiety, and coping styles. Results showed that death anxiety is positively associated with intrusive and deliberate rumination. Moreover, death anxiety is also significantly positively associated with self-distraction coping, denial coping, instrumental support, emotional support, behavior disengagement, religion, and self-blame coping, whereas, death anxiety is significantly negatively associated with active coping and acceptance coping. In addition, both intrusive and deliberate rumination are positively associated with each other and both are positively associated with the self-distraction, active coping, denial coping, instrumental support, emotional support, behavior disengagement, venting, positive reframing, planning, humor, acceptance, religious coping, whereas, self-blame coping is positively associated with intrusive rumination and is not significantly related with the deliberate rumination.

Table 3

Pearson correlation between death anxiety scale and subscales of coping, rumination with demographic variables (N=304)

	1	2	3	4	5	6	7	8	9	10	11	12
1 AGE	-											
2 YOE	.60**	-										
3 MFI	.05	.06	-									
4 INT	-.00	.00	.03	-								
5 DEL	.12*	.11	-.04	.58**	-							
6 PES	.06	.09	.06	.16**	-.05	-						
7 FER	.00	-.01	-.04	.29**	-.00	.44**	-					
8 ANY	-.00	.01	.02	.32**	.19**	.44**	.66**	-				
9 SNS	.01	.02	.12*	.19**	.03	.30**	.43**	.37**	-			
10 PRO	.12*	.06	-.01	.36**	.45**	-.05**	-.03**	-.09**	.01	-		
11 EMO	.03	-.07	-.03	.31**	.34**	.10	.18**	.23**	-.02	.58**	-	
12 AVO	-.04	-.06	-.01	.27**	-.09**	.12*	.15*	.20**	.07	.21**	.45**	-

Note. YOE= Year of Education, MFI= Monthly Family Income, INT= Intrusive Rumination, DEL= Deliberate Rumination, PES= Pessimistic Worry, FER= Fear of Destruction, ANY= Agony of Death, SNS= Sense of Ending, PRO= Problem Solving, EMO = Emotion Focused coping, AVO = Avoidance Coping; ** $p < .01$, * $p < .05$

Table 3 shows the correlation of demographic variables like age, education, monthly family income with the rumination patterns and subscales of death anxiety. Results showed that age is positively associated with deliberate rumination, problems solving and coping. Moreover, family income is significantly positively associated with the sense of ending. It was also brought to attention that pessimistic worry, fear of destruction, agony of death, and sense of ending were significantly positively associated with the intrusive rumination whereas, agony of death was positively associated with deliberate rumination.

Table 4

Mean, standard deviation and t values for the male and female students on Rumination Death Anxiety and Brief Cope subscales (N=304)

	Males		Females		<i>t</i>	<i>p</i>	95% CL		<i>Cohen's d</i>
	(n=163)		(n=141)				<i>LL</i>	<i>UL</i>	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
DA	77.22	13.21	80.20	11.81	2.0	.04	-5.83	-.13	-0.23
INT	13.36	05.33	14.09	06.05	1.1	.26	-2.01	.56	
DEL	16.42	05.42	15.12	06.28	1.9	.05	-2.61	.02	0.22
PES	32.49	04.24	33.12	03.88	1.3	.18	-1.54	.30	
FER	20.26	04.87	21.11	05.24	1.4	.14	-1.99	-.29	
ANY	14.36	05.20	15.26	04.56	1.5	.11	-2.01	.21	
SEN	11.58	03.23	11.91	03.52	.85	.39	-1.09	.43	

Note. DA= Death Anxiety, INT= Intrusive Rumination, DEL= Deliberate Rumination, PES= Pessimistic Worry, FER= Fear of Destruction, ANY = Agony of Death, SEN = Sense of Ending

Table 4 shows the comparison between male and female students on the variables of rumination patterns and death anxiety. An independent sample *t*-test was computed to see the differences across gender. Results showed that female students scored significantly high on death anxiety, whereas, male students significantly scored high on deliberate rumination.

Table 5
Comparison of male and female students on Coping strategies (N=304)

	Males		Females		<i>t</i>	<i>p</i>	95% CI		Cohen's <i>d</i>
	(n=163)		(n=141)				LL	UL	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>					
DA	05.28	1.66	05.26	1.52	0.14	.88	-.63	.23	
ACT	05.53	1.48	05.59	1.60	0.35	.72	-.47	.36	
DEN	04.18	1.57	04.10	1.59	0.42	.67	.37	.49	
SUB	03.32	1.90	02.43	1.14	4.80	.01	.04	.85	0.56
INT	05.12	1.55	04.95	1.78	0.89	.37	.50	.39	
EMO	04.61	1.55	04.51	1.57	0.60	.54	-.58	.27	
BEH	04.19	1.56	04.07	1.53	0.62	.53	.21	.62	
VEN	04.71	1.42	04.51	1.44	1.20	.21	.38	.39	
PO	05.18	1.47	05.39	1.52	1.20	.21	.36	.44	
PLN	05.23	1.48	05.56	1.47	1.70	.07	.53	.27	
HMR	04.85	1.47	04.73	1.50	0.71	.47	-.16	.64	
APT	04.92	1.47	04.83	1.46	0.52	.59	-.17	.62	
REL	05.32	1.53	05.84	1.39	3.00	.01	-.72	.08	-0.35
BLM	04.38	1.58	04.07	1.58	1.60	.09	-.38	.48	
PRO	21.93	4.10	21.28	4.34	1.40	.14	-1.7	.59	
EMO	23.98	4.35	24.95	5.09	0.58	.56	-.92	1.6	
AVO	21.37	5.06	19.95	4.28	2.61	.01	-.78	1.8	0.30

Note. DA=Death Anxiety, INT=Intrusive Rumination, DEL=Deliberate Rumination, SEL=Self-Distraction, ACT=Active Coping, DEN=Denial Coping, SUB=Substance Use, INS=Instrumental Support, EMO=Emotional Support, BEH=Behavioral Disengagement, VEN=Venting of Emotions, PO=Positive Reframing, PLN=Planning, HMR=Humor, APT = Acceptance, REL = Religion, BLM = Self - Blame ** $p < .01$, * $p < .05$

Table 5 shows the comparison of male and female students on coping strategies. Male students scored significantly high on substance abuse coping and avoidance copings strategies whereas, female students scored significantly high on religious coping strategies.

Discussion

The present study was conducted to see the relationship between rumination, coping strategies, and death anxiety among university students. Moreover, it explained how university students deal with the stressful events like terrorism and how they think about these events happening in their life. Further, the study also identified the demographic correlates (age and gender) of coping patterns, rumination styles and death anxiety and gender difference on the main constructs. Pearson moment correlation was used to determine the relationship between coping, rumination and death anxiety among university students. To find the reliability of the scales Cronbach alpha reliability coefficient was determined (see Table 1). Results showed that alpha reliability of all the scales is satisfactory. In addition, to see the gender differences on the study variables, Independent t-test was used.

The first hypothesis posited that intrusive rumination is positively associated with death anxiety while deliberate rumination is negatively associated with death anxiety. Our findings partially supported this hypothesis. Findings showed that intrusive rumination is significantly positively associated with death anxiety (see Table 2). These results are in accordance with the past research. For instance, Khalek, (2005) in a comparative study demonstrated that intrusive thought pattern is the one prominent factor in death anxiety. However, the second part of the hypothesis was not supported. Current findings showed that deliberate rumination was also significantly positively associated

with death anxiety. This illustrates that both rumination styles are associated with fear of death. Similar findings are found in the past literature. For example, according to, Park, Riley, and Snyder (2012) individuals who indulge themselves in negative thinking will more likely to have death anxiety towards stressful events.

The second, third and fourth hypotheses stated that intrusive rumination is positively correlated with emotional and avoidant coping, and negatively associated with problem focused coping and emotion focused coping. Deliberate rumination is negatively associated with avoidant coping and positively associated with problem focusing coping and emotional coping. Moreover, avoidant coping and emotional would be positively associated with death anxiety while problem focused coping is negatively associated with death anxiety.

Results in Tables 2 and 3 showed the correlation between the subscales of rumination and coping strategies. Our findings showed that both intrusive and deliberate rumination are positively associated with the self-distraction, active coping, denial coping, instrumental support, emotional support, behavior disengagement, venting, positive reframing, planning, humor, acceptance, and religious coping, whereas, self-blame coping was significantly positively associated with intrusive rumination. On the other hand, pessimistic worry, fear of destruction, agony of death, and sense of ending were significantly positively associated with the intrusive rumination. Moreover, agony of death was positively associated with the deliberate rumination. Our results partially supported our hypothesis. Stroebe et al. (2007) reported that rumination is more linked with avoidant coping rather than facing the situation. The study was done on the sample of individuals who have lost a loved one; either parent, sibling or a very friend. An individual on such a

tragic loss tries to escape from dealing with the stressor by avoiding it. Another study also stated that people tend to like to share more emotions at the time of stressful situation (Gracia, 2016).

Previous literature stated that deliberate rumination is positively associated with problem and emotional focused coping. It suggested that individuals who reflectively or deliberately think about the situation tend to adapt more problem focused coping and emotional restructuring as compared to avoidant coping strategies (Burwell & Shirk, 2007). Besides, past research also demonstrated that avoidant coping strategies such as behavioral disengagement, self-blame, and denial are consistently associated with increased psychological distress (Leeman, 2015). To see the relationship between coping, rumination, and death anxiety, past research supported that avoidant and emotional coping are positively associated with death. Past research has categorized the coping in terms of avoidant and emotional coping strategies (Kumar & Parashar, 2015).

However, the non-significant results of the some of the assumed correlation can be due to the sample size or cultural variation, as the same was relatively small. It may be inferred from the results that the more the individual has death anxiety towards any situation, the less he will be able to solve the problem and would be more likely to avoid it. The previous research also mentioned that exposure to negative life experiences causes anxiety among individuals and most of them tend to cope up with problem solving coping. Besides, Khan, Watson, and Chen (2016) found that negative religious coping was positively associated with distress.

The fifth hypothesis narrates that female students would score high on intrusive rumination and death anxiety whereas male students would score high on deliberate rumination. Male students would score high on problem solving and avoidant coping whereas female students would score high on emotional coping. Results showed that female students scored significantly high on death anxiety, whereas, male students significantly scored high on deliberate rumination. Moreover, findings showed that male students scored significantly high on substance abuse coping and avoidance coping strategies whereas, female students score significantly high on religious coping strategies. Our hypothesis is partially supported, and findings are mostly in line with past research. In a study, Gracia et al. (2016) found that religiosity and planning were associated with problem focused coping among the sample who suffered from earthquake disclosures. To overcome any traumatic event, mostly the sample population used healthy coping strategies. Past studies also suggested that, though men and women were similar in their cognitive evaluation of the situation, they however reported differences in coping. Women used more social seeking support and used emotion-focused coping to a greater level than men, whereas men stated using comparatively more problem-focused coping and avoiding coping to overcome the stressful situation than women (Folkman & Lazarus, 1980).

The previous literature demonstrated that concerning to gender, women tend to use more emotional coping in which they most likely to use emotional support from their closed ones as well as more likely to let them express their feelings towards stressful situations. And this behavior increases with the age i.e. emotion focused coping is seen more in women as compare to men. A past study explains that women scored high on death anxiety as compare to men. This means women tend to feel more anxious about dying after any stressful event or disease (Suhail & Akram, 2002). Most of the studies concluded that women show more levels of death anxiety as compare to men (Madnawat & Kachhawa, 2007; Russac, Gatliff, Reece & Spottswood, 2007).

Previous literature has also demonstrated that women tend to ruminate more intrusively towards stressful events because they more likely to express more negative feelings and ruminate in a negative pattern regarding the event (Nolen-Hoeksema & Jackson, 2001). As terrorism is narrated as a complex interplay of geopolitical, anthropological and psychosocial factors (Nasim, Khan, & Aziz, 2014), a multidimensional approach is helpful mitigating its negative effects.

Limitations and Recommendations

The first and the foremost limitation of the study was that to assess the death anxiety and rumination patterns, self-report questionnaires were used that may be a potential source of biasness.

Convenient sampling technique was used, that may limit the generalization of results to other educational institutes of Pakistan. In future researches, random sampling may give more general findings.

Further studies can be done with other samples to see how terrorist attacks can change the rumination patterns and anxiety related to death. The study was based on quantitative measure. Future research study can also be done based on qualitative measure with the same sample.

Further, a longitudinal study can be conducted to see the causal links between the terrorism, ruminations, anxiety and coping to see what sort of psychological problems people face in the aftermath of a terrorist event.

Implications

The study clarifies the current psychological state of the students, their rumination patterns and how they cope with these situations. The study can help the authorities and organizations to implement those strategies in future to help people to cope with the situation. Future researches might get benefit in studying the cross-cultural comparisons of the results.

Conclusions

University students exhibit death anxiety because of the intrusive rumination about the events and use avoidant coping to deal with the situation. On the other hand, students also used problem solving coping when handling the stressful situation as they deliberately think about the terrorism event. The negative impacts of terrorism on students can be minimized by teaching them the appropriate coping skills.

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