Impact of a Perceived Threat of Terrorism on Job Performance: A Moderated-Mediated Model

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Abstract

This study explores the relationship between the threat of terrorism and the job performance of police employees. It also examines the potential mediating effect of job-related anxiety between the threat of terrorism to job performance relationship and the moderating effect of innovative work behaviour among Punjab Police personnel. Multisource (employee and respective supervisor), time-lagged data from 425 respondents, was collected, which shows that the threat of terrorism increases job-related anxiety of employees which in turn reduces job performance. Personnel's innovative work behaviour buffers the negative effect of perceived threats of terrorism on job-related anxiety, resultantly the relationship is mitigated for those who are innovative in their work behaviour and practices. In an external environment where terrorism presents a credible threat, organizations can, therefore, encourage employees to exercise innovative ways to enhance security provisions at different levels. The study results showed; a direct association between the perceived Threat of Terrorism (TOT) and Job-Related Anxiety (JRA). While an inverse relationship was emerged between Job-Related Anxiety and Job Performance (JP) and Innovative Work Behaviour (IWB) mitigated the positive relationship between the Perceived Threat of Terrorism and Job-Related Anxiety. Mediation role of Job-Related Anxiety between the perceived Threat of Terrorism and Job Performance was also explored.

It shows that when employees feel a threat of terrorism, causes them to feel anxiety which curtails their performance of employees. However, innovative employees diffuse stress by coming up with novel solutions. Our study is limited due to the sample size. Other

FUJBE Vol 8(1) Feb 2023

psychological reservoirs may also be incorporated in the same model to see the mitigating effect. However, managers may provide training interventions to help in developing innovative behaviour.

Key Words: The perceived threat of terrorism, Job-related anxiety, Innovative Work Behaviour, Job Performance, Punjab Police Personnel

Introduction

Terrorism is a common menace in today's world. Nearly all countries are affected due to the consistent prevalence of terrorism irrespective of caste, creed, and religion (Chen & Siems, 2004; Eller, 2010; Toker, Laurence, & Fried, 2015). The Threat of Terrorism (TOT) is a cause of worry in the routine life of people, although such attacks are not frequent however, individuals feel terrified by the possibility of facing such attacks on them or their family members in future (Paloutzian, Emmons, & Keortge, 2003; Sinclair & LoCicero, 2006). As a result of this perception of a future threat, it is beyond doubt that it may have a negative effect on people's psychological performance, quality of life, and daily routine life (Schuster et al., 2001; Somer, Tamir, Maguen, & Litz, 2005). Not only does the threat of terrorism affect society on the individual level, but it also affects the organizational level. Various organizational sectors have experienced the various impacts of TOT while achieving their organizational goals. The organizations directly exposed to TOT have to face the challenge of a stressed and demotivated workforce. On the other hand, the public sector's executive agencies face a twofold challenge, one is how to cope with their grief, and the second is how to respond to the citizens who expect that those agencies will provide them protection. One of the most important public sector agencies is the police. It is responsible for peacekeeping and has to cope with the challenge of neutralizing the effects of TOT on its personnel as well as citizens. Despite growing interest in the threat of terrorism on the mental well-being of citizens (Shirom, Toker, Shapira, Berliner, & Melamed, 2008), in previous studies, no particular consideration has been focused on enquiring about that how these terrorist attacks can affect and result in a decline in the organizational performance of the workers (Bader & Berg, 2014; Howie, 2007; Toker et al., 2015).

The reason why an employee's ability to cope with work satisfaction does not only involve organizational stress, but an employee's private life can also have a negative influence on his/her performance (Arnold, Flaherty, Voss, & Mowen, 2009). According to Toker et al. (2015), burnout and TOT have a positive relationship. The threat of terrorism also maximizes inter-family conflict, and psychological imbalance like frustration, stress, turnover, employee efficiency, anger, and resentment (Galea, Nandi, & Vlahov, 2005; Himes, 2008). The main concern of an employee and the organization is to meet the job demands (Appelbaum et al., 2004), therefore, how external stress, like perceived TOT, might shape job performance is critical (Holtom, Mitchell, Lee, & Inderrieden, 2005). The critical factor that influences the

work performance of an individual is, the greater the perception of threat, more the anxiety about the work (Benight & Bandura, 2004). As a result of this anxiety, conservation of resource (COR) theory explains that the main reason why the ability to perform at the job by a personnel, declines, is due to the presence of stressful conditions, and given to these stressful conditions also impairs their natural ability to complete their task (Stevan E Hobfoll, 1989).

The effects of terrorism on personnel's job performance must be considered by their organizations to save their workers from its harmful effects (Toker et al., 2015; Waldman, Carmeli, & Halevi, 2011). Therefore, there is a need for a buffering factor that can minimize the negative impact of the threat of terrorism. Innovative work behaviour is an essential measure of the personnel that can improve the job performance required by an organization (Bunce & West, 1994; West, 1989). Job outcome requires permanent organizational, social, psychological, and physical factors relating to the job; these factors have a positive influence on job performance (Bakker & Demerouti, 2007). The transactional theory of stress explains that people analyze job requirements by positive or negative influences on their lives (Lazarus & Folkman, 1984). Innovative work behaviour was reported as directly proportional to job demands (Janssen, 2000). Furthermore, the presence of innovative support was directly related to a personnel's innovative functioning even in the presence of stressful conditions (Leung, Huang, Su, & Lu, 2011). From the above discussion, it is clear that innovative work behaviour can be a potential moderator to diffuse the stress resulting from threatening perceptions.

To test the model of the study, we selected a special context of the police department where the model has relevance and may provide robust results. The police and forces have been the most affected group apart from the civilians in terms of casualties, injuries, and disabilities caused by the terrorist attacks, especially the Punjab Police. The mode of violent attacks included suicidal attacks, rocket attacks, beheadings, remote-control bombs, landmines, firing, sabotage, improvised explosive devices (IEDs), target killings, and hand grenades. The perception of threat may cause increased anxiety which further affects their performance. However, with innovative thoughts and behaviour policemen may come up with a novel solution to cope with a stressful situation.

Literature Review

Threat of Terrorism

Terrorism is "the use of violence for political ends including the use of violence for the purpose of putting the public or any section of the public in fear" as narrated in the British Act for Prevention of Terrorism 1974, whereas USA Department of Defense stated in 1983 that terrorism is "the use of force by revolutionary organizations." The incident of 9/11 has sensitized the phenomena of terrorism, and almost the world perceives the threat of terrorism

more than ever before. There is a need to understand the consequences of perception of the threat of terrorism and political incidence (Huddy, Feldman, Capelos, & Provost, 2002).

Terrorism impacts the individuals of society. People feel anger, anxiety, fear, sadness, and show concerns about the family members for becoming victims of terror attacks (Beck, 2002; Leonie Huddy & Feldman, 2011). Previous literature suggests that adverse effects of terrorism can be decreased by developing a positive behaviour towards personal and social networks, family members, and close friends would be the members of such networks (Huddy et al., 2002; Schlenger et al., 2002). Security forces have come under extra pressure to manage this phenomenon since the advent of terrorism on the world scene. As Police department is considered the first line of defense against such terrorist threats, therefore, the police department has enhanced its vigilance. Police efforts to save the community from terrorism indicate preplanning from their side to better control terrorist activities (Randol, 2012). Previous literature about police departments expresses that for the safety and well-being of the people, police performance increased to a considerable extent (Jonathan-Zamir & Weisburd, 2013). Moreover, it was against the researcher's perception that there was no decrease in the assessing procedure of justice, and the procedure of justice was the main focus of attention by the police in every situation (Randol, 2012).

Few studies have explored that job-related anxiety significantly affects job performance while performing duties under the perceived threat of terrorism. In contrast, this research considered innovative work behaviour an effective tool to reduce job anxiety, resulting in improved job performance even in the presence of a perceived threat.

Job Performance

Scholars believe that an individual's performance has various aspects such as procedural feature, i.e., social and an outcome feature of performance which can be differentiated (Eaves, Hatemi, Prom-Womley, & Murrelle, 2008; Fransen, Fennis, Pruyn, & Das, 2008). Researchers have found a relationship between job performance and job stress (Yerkes & Dodson, 1908). The progress of the Activation Theory of Motivation supports this model and was highly appreciated by other scholars (Greenberg & Kosloff, 2008; Hayes, 2009; Meyer, 2009; Stevens et al., 2009). The basic concept in this model is that increased stress will lower job performance and lower the activation rate (Jamal, 2007). On the other side, individual experiences high order job-related anxiety, and spends most of the time and energy to overcome this anxiety, which results in lower job performance. Moreover, this model describes that if individual experiences very low job-related anxiety, the performance will be more as little energy and time is spent to overcome this anxiety. The critical role of the police department is to maintain the law-andorder situation in a society. Therefore, it has received researchers' attention in the present era. Armeli, Eisenberger, Fasolo, and Lynch (1998), conducted a study and recognized the effect of organizational perceptional provision on the work performance of police personnel. Encouragement of personnel by the society increases the job performance, and various kinds of needs and emotions are satisfied by the perceived organizational support. Perceived organization support is directly proportional to socio-emotional needs and obligations and improves job performance. (van Gelderen, Konijn, & Bakker, 2017).

Job-Related Anxiety

Job-related anxiety can be regarded essential and main psychosis issue and would be the fundamental cause of the mental disorder (Sinclair & LoCicero, 2006; Spector, 2006). Current theories of personality contain the basic concept of anxiety, and literature, the arts, religion, and many other facets of contemporary life are also reflected in anxiety phenomena (Leary, 2004).

Job-related anxiety among police personnel has been the focus for researchers for the last two decades. Bowler et al. (2016), conducted a study and examined the post-traumatic symptoms in police personnel who responded to the 9/11 incident of terrorism in America. The empirical evidence stated that almost half of the police personnel experienced job-related anxiety. It has been observed that various kinds of stressors unprotect police personnel, and fulfilling job requirements in the police department is an laborious task (Anshel, 2000; Paton & Violanti, 1997). Though other occupations also have different types of stressors for employees, however, in the police department, these stressors are of high value and create a high rate of anxiety and tension than a person feels in any other job (Arnetz, Arble, Backman, Lynch, & Lublin, 2013; Laufersweiler-Dwyer & Dwyer, 2000; Sommer & Ehlert, 2004). As police constantly face such situations of anxiety in their job environment and this results in various kinds of health hazards, such as high blood pressure, loss of nervous balance and diabetes, etc. (Acquisti & Gross, 2006; Arnetz et al., 2013; Gross et al., 2006; Sheehan, Sellers, Baker, & Feiner, 2003; Van Hasselt, et al., 2003)

Innovative Work Behaviour (IWB)

The innovative work behaviour can be defined as "the generation, promotion, and realization of new ideas within a work role, workgroup or organization to benefit in performance, the group or the organization" (Scott & Bruce, 1994; Vlahov et al., 2002). The importance of new ideas has a significant effect on the growth and enactment of new ideas and theories that are applied in daily work practices to improve the organization (Aquino et al., 2004). The literature focused on subordinate employees, who play their role to add something new relating to work environments and their groups. However, these novel ideas frequently go beyond the group task to other areas (Aquino et al., 2004; Vlahov et al., 2002).

Creativity is supposed to be positive for society and a source of fulfillment at the individual level instead of its impacts on society. However, in some cases, it can also be malevolent because one who wants to harm someone also uses creativity. This perspective of creativity is essential for law and enforcement agencies, especially in the police department, because understanding this perspective helps counter-terrorism (Cropley, Kaufman, & Cropley, 2008).

In short, we can conclude from the above discussion that innovative work behaviour is essential in the investigation agencies and counter-terrorism departments.

Perceived Threats of Terrorism and Job-Related Anxiety

Research indicates that if a worker experiences family tensions and is occupied about the family members, this negatively impacts the job performance (Singh, Suar, & Leiter, 2012; Zhang, Griffeth, & Fried, 2012). If personnel perceive anxiety personally or relating to their family, these feelings penetrate to a person's work environment (Ford, Heinen, & Langkamer, 2007; Lim & Tai, 2014). The decreasing reserved resources, and being at risk of unfavorable job conditions hinder job performance of the personnel (Witt & Carlson, 2006). The stressful conditions decrease an individual's work performance below than the standards set by the respective organization (Kenneth, Pargament, Tarakeshwar, Ellison, & Wulff, 2001). For example, perception about future terrorism can be taken as a stressor originating from outside the work environment, increasing anxiety. Perception of threat hampers people's thinking ability to cope with the anxiety during routine life (Greenberg, Pyszczynski, & Solomon, 1986). Following the same analogy with Conservation of Resource Reservoir theory, job burnout increases with an increase in perception of threat of terrorism (Toker et al., 2015). Moreover, following the axiom of conservation of resource theory, when psychological resource is compromised, it creates a reaction which may emerge in the form of job-related anxiety. Therefore, in the light of the above presented argument this study hypothesizes:

H1. Perception of threats of terrorism positively effects the job-related anxiety.

Job-related Anxiety and Job Performance

When there are incumbants are stressed, the further feel uncertain under unfavorable conditions, and are not in a position to perform work as expected by the employer (McCarthy et al., 2016; Xie & Johns, 1995). In connection to the discussion of Resource Theory, the existence of inversely proportion relationship between job-related anxiety and job performance is because personnel is not in a position to fully utilize the potential to fulfill the job requirements being under stress (Hobfoll, 2001). Job-related anxiety causes a decline in the job performance for not utilizing the capabilities fully due to unfavorable conditions such as disturbing circumstances and distressing conditions, which otherwise could be done well in favorable conditions (Jamal, 1985; Lim & Tai, 2014; McCarthy et al., 2016). The personnel under stress are not in a position to fulfill their job demands, cannot make cannot stand out in the organization, and cannot do their work with concentration (Quinn, Spreitzer, & Lam, 2012).

On the other hand, the personnel who do not feel anxiety can uplift the morale of their organization with their active participation and enhance their job performance (Brown & Leigh, 1996; Stevan E Hobfoll, 1989). When workers face anxiety, they have to exert more energy and attention to enhance their job performance that the organization demands (De Clercq et al., 2017; Jamal, 1985; McCarthy et al., 2016). Hence, we hypothesize:

H2. There is an inverse relationship between personnel's job-related anxiety and job performance.

Mediating Role of Job-Related Anxiety

Researchers argue that if a concept fully defines the connection between the findings and outcomes, then it may acts as a mediator (Baron & Kenny, 1986). The constructs playing their roles as mediators in the closure procedure find the influence of a construct on the outcome variable. "Their direct effect on dissolution comes mainly from the fact that they are the consequence of the determinant variables, the true causes of the switch" (Antón, Camarero, & Carrero, 2007). It must not be understood that their role is only to conduct the influences of determinant aspects in any procedure. Such aspects do a lot besides this: they may change the impacts of the independent variable and focus on attention; then, that concept is modified and changes the result of such causes on the outcome variable. The mediator's role is proven in literature in connection to satisfaction as the mediator in relating to consumer commitment (Antón et al., 2007; Martínez & del Bosque, 2013). Similarly, it can be visualized to perform its function in the outcome procedure.

The mediating path is further supported with stimulation organism response theory, which posits that whenever any external factor influences the organism, it results into response. The response can be positive or negative depending upon the external factor or the way internalization is made. Following the same analogy, when threat is perceived by any organism cause anxiety and results into lower job performance.

A certain kind of anxiety is evident in people constantly under the threat of terrorism; this results in the impairment of energy resources and finally decreases their work performance (Bader & Berg, 2014; Pargament, 2001). Anxiety that a person feels while executing the work is the mediator that has an effect and decreases the job performance. Job-related anxiety also plays its role as a mediator between the family background of a person, work environment condition, and low performance (Lim & Tai, 2014). This study steps forward by proposing that "job-related anxiety mediates the effect of perceived threats of terrorism on job performance". We can say that perception of anxiety in the working context due to the threat of terrorism decreases the work performance of personnel that he can do in the best possible manner in the absence of these perceived threats (De Clercq et al., 2017).

H3. There is an indirect relationship between threats of terrorism and job performance through Job-related anxiety.

Moderating Role of Innovative Work Behaviour (IWB)

Following the axiom of conservation of resource theory, employees conserve, cumulate and safeguard all types of resources. The key principle of COR explains that employees strive to protect against resource loss, recover from losses, and gain resources. In this way, perceived

threat of terrorism cause loss of psychological resources termed as anxiety. To recover from the resource loss, employees come up with innovative solution by exercising their innovative work behaviour and cope with threatening situation.

The calming effect of a personnel's novel work behaviour is inversely proportional to the perception of future terrorism and job stressors that may involve various factors. Personnel begins to feel a high level of stress by becoming conscious about the future death in terrorism and the need to safeguard one's own life. (Burke, Marlow, & Lento, 2010; Schuster et al., 2001). Innovative work behaviour of the personnel further improves the work performance and results in enhancing the job performance (Bader & Berg, 2014; Vess et al., 2009). Social exchange theory supports this logic by explaining that the more a person can infer from the energy source of innovative work behaviour, the more it is expected that perception of a threat of terrorism cannot penetrate the work environment, which results in the defeat of anxiety (Pargament, 2001).

H4. The positive relationship between personnel' perceived threats of terrorism and their jobrelated anxiety is moderated by their Innovative Work Behaviour, in a way that the relationship is weaker at higher levels of Innovative Work Behaviour.

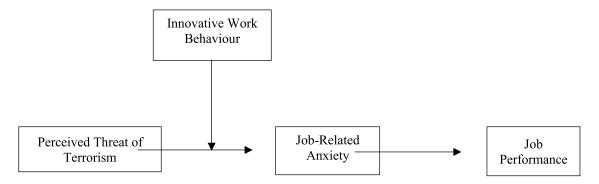


Fig 1: Theoretical framework

Methodology

Data and Methods

To collect the data, a special context was selected. Police personnel were approached for data collection considering their vulnerabilities towards threat of terrorism. The specific population was selected keeping in view the importance for their performance for societal care. Administrative approval from the concerned authority of each district was taken. Police personnel with at least one year of working experience and a bachelor's degree were considered suitable for data collection. The personnel belonging to various hierarchal levels were targeted to obtain maximum variation in responses. All respondents were ensured about the academic significance of the research and were briefed about the confidentiality measure taken in this

regard. The researcher could not observe any notable event during data collection in the departments of the respondents.

A rigorous research design was formulated to control biases and to collect responses. It was primarily a time-lagged study where the data was collected at three different points in time. At the first level (T1), around 750 questionnaires were floated to tap responses about TOT and IWB. Later after two months, data about job anxiety was collected at T2, followed by Job Performance after another two months at T3. At the first level (T1), around 513 responses were received. Whereas, the next level (T2) received 481 responses. Questionnaires were designed to have unique codes to match responses. Since the job performance data had to be collected from supervisors, respondents were also required to write the name of the respective supervisor. The last phase (T3) provided around 437 responses. In nutshell, employees were asked to fill the questionnaire taping responses about perceived threat of terrorism, job related anxiety and innovative work behaviour. All the questionnaires were screened through a vigorous screening test where some of the questionnaires failed to pass the tests and were excluded from the final analysis. Finally, 425 valid and useable questionnaires were analyzed using SPSS 20.0 and AMOS 23.

Measures

The conceptual framework required a survey design to examine all the constructs used in this study. Literature review facilitated a distinction between these constructs used in the research. The constructs required for this research include the perceived relationship threat of terrorism, job-related anxiety, innovative work behaviour, and job performance. Following scales have been used to measure each variable:

Perceived threat of terrorism

The perceived threat of terrorism was measured by a shorter version of the 25-items scale developed by Sinclair and LoCicero (2006) to assess this construct. Sample items were "To what extent have you altered your regular daily life activities as a result of terrorism". All the items were measured using a five-point Likert scale ranging from 1-Not to 5-Extremely. The value of Cronbach Alpha was α =0.94.

Job Performance

The 21-items scale was adopted to measure supervisory rated job performance, which was developed by Williams and Anderson (1991) to assess this construct. Sample items included "Help others who have heavy workloads." A 5-point Likert scale ranging from 1-Strongly Disagree to Agree 5-Strongly was used. The value of Cronbach Alpha was α =0.94.

Job-Related Anxiety

The 6-states scale was adopted to measure job-related anxiety, developed by Jones, Latreille, and Sloane (2016) to assess this construct. The personnel were asked, "Thinking of the past few weeks, how much of the time has your job made you feel each of the following states?". The sample state was "Tense." All states were measured on a 5-point Likert scale ranging from 1-Never to 5-All of the time. The value of Cronbach Alpha was α =0.94.

Innovative Work Behaviour

The 9-item scale was adopted to measure innovative work behaviour, developed by Janssen (2000) to assess this construct. Sample items were "I create new ideas for difficult issues." Responses to items are given on a frequency scale varying from 1-Never to 7-Always. The value of Cronbach Alpha was α =0.94.

Control Variables

The participants were asked about their age, gender, marital status, designation, and the highest level of education to evaluate the possible effects of control variables on the job performance. A one-way ANOVA was executed to examine the effects of control variables with job performance, which was found insignificant across the organization.

Results

In this study, a "one-factor test" was employed to evaluate the "common method bias" (Harman, 1976). In order to execute this test, the Varimax Rotation analysis was used by combining all the elements into a critical factor. If the threshold value of a single factor is more than 50% of the variance, it results in the high existence of common method biases. Simultaneously, the study employed a one-factor test after entering all the items that accounted for less than 21% of the variance, which rejects the existence of common method biases in the data (Harman, 1976).

Keeping in view the social desirability which may give biasness to the responses of a perceived threat of terrorism and job-related anxiety, the study followed standard procedure to diminish social desirability biases that may motivate respondents to show socially acceptable opinions (Van de Mortel, 2008).

Measurement Model Fit

Various researchers caution that the assumed measurement model should be used very carefully relating to the subject under study (Jöreskog & Sörbom, 1993). The fitness of the measurement model depends upon the significance of "confirmatory factor analysis." The effectiveness of the model's fitness was confirmed and found reliable by various methods. The suitability of the measurement model is explained in table 4.8, which reveals that overall model fitness was found.

Table-1: Goodness-of-fit statistics for the measurement model

	Val	ues	
Goodness-of-fit statistics	Achieved	Guidelines	
Chi-Square (CMIN)	3504.37	Significant	
DF	1250	NA	
CMIN/DF	2.8	2-3	
CFI	0.87	CFI<0.9	
GFI/AGFI	0.74/0.72	GFI/AGFI>0.8	
RMSEA	0.06	RMSEA<0.08	
SRMR	0.05	SRMR<0.06	
NFI	0.81	NFI>0.9	

The theoretical model fit was confirmed from table-1 because the value of CMIN/DF is 2.804, which is less than the threshold value of 3.0 for excellent fit indices accomplished from the sample. "The comparative fit index (CFI) is .87, less than the cut-off value of 0.9, further ensuring the suitability of the model. The Root Mean Square Error of Approximation (RMSEA) value is .06, below the cut-off value of .08. The sample data's Standardized Root Mean Residual (SRMR) value is .05 which is also below the cut-off value of .06. The overall indices suggest a reasonably good fit of the model to the data, and the analysis well supports the four-factor model".

To ensure the convergent and discriminant validity of the measure. CFA was performed which showed that the average variance extracted for all the measures was above 0.5 ensuring convergent validity. Moreover, the maximum shared variance (MSV) was also less than AVE which ensured discriminant validity (Table-2).

After examining the model fitness and construct validities, the correlation between the hypothesized relationships were also examined. All the proposed relationships were significant and in expected direction (Table-2).

Table-2: Correlation and Descriptive Statistics

Construct	Mean	SD	AVE	MSV	Cronbach (α)	1	2	3	4
1. TOT	.25	.59	0.5	0.04	.94	.71			
2. IWB	.19	.79	0.66	0.2	.94	.21***	.81		
3. JRA	.31	.94	0.73	0.2	.94	.2***	.44***	.85	
4. JP	.45	.45	0.5	0.07	.94	.11*	.15***	.26***	.71

Notes: n=425, * p < 0.05, ** p < 0.01, *** p < 0.001.

Hypothesis Testing

We found support for the hypothesis-1 as a positive relationship is showed between perceived threats of terrorism and job-related anxiety in the table-3 (β = 0.24, p < 0.01). Perceived threats of terrorism can increase job anxiety in employees. This is because of the uncertainty and potential danger associated with terrorism, which can lead to feelings of fear and insecurity in

individuals. Employees may become more anxious about their safety in the workplace or their ability to perform their duties effectively if they are constantly worrying about the potential of a terrorist attack. Out study also supported that job-related anxiety is the key cause to decrease performance, as table-3 shows there exists a negative relationship between job-related anxiety and job performance ($\beta = -0.12$, p < 0.001), thus H2 has been accepted. Terrorism-related threats can make employees feel vulnerable and anxious, which can lead to decreased productivity, decreased motivation, and low performance.

Table-3: Testing for Mediation: JRA as Mediator between TOT and Job Performance

Predictors	Media	Mediator Variable: JRA			Dependent Variable: JP		
	В	R2	Δ R2	В	R2	Δ R2	
Direct Effects							
Step-I							
TOT	0.24**	0.02	0.02**	0.11**	0.02	0.02	
Indirect Effects							
Step-I							
JRA				-0.11**	0.06	0.06	
Step-II							
TOT				0.14**	0.09	.036	

Note. N = 425. TOT = Threat of Terrorism; JRA = Job-Related Anxiety; JP = Job Performance * <math>p < 0.05; *** p < 0.01; **** p < 0.001

In order to test the mediation effect of job-related anxiety between the perceived threat of terrorism and job performance author employed Preachers & Hayes Bootstrap method which is considered easy, fast & reliable method to test hypothesis with some inherent advantage over conventional procedure (Table-3). We executed model 4, with 95% of 5000 bootstrap resamples (Hayes, 2015) considering the indirect effect of perceived threat of terrorism on job performance through job related anxiety. The results of mediation analysis support the indirect effect (the indirect effect ($\beta = 0.14$, p < 0.001) as given in table-3, with un-standardized indirect effects and their corresponding significance. The result of mediation analysis proved that job-related anxiety mediates the relationship between the perceived threat of terrorism and job performance, leading to accept hypothesis 4.

To test moderation and mediation effects we used "Preachers & Hayes Bootstrap method" which is appropriate, fast, and reliable method used to test the study hypotheses as compared to traditional processes. We adopted model 7 in order to confirm moderation mediation effect with 95 % of 5,000 bootstrap re-samples by using the process-macro designed by Hayes (2015) considering the indirect effect of TOT (perceived threat of terrorism) on JP (job performance) by JRA (job-related anxiety) where innovative work behaviour provide boundary conditions for the association between perceived threat of terrorism and job-related anxiety. Table-3 provides the results of mediation analysis while table-4 reveals moderation results.

Table-4: Testing for Moderation: IWB as Moderator between TOT and JRA

	Job-related Anxiety		
•	β	ΔR^2	
Step 1			
Threat of terrorism	14**		
Innovative Work Behaviour	22**	.17	
Step 2			
Threat of terrorism	.73		
Innovative Work Behaviour	.2		
Threat of terrorism x Innovative work behaviour	13***	.03	

^{*}p < 0.05; **p < 0.01; ***p < 0.001

Table-4 provides the results for the moderation in the following research. The hypothesis 4 which is IWB negatively moderates the relationship between TOT and JRA. The hypothesis is supported by the results in the table-4 for interaction term. The stated results revealed that IWB is moderating the relationship between TOT and JRA in the negative direction. The moderating effect of innovative work behaviour on the relationship between perceived threat of terrorism and job-related anxiety has been confirmed by executing the macro-PROCESS v3.0 with mean-centered products of perceived threat of terrorism and innovative work behaviour as shown in table-4, the moderation effects of innovative work behaviour is supported (β for TOTxIWB = -0.13***) between perceived threat of terrorism and job-related anxiety. Therefore, we concluded that innovative work behaviour moderates between perceived threat of terrorism and job-related anxiety.

Results shows that innovative work behaviour moderate the relationship between perceived threats of terrorism on job-related anxiety. To further clarify the nature of this interaction, the effect of perceived threats of terrorism on job-related anxiety at high and low levels of innovative work behaviour, is plotted as shown in the figure 2.

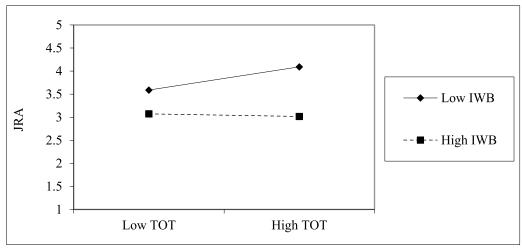


Figure 2: Two-way interaction of threat of terrorism and innovative work behaviour on job-related anxiety

Discussion

The study aimed to explore how the external environment factor perceived threat of terrorism could affect the job performance of personnel, especially in Punjab police. There is a potential that when personnel feels TOT, it may affect their mental well-being and organizational functioning (Bader & Berg, 2014; Metcalfe, Powdthavee, & Dolan, 2011). This study assessed the perception of future terrorist attacks that stimulate job-related anxiety, which hinders the personnel to meet organizational goals and harms the personnel's job performance (Bader & Berg, 2014; De Clercq et al., 2017). The potential death threats because of expected terrorist attack cause a depletion of personnel's job resources and puts the personnel under a challenge for their administrative work (Bader & Berg, 2014). However, innovative work behaviour is a strategy that the personnel use to cope with stressful situations and protect their job resources.

The findings show that the perceived threat of terrorism aggravates job-related anxiety; earlier studies also support these results that the threat of physical injury because of the threat of terrorism impacts the personnel's job situations. The personnel' mortality salience become activated as the result of a perceived threat of terrorism (Greenberg et al., 1986), and when the personnel becomes short of their resources due to their personal life experiences, the anxiety taps onto their workplace; as result personnel doubts their ability to meet the expectations of an employer (Hobfoll & Shirom, 2001). It means when personnel perceive TOT as a hurdle and feel that they have limited resources to achieve organizational goals, it increases their job-related anxiety for the organizational performance (Howie, 2007). Furthermore, the perceived threat of terrorism makes personnel worried about their family members and their attention is diverted from the work (Kastenmüller et al., 2011), which results in decreased focus on job responsibilities.

The findings support the idea that job-related anxiety negatively affects job performance. Job-related anxiety stimulated by the perceived threat of terrorism has a critical effect resulting in reduced job performance. This is because of the depletion of resources due to job-related anxiety, the resources required to meet organizational goals set by the employer (McCarthy et al., 2016; Quinn et al., 2012).

Surprisingly and contrary to the expectations, the findings of the relationship between the perceived threat of terrorism and job performance were positive, meaning the perceived threat of terrorism positively influence the job performance of Punjab police. The reason may be perceived threat of terrorism was accepted as a challenging stress by the Punjab police which resulted in the enhancement of their performance. The other way to justify this is that the critical responsibility of the security forces is to deal with threatening situations of law and order. Furthermore, Pakistan is one of the significant front-line countries in a war against terrorism and the second most victim of terrorism; due to this scenario, Pakistani security

forces, including Punjab police, have uplifted their training and equipment, which led them to improved performance. As a result, terrorism has been reduced in Pakistan.

The findings further indicate that innovative work behaviour acts as a threat neutralizer by weakening the negative relationship of a perceived threat of terrorism on job-related anxiety. The findings also reveal that innovative work behaviour weakens the relationship of TOT and JRA. These findings are consistent with the extant literature on job demands and innovation (West, 1989) these findings suggest that when a person feels worried and uneasy due to perceived threat of terrorism, may result into increase job related anxiety. However, if an employee exercises his innovative behaviour may cope with the threat of terrorism. Employees' innovation and creativity put him in a perceptually safe condition because innovative work behaviour helps to figure out solutions for external threats. These findings are supported by the study of De Clercq et al. (2017).

Theoretical Implications

The present study has extended the research of the perceived threat of terrorism in various ways. First, this study has examined the impact of a perceived threat of terrorism on the job of security forces which provided the empirical evidence of the positive relationship between perceived threat of terrorism and job performance which was not deliberated in the already existing research. Secondly, this study confirmed the threat neutralizer role of IWB on the relationship of a perceived threat of terrorism and job-related anxiety. The study examined all relationships by collecting data from Punjab police, specifically remote districts, Multan, Khanewal, Vehari, and Bhakkar. This population of Punjab police is unique, and the area is also undiscovered regarding the research domain of job performance.

Practical Implications

The current study provides guidelines for those involved in policymaking to keep up acceptable job performance of personnel in the presence of the perceived threat of terrorism. Policymakers would have to understand that the perception of future terrorist attacks may stimulate job-related anxiety. There is a need to identify that some personnel may be hesitant in accepting the fear of expected upcoming terrorist attacks to avoid looking cowardly. Therefore, the organizations has to be vigilant in the identification of personnel' concerns about the physical threats for themselves or their loved ones due to terrorist attacks and must craft the feedback mechanism which gives the liberty of expressions to the personnel about the victims of terrorism (Waldman et al.,2011). The organizations may have to bring transparency in the objectives (e.g., specific performance goals) and means (e.g., time, budget) of the job demands of the personnel, to ensure that the process of achieving current performance goals, even in the presence of threatening external environment is supportive and reduces anxiety.

Although, organizations cannot avoid spillover of life-threatening fear of personnel onto the workplace altogether. However, organizations should explore ways to minimize the chances of increasing job-related anxiety due to future terror attacks and reduced job performance. A significant finding of this study is that when future terror attacks are a ground reality for the personnel, it is possible to control resource depletion with the help of training and development. Other findings also suggest that innovative work behaviours are a threat neutralizer; therefore, at the time of hiring, Punjab police should establish a creativity test, and organizations should encourage the employees to work out new ways to perform the tasks. There are few training programs available for creativity and innovation. The department should arrange these training to enhance innovative work behaviour during critical situations faced by Punjab police. The measures taken by the police and other peacekeeping departments should be highlighted, and achievements by these departments should also be recognized to send a message that these threats can be controlled. Taking these measures, would help in reducing anxiety.

Strengths, Limitations and Future Directions

The current study has several strengths; particularly, it helps enhance the understanding of TOT, IWB moderator, JRA mediator, and job outcome JP theories in a new cultural setting which is significantly different from North America and Europe. Exploring the main moderating and mediating effects in such a setting extends our understanding and provides evidence for the external validity of research dominated by western samples. Second, the study followed temporal separation and collected data at two-time waves, which reduces the chances of method bias. Third, this study provides strong evidence for the main effect of IWB on job performance.

This study has a few limitations, considering those would offer opportunities for future research. First, the study used a time lag of one month between assessing the perceived threat of terrorism, job-related anxiety, innovative work behaviour, and job performance. The data of TOT, JRA, and IWB was taken simultaneously, and after one month data JP was collected. Therefore, common method bias among TOT, JRA, and IWB is not out of the question. Future research could use a longer time frame to avoid common method bias. Second data of JP was collected from supervisors; therefore, biasness about one's performance is also another prospect. Future researchers could collect data from supervisors about JP of subordinate staff. The present study tested IWB as a moderator; the other threat neutralizer can be studied in future research. This study tested two dimensions of job-related anxiety in the future; another dimension could be included in the mediator to explore the severity of JRA.

References

- Acquisti, A., & Gross, R. (2006). *Imagined communities: Awareness, information sharing, and privacy on the Facebook*. Paper presented at the International workshop on privacy enhancing technologies.
- Anshel, M. H. (2000). A conceptual model and implications for coping with stressful events in police work. *Criminal justice and Behaviour*, *27*(3), 375-400.
- Antón, C., Camarero, C., & Carrero, M. (2007). The mediating effect of satisfaction on consumers' switching intention. *Psychology & Marketing*, 24(6), 511-538.
- Appelbaum, S., Bartolomucci, N., Beaumier, E., Boulanger, J., Corrigan, R., Dore, I., . . . Serroni, C. (2004). Organizational citizenship behaviour: a case study of culture, leadership and trust. *Management decision*, 42(1), 13-40.
- Aquino, K., Douglas, S., & Martinko, M. J. (2004). Overt Anger in Response to Victimization: Attributional Style and Organizational Norms as Moderators. *Journal of Occupational Health Psychology*, 9(2), 152-164. doi:10.1037/1076-8998.9.2.152
- Armeli, S., Eisenberger, R., Fasolo, P., & Lynch, P. (1998). Perceived organizational support and police performance: The moderating influence of socioemotional needs. *Journal of Applied Psychology*, 83(2), 288.
- Arnetz, B. B., Arble, E., Backman, L., Lynch, A., & Lublin, A. (2013). Assessment of a prevention program for work-related stress among urban police officers. *International archives of occupational and environmental health*, 86(1), 79-88.
- Arnold, T., Flaherty, K. E., Voss, K. E., & Mowen, J. C. (2009). Role stressors and retail performance: The role of perceived competitive climate. *Journal of Retailing*, 85(2), 194-205.
- Bader, B., & Berg, N. (2014). The influence of terrorism on expatriate performance: a conceptual approach. *The International Journal of Human Resource Management*, 25(4), 539-557. doi:10.1080/09585192.2013.814702
- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309-328.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, *51*(6), 1173.
- Baum, J. R., & Locke, E. A. (2004). The relationship of entrepreneurial traits, skill, and motivation to subsequent venture growth. *Journal of Applied Psychology*, 89(4), 587.
- Beck, U. (2002). The cosmopolitan society and its enemies. *Theory, Culture & Society, 19*(1-2), 17-44.
- Benight, C. C., & Bandura, A. (2004). Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behaviour Research and Therapy*, 42(10), 1129-1148.
- Boscarino, J. A., Adams, R. E., Figley, C. R., Galea, S., & Foa, E. B. (2006). Fear of terrorism and preparedness in New York City 2 years after the attacks: implications for disaster

- planning and research. *J Public Health Manag Pract*, *12*. doi:10.1097/00124784-200611000-00002
- Boscarino, J. A., Figley, C. R., & Adams, R. E. (2003). Fear of terrorism in New York after the September 11 terrorist attacks: implications for emergency mental health and preparedness. *International journal of emergency mental health*, *5*(4), 199.
- Bowler, R. M., Kornblith, E. S., Li, J., Adams, S. W., Gocheva, V. V., Schwarzer, R., & Cone, J. E. (2016). Police officers who responded to 9/11: Comorbidity of PTSD, depression, and anxiety 10–11 years later. *American Journal of Industrial Medicine*, *59*(6), 425-436.
- Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, 81(4), 358-368. doi:10.1037/0021-9010.81.4.358
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. *Sage focus editions*, 154, 136-136.
- Bunce, D., & West, M. (1994). Changing work environments: Innovative coping responses to occupational stress. *Work & Stress*, 8(4), 319-331.
- Burke, M., Marlow, C., & Lento, T. (2010). *Social network activity and social well-being*. Paper presented at the Proceedings of the SIGCHI conference on human factors in computing systems.
- Byrne, A., & Eysenck, M. W. (1995). Trait anxiety, anxious mood, and threat detection. *Cognition & Emotion*, 9(6), 549-562.
- Cashdan, E. (2001). Ethnocentrism and xenophobia: A cross-cultural study. *Current anthropology*, 42(5), 760-764.
- Chen, A. H., & Siems, T. F. (2004). The effects of terrorism on global capital markets. *European Journal of Political Economy*, 20(2), 349-366. doi:https://doi.org/10.1016/j.ejpoleco.2003.12.005
- Cropley, D. H., Kaufman, J. C., & Cropley, A. J. (2008). Malevolent creativity: A functional model of creativity in terrorism and crime. *Creativity Research Journal*, 20(2), 105-115.
- De Clercq, D., Haq, I. U., & Azeem, M. U. (2017). Perceived threats of terrorism and job performance: The roles of job-related anxiety and religiousness. *Journal of Business Research*, 78, 23-32.
- De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, 19(1), 23-36.
- Dean, G., Fahsing, I. A., Gottschalk, P., & Solli-Saether, H. (2008). Investigative thinking and creativity: an empirical study of police detectives in Norway. *International Journal of Innovation and Learning*, *5*(2), 170-185.
- Dechesne, M., Pyszczynski, T., Arndt, J., Ransom, S., Sheldon, K. M., van Knippenberg, A., & Janssen, J. (2003). Literal and symbolic immortality: The effect of evidence of literal immortality on self-esteem striving in response to mortality salience. *Journal of Personality and Social Psychology*, 84(4), 722-737. doi:10.1037/0022-3514.84.4.722
- Dewey, J. (2002). Human nature and conduct: Courier Corporation.

- Drabek, T. E. (1999). Understanding disaster warning responses. *The Social Science Journal*, *36*. doi:10.1016/s0362-3319(99)00021-x
- Eaves, L. J., Hatemi, P. K., Prom-Womley, E. C., & Murrelle, L. (2008). Social and Genetic Influences on Adolescent Religious Attitudes and Practices. *Social Forces*, 86(4), 1621-1646. doi:10.1353/sof.0.0050
- Eller, J. D. (2010). *Cruel creeds, virtuous violence: Religious violence across culture and history*: Prometheus Books.
- Fabricatore, A. N., Handal, P. J., Rubio, D. M., & Gilner, F. H. (2004). RESEARCH: Stress, Religion, and Mental Health: Religious Coping in Mediating and Moderating Roles. *The International Journal for the Psychology of Religion*, *14*(2), 91-108. doi:10.1207/s15327582ijpr1402_2
- Fischhoff, B., Gonzales, R., Small, D., & Lerner, J. (2003). Evaluating the success of terror risk communications. *Biosecur Bioterror*, 1. doi:10.1089/153871303771861450
- Ford, M. T., Heinen, B. A., & Langkamer, K. L. (2007). Work and family satisfaction and conflict: a meta-analysis of cross-domain relations. In: American Psychological Association.
- Fransen, M. L., Fennis, B. M., Pruyn, A. T. H., & Das, E. (2008). Rest in peace? Brand-induced mortality salience and consumer behaviour. *Journal of Business Research*, 61(10), 1053-1061. doi:http://dx.doi.org/10.1016/j.jbusres.2007.09.020
- Fransen, M. L., Smeesters, D., & Fennis, B. M. (2011). The role of social presence in mortality salience effects. *Journal of Business Research*, 64(1), 29-33. doi:http://dx.doi.org/10.1016/j.jbusres.2009.09.016
- Galea, S., Nandi, A., & Vlahov, D. (2005). The epidemiology of post-traumatic stress disorder after disasters. *Epidemiologic reviews*, 27(1), 78-91.
- Gerbing, D. W., & Anderson, J. C. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment. *Journal of marketing research*, 186-192.
- Gibson, J. L. (2006). Enigmas of intolerance: Fifty years after Stouffer's communism, conformity, and civil liberties. *Perspectives on Politics*, 4(1), 21-34.
- Gould, E. D., & Klor, E. F. (2010). Does Terrorism Work?*. *The Quarterly Journal of Economics*, 125(4), 1459-1510. doi:10.1162/qjec.2010.125.4.1459
- Greenberg, J., & Kosloff, S. (2008). Terror Management Theory: Implications for Understanding Prejudice, Stereotyping, Intergroup Conflict, and Political Attitudes. *Social and Personality Psychology Compass*, 2(5), 1881-1894. doi:10.1111/j.1751-9004.2008.00144.x
- Greenberg, J., Pyszczynski, T., & Solomon, S. (1986). The causes and consequences of a need for self-esteem: A terror management theory. *Public self and private self, 189*, 189-212.
- Gross, R., Neria, Y., Tao, X., Massa, J., Ashwell, L., Davis, K., & Geyh, A. (2006). Posttraumatic stress disorder and other psychological sequelae among World Trade Center clean up and recovery workers. *Annals of the New York Academy of Sciences*, 1071(1), 495-499.
- Hair, J. F. (2006). Multivariate data analysis: Pearson Education India.

- Harman, H. H. (1976). Modern factor analysis: University of Chicago press.
- Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication monographs*, 76(4), 408-420.
- Hayes, A. F. (2013). Methodology in the social sciences. In: Introduction to mediation, moderation, and conditional process analysis: A
- Himes, J. S. (2008). Conflict and conflict management: University of Georgia Press.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American psychologist*, 44(3), 513.
- Hobfoll, S. E. (2001). The Influence of Culture, Community, and the Nested-Self in the Stress Process: Advancing Conservation of Resources Theory. *Applied Psychology*, *50*(3), 337-421. doi:10.1111/1464-0597.00062
- Hobfoll, S. E., & Shirom, A. (2001). Conservation of resources theory: Applications to stress and management in the workplace.
- Hofstede, G. (2003). *Culture's consequences: Comparing values, behaviours, institutions and organizations across nations*: Sage publications.
- Holtom, B. C., Mitchell, T. R., Lee, T. W., & Inderrieden, E. J. (2005). Shocks as causes of turnover: What they are and how organizations can manage them. *Human Resource Management: Published in Cooperation with the School of Business Administration, The University of Michigan and in alliance with the Society of Human Resources Management,* 44(3), 337-352.
- Howie, L. (2007). The terrorism threat and managing workplaces. *Disaster Prevention and Management: An International Journal*, 16(1), 70-78.
- Hu, L.-t., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological methods*, *3*(4), 424.
- Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Hu, Q., Schaufeli, W. B., & Taris, T. W. (2017). How are changes in exposure to job demands and job resources related to burnout and engagement? A longitudinal study among Chinese nurses and police officers. *Stress and Health*, 33(5), 631-644.
- Huddy, L., & Feldman, S. (2011). Americans respond politically to 9/11: understanding the impact of the terrorist attacks and their aftermath. *American psychologist*, 66(6), 455.
- Huddy, L., Feldman, S., Capelos, T., & Provost, C. (2002). The consequences of terrorism: disentangling the effects of personal and national threat. *Polit Psychol*, 23. doi:10.1111/0162-895x.00295
- Huddy, L., Feldman, S., Taber, C., & Lahav, G. (2005). Threat, anxiety, and support of antiterrorism policies. *American journal of political science*, 49(3), 593-608.

- Jamal, M. (1985). Relationship of Job Stress to Job Performance: A Study of Managers and Blue-Collar Workers. *Human Relations*, 38(5), 409-424. doi:doi:10.1177/001872678503800502
- Jamal, M. (2007). Job stress and job performance controversy revisited: An empirical examination in two countries. *International journal of stress management*, 14(2), 175.
- Janssen, O. (2000). Job demands, perceptions of effort-reward fairness and innovative work behaviour. *Journal of Occupational and Organizational Psychology*, 73(3), 287-302. doi:10.1348/096317900167038
- Janssen, O. (2003). Innovative behaviour and job involvement at the price of conflict and less satisfactory relations with co-workers. *Journal of Occupational and Organizational Psychology*, 76(3), 347-364. doi:10.1348/096317903769647210
- Janssen, O. (2004). How fairness perceptions make innovative behaviour more or less stressful. *Journal of organizational behaviour*, 25(2), 201-215. doi:10.1002/job.238
- Jonathan-Zamir, T., & Weisburd, D. (2013). The effects of security threats on antecedents of police legitimacy: Findings from a quasi-experiment in Israel. *Journal of research in crime and delinquency*, 50(1), 3-32.
- Jones, M. K., Latreille, P. L., & Sloane, P. J. (2016). Job Anxiety, Work-Related Psychological Illness and Workplace Performance. *British Journal of Industrial Relations*, *54*(4), 742-767.
- Jöreskog, K. G., & Sörbom, D. (1993). LISREL 8: Structural equation modeling with the SIMPLIS command language: Scientific Software International.
- Kalleberg, A. L. (2009). Precarious work, insecure workers: Employment relations in transition. *American sociological review, 74*(1), 1-22.
- Kastenmüller, A., Greitemeyer, T., Aydin, N., Tattersall, A. J., Peus, C., Bussmann, P., . . . Fischer, P. (2011). Terrorism threat and networking: Evidence that terrorism salience decreases occupational networking. *Journal of organizational behaviour*, 32(7), 961-977. doi:10.1002/job.745
- Kosloff, S., Greenberg, J., Sullivan, D., & Weise, D. (2010). Of Trophies and Pillars: Exploring the Terror Management Functions of Short-Term and Long-Term Relationship Partners. *Personality and Social Psychology Bulletin*, *36*(8), 1037-1051. doi:doi:10.1177/0146167210374602
- Koslowsky, M., Kluger, A. N., & Reich, M. (2013). *Commuting stress: Causes, effects, and methods of coping*: Springer Science & Business Media.
- Kraiger, K. (2003). Perspectives on training and development. *Handbook of psychology*, 171-192.
- Laufersweiler-Dwyer, D. L., & Dwyer, R. G. (2000). Profiling those impacted by organizational stressors at the macro, intermediate and micro levels of several police agencies. *Criminal Justice Studies*, 12(4), 443-469.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*: Springer publishing company.
- Leary, T. (2004). *Interpersonal diagnosis of personality: A functional theory and methodology for personality evaluation*: Wipf and Stock Publishers.

- Lemyre, L., Lee, J. E. C., & Krewski, D. (2004). *National public survey of perceived CBRN terrorism threat and preparedness*. Ottawa: University of Ottawa, Institute of Population Health.
- Lemyre, L., Lee, J. E. C., Turner, M. C., & Krewski, D. (2007). Terrorism preparedness in Canada: a public survey on perceived institutional and individual response to terrorism. *Int J Emergency Management*, 4. doi:10.1504/ijem.2007.013995
- Leung, K., Huang, K. L., Su, C. H., & Lu, L. (2011). Curvilinear relationships between role stress and innovative performance: Moderating effects of perceived support for innovation. *Journal of Occupational and Organizational Psychology*, 84(4), 741-758.
- Lim, S., & Tai, K. (2014). Family incivility and job performance: A moderated mediation model of psychological distress and core self-evaluation. *Journal of Applied Psychology*, 99(2), 351.
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence Limits for the Indirect Effect: Distribution of the Product and Resampling Methods. *Multivariate Behavioural Research*, *39*(1), 99-128. doi:10.1207/s15327906mbr3901 4
- Malik, I. H. (2002). Pakistan in 2001: the Afghanistan crisis and the rediscovery of the frontline state. *Asian Survey*, *42*(1), 204-212.
- Marshall, R. D., Bryant, R. A., Amsel, L., Suh, E. J., Cook, J. M., & Neria, Y. (2007). The psychology of ongoing threat: relative risk appraisal the September 11 attacks and terrorism-related fears. *Am Psychol*, 62. doi:10.1037/0003-066x.62.4.304
- Martínez, P., & del Bosque, I. R. (2013). CSR and customer loyalty: The roles of trust, customer identification with the company and satisfaction. *International Journal of Hospitality Management*, 35, 89-99.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual review of psychology*, 52(1), 397-422.
- McCarthy, J. M., Trougakos, J. P., & Cheng, B. H. (2016). Are anxious workers less productive workers? It depends on the quality of social exchange. *Journal of Applied Psychology*, 101(2), 279.
- McLay, L. A., & Mayorga, M. E. (2010). Evaluating emergency medical service performance measures. *Health Care Management Science*, *13*(2), 124-136. doi:10.1007/s10729-009-9115-x
- Merolla, J. L., & Zechmeister, E. J. (2009). *Democracy at risk: How terrorist threats affect the public*: University of Chicago Press.
- Metcalfe, R., Powdthavee, N., & Dolan, P. (2011). Destruction and distress: using a quasi-experiment to show the effects of the September 11 attacks on mental well-being in the United Kingdom. *The Economic Journal*, 121(550), F81-F103.
- Meyer, C. O. (2009). International terrorism as a force of homogenization? A constructivist approach to understanding cross-national threat perceptions and responses. *Cambridge Review of International Affairs*, 22(4), 647-666. doi:10.1080/09557570903325462

- Motowidlo, S. (2003). Job Performance. Inw. Borman, Ilgen, D. ve Klimoski, R., Handbook of Psychology: Industrial and Organizational Psychology, 12, Hoboken. In: Nj: John Wiley and Sons.
- Nahapiet, J., & Ghoshal, S. (1998). Social Capital, Intellectual Capital, and the Organizational Advantage. *The Academy of Management Review*, *23*(2), 242-266. doi:10.2307/259373
- Paloutzian, R. F., Emmons, R. A., & Keortge, S. G. (2003). Spiritual well-being, spiritual intelligence, and healthy workplace policy. *Handbook of workplace spirituality and organizational performance*, 123-136.
- Pargament, K. I. (2001). *The psychology of religion and coping: Theory, research, practice*: Guilford Press.
- Pargament, K. I., Tarakeshwar, N., Ellison, C. G., & Wulff, K. M. (2001). Religious Coping Among the Religious: The Relationships Between Religious Coping and Well-Being in a National Sample of Presbyterian Clergy, Elders, and Members. *Journal for the Scientific Study of Religion*, 40(3), 497-513. doi:10.1111/0021-8294.00073
- Paton, D., & Violanti, J. (1997). Long term exposure to traumatic demands in police officers: behavioural addiction and its management. *Looking Back, Moving Forward: Fifty years of New Zealand Psychology. Wellington, NZ: New Zealand Psychological Society.*
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behaviour Research Methods, Instruments, & Computers,* 36(4), 717-731. doi:10.3758/bf03206553
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behaviour research methods*, *36*(4), 717-731.
- Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Addressing Moderated Mediation Hypotheses: Theory, Methods, and Prescriptions. *Multivariate Behavioural Research*, 42(1), 185-227. doi:10.1080/00273170701341316
- Pyszczynski, T., Greenberg, J., & Solomon, S. (1997). Why Do We Need What We Need? A Terror Management Perspective on the Roots of Human Social Motivation. *Psychological inquiry*, 8(1), 1-20. doi:10.1207/s15327965pli0801_1
- Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. (2004). Why do people need self-esteem? A theoretical and empirical review. *Psychological bulletin*, 130(3), 435.
- Pyszczynski, T., Solomon, S., & Greenberg, J. (2003). *In the wake of 9/11: Rising above the terror*: American Psychological Association.
- Quinn, R. W., Spreitzer, G. M., & Lam, C. F. (2012). Building a Sustainable Model of Human Energy in Organizations: Exploring the Critical Role of Resources. *Academy of Management Annals*, 6(1), 337-396. doi:10.1080/19416520.2012.676762
- Randol, B. M. (2012). The organizational correlates of terrorism response preparedness in local police departments. *Criminal Justice Policy Review*, 23(3), 304-326.
- Rubin, G. J., Brewin, C. R., Greenberg, N., Hughes, J. H., Simpson, J., & Wessely, S. (2007). Enduring consequences of terrorism: 7-month follow-up survey of reactions to the bombings in London on 7 July 2005. *Br J Psychiatry*, 190. doi:10.1192/bjp.bp.106.029785

- Rubin, G. J., Brewin, C. R., Greenberg, N., Simpson, J., & Wessely, S. (2005). Psychological and behavioural reactions to the bombings in London on 7 July 2005: cross sectional survey of a representative sample of Londoners. *BMJ*, 331(7517), 606.
- Sabri, F. (May 20, 2017). Pakistan Today, Daily Newspaper. In.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of psychological research online*, 8(2), 23-74.
- Schlenger, W. E., Caddell, J. M., Ebert, L., Jordan, B. K., Rourke, K. M., Wilson, D., . . . Kulka, R. A. (2002). Psychological reactions to terrorist attacks: findings from the National Study of Americans' Reactions to September 11. *JAMA*, 288. doi:10.1001/jama.288.5.581
- Schuster, M. A., Stein, B. D., Jaycox, L. H., Collins, R. L., Marshall, G. N., Elliott, M. N., . . . Berry, S. H. (2001). A National Survey of Stress Reactions after the September 11, 2001, Terrorist Attacks. *New England Journal of Medicine*, *345*(20), 1507-1512. doi:10.1056/nejm200111153452024
- Scott, S. G., & Bruce, R. A. (1994). Determinants of innovative behaviour: A path model of individual innovation in the workplace. *Academy of management journal*, *37*(3), 580-607.
- Shahzad, S. J. H., Zakaria, M., Rehman, M. U., Ahmed, T., & Fida, B. A. (2016). Relationship Between FDI, Terrorism and Economic Growth in Pakistan: Pre and Post 9/11 Analysis. *Social Indicators Research*, 127(1), 179-194. doi:10.1007/s11205-015-0950-5
- Shirom, A., Toker, S., Shapira, I., Berliner, S., & Melamed, S. (2008). Exposure to and fear of terror as predictors of self-rated health among apparently healthy employees. *British Journal of Health Psychology*, *13*(2), 257-271. doi:10.1348/135910707x180747
- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: new procedures and recommendations. *Psychological methods*, 7(4), 422.
- Silver, R. C., Holman, E. A., McIntosh, D. N., Poulin, M., & Gil-Rivas, V. (2002). Nationwide longitudinal study of psychological responses to September 11. *JAMA*, 288. doi:10.1001/jama.288.10.1235
- Sinclair, S. J., & LoCicero, A. (2006). Development and psychometric testing of the perceptions of terrorism questionnaire short-form (PTQ-SF). *The New School Psychology Bulletin*, 4(1), 7-43.
- Singh, P., Suar, D., & Leiter, M. P. (2012). Antecedents, work-related consequences, and buffers of job burnout among Indian software developers. *Journal of Leadership & Organizational Studies*, 19(1), 83-104.
- Somer, E., Tamir, E., Maguen, S., & Litz, B. T. (2005). Brief cognitive-behavioural phone-based intervention targeting anxiety about the threat of attack: a pilot study. *Behaviour Research and Therapy*, 43(5), 669-679. doi:http://dx.doi.org/10.1016/j.brat.2004.05.006
- Sommer, I., & Ehlert, U. (2004). Adjustment to trauma exposure: prevalence and predictors of posttraumatic stress disorder symptoms in mountain guides. *Journal of psychosomatic research*, 57(4), 329-335.
- Spector, P. E. (2006). Method Variance in Organizational Research. *Organizational Research Methods*, 9(2), 221-232. doi:doi:10.1177/1094428105284955

- Stein, J. H., Steinley, D., & Cropanzano, R. (2011). How and why terrorism corrupts the consistency principle of organizational justice. *Journal of organizational behaviour*, 32(7), 984-1007. doi:10.1002/job.729
- Stevens, G., Agho, K., Taylor, M., Barr, M., Raphael, B., & Jorm, L. (2009). Terrorism in Australia: factors associated with perceived threat and incident-critical behaviours. *BMC Public Health*, *9*(1), 91. doi:10.1186/1471-2458-9-91
- ten Brummelhuis, L. L., & Van Der Lippe, T. (2010). Effective work-life balance support for various household structures. *Human Resource Management*, 49(2), 173-193.
- Toker, S., Laurence, G. A., & Fried, Y. (2015). Fear of terror and increased job burnout over time: Examining the mediating role of insomnia and the moderating role of work support. *Journal of Organizational Behaviour*, 36(2), 272-291. doi:10.1002/job.1980
- Torabi, M. R., & Seo, D.-C. (2004). National study of behavioural and life changes since September 11. *Health Education & Behaviour*, 31(2), 179-192.
- Toynbee, A. J. (1988). A Study of History: Volume I: Abridgement of (Vol. 1): Oxford Paperbacks.
- Tucker, J. B. (2003). Strategies for Countering Terrorism: Lessons from the Israeli Experience. In *Journal of Homeland Security*.
- Van de Mortel, T. F. (2008). Faking it: social desirability response bias in self-report research. *Australian Journal of Advanced Nursing, The, 25*(4), 40.
- van Gelderen, B. R., & Bik, L. W. (2016). Affective organizational commitment, work engagement and service performance among police officers. *Policing: An International Journal of Police Strategies & Management*, 39(1), 206-221.
- van Gelderen, B. R., Konijn, E. A., & Bakker, A. B. (2017). Emotional labor among police officers: A diary study relating strain, emotional labor, and service performance. *The International Journal of Human Resource Management*, 28(6), 852-879.
- Van Hasselt, V. B., Sheehan, D. C., Sellers, A. H., Baker, M. T., & Feiner, C.-A. (2003). A behavioural-analytic model for assessing stress in police officers: phase I. Development of the Law Enforcement Officer Stress Survey (LEOSS). *International journal of emergency mental health*.
- Vess, M., Arndt, J., Cox, C. R., Routledge, C., & Goldenberg, J. L. (2009). Exploring the existential function of religion: the effect of religious fundamentalism and mortality salience on faith-based medical refusals. *Journal of Personality and Social Psychology*, 97(2), 334.
- Vlahov, D., Galea, S., Resnick, H., Ahern, J., Boscarino, J. A., Bucuvalas, M., . . . Kilpatrick, D. (2002). Increased use of cigarettes, alcohol, and marijuana among Manhattan, New York, residents after the September 11th terrorist attacks. *Am J Epidemiol*, 155. doi:10.1093/aje/155.11.988
- Waldman, D. A., Carmeli, A., & Halevi, M. Y. (2011). Beyond the red tape: How victims of terrorism perceive and react to organizational responses to their suffering. *Journal of Organizational Behaviour*, 32(7), 938-954.
- West, C. (1989). The American evasion of philosophy: A genealogy of pragmatism: Springer.

- Williams, L. J., & Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviours. *Journal of Management*, 17(3), 601-617.
- Witt, L., & Carlson, D. S. (2006). The work-family interface and job performance: moderating effects of conscientiousness and perceived organizational support. *Journal of Occupational Health Psychology*, 11(4), 343.
- Xie, J. L., & Johns, G. (1995). Job scope and stress: Can job scope be too high? *Academy of management journal*, 38(5), 1288-1309.
- Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of comparative neurology and psychology*, 18(5), 459-482.
- Youssef, C. M., & Luthans, F. (2007). Positive organizational behaviour in the workplace: The impact of hope, optimism, and resilience. *Journal of management*, *33*(5), 774-800.
- Zhang, M., Griffeth, R. W., & Fried, D. D. (2012). Work-family conflict and individual consequences. *Journal of Managerial Psychology*, *27*(7), 696-713.