Pakistan Journal of Psychology, June 2016, 47, 1, 3-19

PSYCHOLOGICAL EFFECTS AND COPING STRATEGIES IN DIRECT AND INDIRECT EXPOSURE TO ONGOING TERRORISM

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ABSTRACT

The objective of the study was to find out differences on psychological effects of terrorism and coping strategies adopted by men in direct and indirect exposed groups. The sample was taken from two strata: Participants directly exposed to terrorist attacks and those who were indirectly exposed (i.e. individuals exposed through social media). Those who volunteered to participate in the study were administered: Brief Symptom Inventory (BSI; Derogatis & Melisaratos, 1983) and Brief COPE (Carver, 1997), translated into indigenous language. The results indicate that directly exposed group shows significantly higher scores on somatization, phobic anxiety and paranoid ideation as compared to indirectly exposed group. The directly exposed group scored high on self-distraction and venting whereby indirectly exposed group scored high on denial, humor and acceptance. Implications for the implementation of community based psychological interventions to counter the effects of terrorism are hereby suggested.

Keywords: Terrorism, Exposure, Coping, Psychological Effect

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INTRODUCTION

Over the past few years, terrorism has invaded Pakistan like an epidemic, adversely affecting every sphere of life including psychological, economic, social and political. The long term psychological effects of ongoing terrorism remain a debilitating and grave concern, not only for those who have directly witnessed these attacks but also for those who are indirect victims of exposure through e.g. media outlets. Immediate, graphic, and extensive coverage by national media is contributing towards psychological crisis that may engulf directly and indirectly exposed population alike. The study aimed to examine the differences in psychological effects and types of coping strategies adopted by groups under direct and indirect exposure to terrorism.

Terrorism has been prevalent in the world in acts of varying intensity since time immemorial; it still seems to command more attention than other violent acts. Especially in the wake of Pakistan's involvement in the war against terrorism, citizens of this country have been directly or indirectly psychologically disturbed by such incidents. We need a clear operational definition to respond to terrorism. According to the U.S. Code Title 22 of the (United States Government, 2010) terrorism refers to as politically driven violence executed in a covert style against citizens. Experts on terrorism believe that the main objective behind terrorism is to create a fearful response among the victims and the audience. The interpretation of terrorism depends on whether a legal, moral, or behavioral viewpoint is used. In case the viewpoint engulfs a legal or moral element the ethics and morals of the interpreter become the emphasis not the act itself (Ruby, 2003). A behavioral perspective seems to be suitable for construing and countering to terrorism. This perspective highlights an agenda for perceiving overt and observable behaviors provoked by acts of terror. Individual's physical and psychological functioning is acutely disturbed and places itself as a specimen for investigating the impact of this abhorred phenomenon.

The effect of traumatic events on human functioning has been a subject of study for many years (Ahmed et al., 2011; Bleich, Gelkopf, & Solomon, 2003). Studies provide ample evidence for the devastating effects of terrorism on human functioning (e.g., Butler, Panzer, & Goldfrank, 2003; Somer, Ruvio, Soref, & Sever, 2005). Terrorism brings with it a larger effect than other catastrophes, and consequently producing a stronger distress response and drastic changes in behavior. By virtue of these unique features of terrorism, the chances of psychiatric illness are multiplied (Butler, Panzer, & Goldfrank, 2003).

Commonly reported psychological ill effects of terrorist attacks include psychological distress, anxiety and depression (Ghafoori et al., 2009; Nasim, Khan, & Aziz, 2014). Studies carried out on a sample of people exposed to small-scale bombings and shooting attacks confirm the presence of varied psychological concerns like free floating anxiety (Wilson, Pool, & Trew, 1997). North and colleagues (2005) acknowledged that population directly exposed to terrorist attack is likely to suffer from post-traumatic stress disorder (PTSD). Direct exposure leads to the development of numbing symptoms and avoidance. The researchers found out some universal symptoms like intrusive re-experience and hyper arousal resulting from terrorism.

Research on terrorism has lead trauma scholars to hypothesize the long-lasting psychological effects of indirect mass violence through media exposure. Studies suggest that physical proximity to the traumatic events is more likely to create stronger psychological reactions (e.g., Schelenger, Juesta, Caddell, Ebert, & Ebert, 2002). Now there is ample evidence that in the presence of indirect exposure, passive victims are also likely to experience stress reactions (Pfefferbaum et al., 2001). In a web based epidemiological survey after the September 11 attacks in US features of PTSD in 11.2% of New York citizens are revealed. American citizens living in other parts of the country were also found to report similar symptoms clearly highlighting the effects of indirect exposure (Schlenger et al., 2002). The susceptibility of people living far from the influenced area subsequent to a major nationwide trauma was documented by Silver, Holman, McIntosh, Poulin, and Gil-Rivas (2002). They stated that 17% of US citizens, who were not living in New York City, suffered psychological symptoms including denial and anxiety. Further, Gidron (2002), in his review, concluded that the occurrence of severe psychotic symptoms like paranoid ideation subsequent to terrorist attacks worldwide is estimated to be 28%.

Media reporting of continuous threats and acts of terrorism often results in disrupting the wellbeing of the people (Galea et al., 2002). Media coverage positively nurtures an extensive belief that terrorist attacks are both more common and more dangerous than is many times the case (Ockrent, 2006). Psychologists have also found that rigorous media report, by itself can have specific destructive consequences with some adults appearing to fall prey to serious psychological problems. The effects are likely to intensify in case of long term media coverage of terrorist attacks. Most commonly reported long term effects to media coverage are insomnia, anxiety or depression (Hoffmann, 2006). Ahmed et al. (2011) conducted an indigenous study on graduate students from

four universities situated in the city of Karachi. These researchers found out that 65.8% of the students reported mild stress levels, 91.5% of these students were exposed to terrorism through media like television. Personal exposure to terrorism was reported by 26.5% students. Most frequent reported symptom of stress was irritability. Constant threat and ongoing terrorism was found to be the main cause of mild to moderate level of stress among these students.

Studies have investigated the mediating role of coping in the face of terrorism. Researchers have found out varied effects of types of coping in reducing the severity of pathological symptoms in population exposed to terrorism **(**Hobfoll, Mancini, Hall, Canetti, & Bonano, 2011). Directly and indirectly exposed groups employ different coping strategies in face of terrorism (Shalev, Tuval-Mashiach, & Hadar, 2004; Somer Ruvio, Soref, & Sever, 2005). The threat of terrorism makes communities grow more cohesive, making individuals relate more strongly with the community around them. Coping mechanisms such as increased support to members in communities during ongoing terrorism has been found out to buffer the psychological ill effects experienced by the direct victims of terrorism (Curran, 1988) as well as indirect victims (Ockrent, 2006).

In Pakistan, research efforts have been undertaken in this regard, but the emphasis has generally been on population under direct exposure (Kunwal & Kausar, 2008; Yousafzai & Siddiqui, 2007). Research data identifying psychological consequences for indirectly exposed population is extremely scarce; still awaiting attention of indigenous research. Our study was meant to examine the differences in psychological effects (clinically relevant psychological symptoms) of ongoing terrorism in males who are directly exposed and those indirectly exposed to terrorism. The study further aimed to find out difference in use of coping strategies employed by those who were directly exposed to terrorism and those who were exposed indirectly through media.

Following hypotheses are framed for present research:

1. There will likely be significant differences between directly exposed group to terrorist attack and indirectly exposed group on clinically relevant psychological symptoms: somatization, paranoid Ideation, phobic anxiety obsessive compulsion, depression, anxiety, interpersonal sensitivity, hostility and psychoticism

2. There will likely be a significant difference between directly exposed group to terrorist attack and indirectly exposed group on types of coping strategies employed: active coping, planning, using instrumental support, using emotional support, venting, behavioral disengagement, self-distraction, self-blame, positive reframing, humor, denial, acceptance, religion, and substance use.

METHOD

Participants

The stratified sampling technique was used to collect data from male adults living in areas of Lahore. The sample (N=110) was taken from two strata: directly exposed to terrorist attacks (n=48) and indirectly exposed (n=62). Both groups were selected on the basis of similarity in social demographics i.e. age, education, occupation and income. All the participants were shopkeepers.

Table 1
Demographic Characteristics of the Participants (N =110)

Characteristics	Directly Exposed Group (n=48)	Indirectly Exposed Group (n=62)
Age		
M	31.12	35.23
SD	10.69	11.98
Monthly Income (in PKR)		
M	39000	41000
SD	7000	8500
Education		
≤ 10 years	85%	82%
12 to 14 years	13%	10%
≥ 16 years	2%	8%
Marital Status		
Married	74%	69%
Unmarried/Single	26%	31%

Measures

Demographic Information Sheet

The Demographic Information Sheet was used to obtain demographic information about participants.

Brief Symptom Inventory (BSI)

The Brief Symptom Inventory (BSI), comprising of 53 items evaluating 9 symptom domains, was administered to identify self-reported psychological effects. It takes approximately 20 minutes to administer. The responses are rated on a 5-point Likert scale ranging *from 0="not at all", to 4="extremely"*. The BSI instrument has good internal reliability showing an average rating above .70 for the scales. The range for test-retest reliability was .68 to .91 (Derogatis & Melisaratos, 1983). This test is commonly correlated with the Symptom Check List-90-Revised and considered reliable to assess different aspects of functioning (Derogatis & Melisaratos, 1983; Horowitz, Wilner & Alvarez, 1979). The scale was translated into Urdu for the current study as it was more understandable for the sample. The alpha reliabilities (see Table 2) for all nine domains indicate satisfactory internal consistency of the scale.

Brief COPE Scale

Brief COPE Scale (Carver, 1997), an abridged version of the COPE inventory (Carver, Scheier, & Weintraub, 1985), was administered to find out types of coping strategies employed by the study participants to master, tolerate, reduce or minimize stress in face of exposure to terrorism. It contains 28 items and is rated by the 4-point Likert scale, ranging from *"I haven't been doing this at all"* (score one) to *"I have been doing this a lot"* (score four). In total, it consists of fourteen scales measuring use of different coping strategies including active coping, planning, using instrumental support, venting, using emotional support, religion, behavioral disengagement, self-blame, positive reframing, self-distraction, humor, denial, acceptance, and substance use. The validation studies attest to its good validity and reliability α = .50 and -.90 respectively (Carver, 1997). The scale was translated into Urdu for the current study as it was more understandable for the sample under investigation. The alpha reliabilities (see Table 3) for all fourteen domains indicate satisfactory internal consistency of the scale.

Procedure

Prior to administration of the scales, the participants were explained about the uses, rationale and the benefits which the future generation would have from the current study. Many participants who initially refused to participate, after this briefing got ready to take part in the study. A sum of 57 and 65 people from directly and indirectly exposed groups were contacted and 48 and 62 gave their permission to participate in the present research. Data was collected from two markets of Lahore; one of which was direct victim of terrorism. Formal consent was taken. Followed by demographic information sheet was filled in. Afterwards, Brief Symptom Inventory and Brief COPE Scale were independently administered to all study participants.

Scoring & Statistical Analysis

After data collection, scoring of measures was done. Independent samples *t*-test analyses were run to find out differences between directly and indirectly exposed groups on hypothesized variables.

RESULTS

Table 2
Alpha Reliabilities for the Brief Symptom Inventory (BSI)

Domains of BSI	***α***
Somatization	.77
Obsession Compulsion	.79
Interpersonal Sensitivity	.82
Depression	.80
Anxiety	.80
Hostility	.86
Phobic Anxiety	.76
Paranoid Ideation	.74
Psychoticism	.84

Table 3
Alpha Reliabilities for the Brief COPE

Brief COPE Sub-scales	***α***
Active Coping	.71
Planning	.81
Positive Reframing	.59
Acceptance	.79
Humor	.83
Religion	.87
Using Emotional Support	.75
Using Instrumental Support	.80
Self-distraction	.61
Denial	.58
Venting	.59
Substance Use	.92
Behavioral Disengagement	.71
Self-Blame	.69

Table 4

Differences between Directly Exposed to Terrorist Attacks Group (n = 48) and Indirectly Exposed Group (n = 62) on clinically relevant Psychological Symptoms

Psychological Symptoms	Directly Exposed Group		Indirectly Exposed Group		*t*	*p*	Cohen's d
	M	*SD*	*M*	*SD*			
Somatization	0.56	0.55	0.23	0.22	2.97	.001	.79
Paranoid Ideation	1.01	0.81	0.59	0.41	3.28	.002	.66
Phobic Anxiety	1.11	0.45	0.85	0.32	2.49	.010	.69
Obsessive Compulsion	0.58	0.36	0.53	0.34	0.46	.853	.04
Depression	1.01	0.61	1.11	0.68	-0.81	.418	.15
Anxiety	0.89	0.73	0.75	0.51	0.85	.262	.22
Interpersonal Sensitivity	0.66	0.61	0.53	0.54	0.60	.248	.14
Hostility	0.52	0.39	0.47	0.26	0.77	.445	.15
Psychoticism	0.52	0.39	0.39	0.29	1.89	.061	.38

$p<.05$; $df = 108$

Table 5
Differences between Directly Exposed to Terrorist Attacks Group (n = 48) and Indirectly Exposed Group (n = 62) on Coping Strategies

Coping Strategies	Directly Exposed Group		Indirectly Exposed Group		*t*	*p*	Cohen's d
	M	***SD***	***M***	***SD***			
Self Distraction	6.5	1.91	4.5	1.71	4.27	.001	0.87
Venting	6.6	1.82	5.4	1.42	2.85	.005	0.73
Denial	2.5	1.60	3.5	1.05	-2.82	.003	0.74
Humor	5.5	1.17	6.1	1.11	-2.03	.012	0.52
Acceptance	5.4	1.81	7.1	2.10	-3.37	.001	0.85
Religious Coping	6.9	1.77	7.01	1.54	-0.34	.732	0.07
ESS	5.6	1.60	6.2	1.50	-1.90	.060	0.36
Self-Blame	4.9	1.02	4.9	1.11	0.15	.883	0.03
Active Coping	2.5	1.50	2.9	1.10	-1.55	.125	0.30
Planning	1.7	0.81	1.5	0.61	1.45	.153	0.28
Substance Use	3.1	1.50	2.9	1.51	0.69	.488	0.13
UIS	1.8	0.83	1.7	0.65	1.41	.157	0.29
BD	2.9	0.69	2.8	0.78	0.712	.478	0.12
PR	3.1	1.15	2.9	1.03	0.95	.344	0.18

Note: Emotional Support Seeking= ESS; Use of Instrumental Support= UIS; Behavioral Disengagement= BD; Positive Reframing = PR
$p<.05$; $df = 108$

DISCUSSION

Regarding our first hypothesis, in our study we found significant differences between the directly exposed and indirectly exposed groups on three psychological dimensions i.e., phobic anxiety, paranoid ideation and somatisation with directly exposed group reporting higher scores on all the three dimensions (Table 4). The results of our study are consistent to many past researches, where groups who were directly exposed to terroristic attacks reported presence of greater psychological symptoms. Researchers have found out that there are some universal symptoms like intrusive re-experience and hyper arousal as a result of direct exposure to terrorism that pave the way for more severe psychological effects. One of the most pertinent ramifications of direct exposure to terror is a disproportional reaction characterized by feelings of personal and collective fear, and heightened behavioral responses to that fear (Canetti-Nisim, Halperin, Sharvit, & Hobfoll, 2009). Thus, the findings are consistent with relevant evidence regarding direct corollaries of terrorism (Tucker et al., 2010; Silver, et al., 2002).

Further, no significant differences were reported on obsessive compulsion, depression, anxiety, interpersonal sensitivity, hostility and psychoticism in our study. The results of the study point towards the fact that indirectly exposed group has similar long term psychological effect through immediate and vivid broadcasting and communication of violent, and shocking terrorist attacks by the media (Bleich, Gelkopf, & Solomon, 2003). Schuster and colleagues (2001) found out that indirect exposure to September 11 attacks in a sample of US adults established presence of psychological symptoms. Commonly reported stress symptoms included obsessive compulsion, depression and anxiety. The reason can be that in both groups the unknown effects of questionable future security and unpredictability are the same, as these terrorist attacks tend to occur anytime and anywhere (Silver et al., 2002). Non-significant differences on majority of psychological dimensions are highly indicative of the fact that indirectly exposed male population suffered similar psychological effects. In addition, it may reflect a degree of adjustment; people develop ways of coping and resilience in face of repeated exposure to unpredictable, shocking attacks of terrorism (Shalev et al., 2004).

Media-oriented terrorism has its impact on viewers who, through the media's facilitation, join the widening circles of victims of terrorism. Therefore, it can be aptly stated that the current study precisely concurs with global

scholarship regarding vicarious traumatization (Yagur, Grinshpoon, & Ponizovsky, 2002). Trauma witnessed firsthand or from a secondary source poses consequences of great gravity for even the most resilient people. Vicarious traumatization signifies as a secondary source i.e., media generated effect. This point towards the fact that indirectly exposed groups have similar long term psychological effects through immediate and vivid broadcasting and communication of violent, and shocking terrorist attacks (Bleich, Gelkopf, & Solomon, 2003).

During the last decade, news coverage on terrorism has been extensive by Pakistani news channels, despite evidence suggesting that such coverage may cause viewers and reporters of such incidents to suffer from trauma leading to anxiety, depression and emotional problems (Daredia, Zehra, & Rasheed, 2013; Naeem, Taj, Khan, & Ayub, 2012). In Pakistan, media transmissions are accountable for inducing negative psychological impact on its viewers. Tufail (2010) found that 35% of his study participants believed that TV coverage of terrorist attacks had a negative influence on viewers, while 45% believed that the impact is moderately negative. He further established that there is high probability of perceived depression in active viewers. Daredia, Zehra, and Rasheed (2013) documented that 41.5% of the study respondents experienced "brief" effects of trauma and 28.8% "lasting" effects of watching breaking news of violence. Almost half of the participants stated feeling stressed after watching television news. Situations which are integral in most media reporting of terrorism, are generally enough to harvest a mortality salience effect (Silke, 2014). This phenomena is consistent with the outcome of the current research i.e., equal reporting of majority of dimension of BSI.

Our second hypothesis was to explore differences on various coping strategies employed by direct and indirect exposed groups. The findings indicate that the use of self-distraction and venting was more customary in directly exposed group whereas in indirectly exposed groups, all forms of mental disengagements (i.e., denial, humor and acceptance) were habitual. The significant differences in the use of five of the fourteen types of coping strategies were reported and no differences on use of other nine types of coping strategies were evident, religious coping, emotional support seeking, self-blame, active coping, planning, substance use, use of instrumental support, behavioral disengagement and positive reframing (Table 5).

The acceptance was found to be a coping strategy in indirect exposed group, endorsed by previous studies (e.g., Somer, Ruvio, Soref, & Sever, 2005). Somer and colleagues posited that humor and acceptance are types of coping employed under ongoing uncontrollable stressors. Reflecting a sense of acceptance and adjustment to the uncontrollable perils of life under the threat of terror is the most frequently utilized coping strategy. Denial about becoming a victim of terrorist attack is the easiest way of coping to diminish unavoidable stressors. Ahmed et al. (2011) postulated that the venting, self-distraction and religious coping are prevalent amongst adults. Those who appeared to be stressed by the threat of terrorism attacks were likely to cope with their feelings of vulnerability and future threat by increasing their faith in religion, accepting the situation, avoiding facing the situation, distracting themselves and focusing on and venting their emotions about the attacks. Though, our study indicates no difference on religious coping indicating use of religious coping by both groups. Regarding no differences on other eight types of strategies, results are consistent with past researches to the best of researcher's knowledge (Galea et al., 2002; Pfefferbaum et al., 2001; Schlenger et al., 2002) who found similar use of these strategies by both group.

Conclusion

Summing up, our findings are indicative of differences on some of the clinically relevant psychological symptoms and some of the coping strategies and no difference were found on most of the clinically relevant psychological symptoms and coping strategies. The clinically manifested psychological symptoms of somatization, phobic anxiety and paranoid ideation were found to be greater in directly exposed group in contrast to indirectly exposed group. However, on other psychological symptoms, insignificant differences were found between both groups. Self-distraction and venting was more common in directly exposed group as behaviourally oriented coping may be ineffective in accordance to their situation. In indirectly exposed groups, all forms of mental disengagements (denial, humour and acceptance) were apparent. These findings highlight the significance of both direct exposure and indirect exposure to terrorism.

Results of the current study have limited generalizability, due to selective nature of the sample. In addition, it is pertinent to study gender differences in concurrence with the variables as women may have different psychological manifestation and coping responses than the men. The results suggest that

ongoing and continuous effects of terrorism need to be targeted through planning and implementation of community based psychological interventions. Review of media policy is required on an urgent basis. Media needs to be informed about harmful psychological effects of vivid broadcasting of terrorist attacks and adherence to revised policy should be monitored.

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