

## **GENDER DIFFERENCES IN ANXIETY, DEPRESSION AND STRESS AMONG SURVIVORS OF SUICIDE BOMBING**

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The present research studied gender differences for anxiety, depression and stress among survivors of suicide bombings in Lahore, Pakistan. The sample consisted of 120 adult survivors of suicide bombings (79 men and 41 women) in the vicinity of buildings occupied by Federal Investigation Agency (FIA), General Post Office and Lahore High Court which were rocked by a series of suicide bombing. Depression Anxiety Stress Scale (Lovibond & Lovibond, 1995) was administered to all the research participants. The results indicated significant gender differences in depression, anxiety and stress reported by the survivors of suicide bombings. The findings further suggested that female survivors scored higher on depression, anxiety and stress than their male counterparts. Furthermore, positive significant relationship was found between stress and depression, stress and anxiety, depression and anxiety. The findings of this research have implications for promoting our knowledge of gender related differences in anxiety, depression and stress among survivors of suicide bombings so that effective counseling and psychotherapeutic interventions could be introduced for the survivors of traumatic events.

*Keywords:* anxiety, depression, survivors, suicide bombing

Unfortunately, Pakistan has been the target for a series of suicide bombing attacks since 9/11. Important buildings and places in Lahore-the provincial capital city of Pakistan-have especially been targeted. The buildings occupied by Federal Investigation Agency, General Post Office and Lahore High Court were targeted by the suicide bombers in 2008 resulting in death and destruction of innocent men, women

and children which created massive feelings of helplessness, insecurity, panic, stress, sadness, anger, fear and horror among the survivors and their dear ones.

According to Moghaddam and Marsella (2004), terrorism is the force of violence that has pressurized, endangered and damaged people, governments, nations or perhaps civilizations over the past several years. Terrorism has killed, injured and permanently brutalized thousands of innocent people. Terrorist violence is always planned and is intended to produce fear in someone other than the victims as well.

abdominal discomfort, dry mouth, rapid heartbeat or palpitations, inability to concentrate, shortness of

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breath, detachment from surroundings, insomnia, nightmares, muscle tension, trembling, sweating/flushing, diarrhea, getting easily tired and headache (APA, 2000). These symptoms are often reported by the female survivors of bombings (Dolberg et al., 2010; Farooqi & Tariq 2010; Huddy, Feldman & Cassese, 2008; North et al., 1999; Pat-Horenczyk et al., 2007; Qouta, Punamaki, & Sarraj, 2003; Solomon, 2009; Summers & Winefield, 2009 and Tolin & Foa, 2006).

Skoric (2006) has described stress as "experiencing the events that are perceived as endangering one's physical or psychological well being and these events are usually referred to as stressors..."

Researchers have identified various symptoms of depression such as remarkable change in mood, appetite, weight or sleep pattern, loss of interest and pleasure in nearly all activities, fatigue, depersonalization, difficulty in decision making, agitation, irritability, feelings of worthlessness, self blaming and suicidal thinking. These symptoms are often reported by the female survivors of traumatic events like suicide bombings (Bossolo, Bergantion, Lichtenstein, & Gautam, 2002; Gautam et al., 1998; Hobfoll, Nisim & Johnson, 2006; Peltzer, 1999; and Solomon, Gelkopf, & Bleich, 2005).

Zara, Kaplan, Erdogan, and Guler (2009) studied survivors of the Istanbul terrorist bombings and found 35.6% prevalence rate of posttraumatic stress disorder and 23.5% of depression among survivors. Moreov-

er they found that female survivors were at risk to develop posttraumatic stress as well as depression after the terrorist bombings.

Murphy (2010) and Norris (2005) have identified from various published documents and empirical review of literature that women and girls showed more symptoms of PTSD, depression, anxiety, fear of nonspecific disaster and health problems than men and boys. Moreover, the findings further suggested that these symptoms were also high if victims of traumatic events were from the developing countries or experienced mass violence such as terrorism.

The present study aimed to explore gender sensitive issues regarding anxiety, depression and stress experienced by the survivors of bomb blasts in Lahore city of Pakistan. It further explores the interrelationship between stress, depression, and anxiety among survivors of suicide bombings. It may be argued that the findings of this research would promote our understanding of gender related issues in anxiety, depression and stress of survivors as a result of exposure to suicide bombing and highlights the need for gender-sensitive counseling and effective psychotherapeutic interventions to alleviate anxiety, depression and stress among the adult survivors of suicide bombings.

## Method

### *Sample*

The purposive sample comprised of 120 adult survivors of suicide bombings (79 men and 41 women).

The sample was taken from the buildings occupied by Federal Investigation Agency (FIA), General Post Office (GPO) and the Lahore High Court. Further demographic characteristics are given in Table 1.

### *Inclusion Criteria*

In the present study, survey research design was used. The following inclusion criteria were used for sampling:

1. The adult survivors within age range of 19-69 years, currently working at FIA, GPO and Lahore High Court who were live witnesses of the Lahore suicide bombings.
2. Availability and willingness of the participants.
3. No past history of any psychiatric disorder.

### *Measures*

The following tools were used:

- (i) Demographic Information Form.
- (ii) Depression, Anxiety, Stress Scale (DASS; Lovibond & Lovibond, 1995).

#### *1. Demographic Information Form*

Demographic information Form was used to gather information about age, education, gender, marital status and number of dependents of the research participants.

2. *Depression, Anxiety and Stress Scale (DASS; Lovibond & Lovibond, 1995).*

The DASS is a 42 items self reported inventory which was developed by Lovibond & Lovibond (1995). It consists of three sub-scales named: Depression Scale, Anxiety Scale and Stress Scale and each sub-scale consist of 14 items with four optional responses as follows: (a) Did not apply to me at all (0), (b) Applied to me some degree, or some of the time (1), (c) Applied to me a considerable degree, or a good part of time (2), (d) Applied to me very much or most of the time (3).

All the items of DASS are designed to measure the symptoms of depression, anxiety and stress among the respondents. The *DASS-Depression Scale* was based on different symptoms of depression, i.e., depressed mood, irritability, etc. The *DASS-Anxiety Scale* assesses different symptoms of anxiety, i.e., dryness of mouth, breathing difficulty etc. The *DASS-Stress Scale* identifies different symptoms of stress, i.e., worthlessness feelings, upset, etc.

Written permission was sought from the authors of DASS (Urdu version) which was previously translated into Urdu. The current researchers proposed few changes in the Urdu version of DASS, such as composition of DASS, time frame, formatting and gender-sensitive language of DASS.

These changes were approved by the authors of DASS for the current research project and this updated

Table 1  
*Demographic Characteristics of the Sample (N=120)*

| Characteristics   | Total Sample<br>(N = 120) |      | Men<br>(n = 79) |      | Women<br>(n = 41) |      |
|-------------------|---------------------------|------|-----------------|------|-------------------|------|
|                   | f                         | %    | f               | %    | f                 | %    |
| Marital Status    |                           |      |                 |      |                   |      |
| Married           | 91                        | 75.8 | 70              | 88.6 | 21                | 51.0 |
| Unmarried         | 29                        | 24.2 | 09              | 11.4 | 20                | 48.0 |
| Age Range         | 19-69                     |      |                 |      |                   |      |
| Educational Range | Matric - Graduation       |      |                 |      |                   |      |

DASS (Urdu version) is available online at the DASS website.

An internal consistency of the DASS and its subscales has been established and it is highly correlated with other commonly used measures of anxiety, depression and stress; as follows:

Total DASS:  $\alpha = .97$

Stress Scale:  $\alpha = .93$

Anxiety Scale:  $\alpha = .91$

Depression Scale:  $\alpha = .94$

### *Procedure*

The current research project was approved by the Board of Studies, Department of Applied Psychology, University of the Punjab Lahore, Pakistan. The data were collected from Federal Investigation Agency (FIA) Zonal Office, General Post Office (GPO) Lahore and the Lahore High Court after seeking formal permission. All the participants were briefed about the nature and purpose of the current research project. Informed Consent Form was administered to each of the participants individually to obtain

their written consent for participation in this research. Then DASS was individually administered to the survivors of suicide bombings. It is worth-mentioning here that out of the total 125 survivors of suicide bombings who were interviewed by the researchers, 120 (96%) agreed to take part in the study and 5 (4%) did not respond due to their official designations.

## **Results**

### *Statistical Analysis*

Independent sample *t*-test was used to find out gender differences in depression, anxiety and stress among survivors of Lahore suicide bombings. Furthermore, Pearson Product Moment correlation coefficient was computed to determine relationship between the level of depression, anxiety and stress among the survivors of suicide bombings.

The results given in Table 2 indicate significant gender differences in the total DSS scores of survivors of Lahore suicide bombing  $t(118) = 6.88, p < .01$ . The female

Table 2

*Gender Difference in Total Scores of Depression Anxiety Stress Scale (N = 120)*

|                        | <i>M</i> | <i>SD</i> | <i>t</i> |
|------------------------|----------|-----------|----------|
| Men ( <i>n</i> = 79)   | 40.16    | 28.41     | 6.88*    |
| Women ( <i>n</i> = 41) | 78.90    | 30.80     |          |

*df* = 118. \**p* < .01.

Table 3

*Gender Difference in Level of Anxiety, Stress and Depression among Survivors of Lahore Suicide Bombings (N = 120)*

|                        | <i>M</i> | <i>SD</i> | <i>t</i> |
|------------------------|----------|-----------|----------|
| <b>Anxiety</b>         |          |           |          |
| Men ( <i>n</i> = 79)   | 12.73    | 9.60      | 7.50*    |
| Women ( <i>n</i> = 41) | 26.75    | 9.91      |          |
| <b>Stress</b>          |          |           |          |
| Men ( <i>n</i> = 79)   | 15.08    | 10.35     | 6.07*    |
| Women ( <i>n</i> = 41) | 26.63    | 8.86      |          |
| <b>Depression</b>      |          |           |          |
| Men ( <i>n</i> = 79)   | 12.34    | 9.54      | 6.21*    |
| Women ( <i>n</i> = 41) | 25.51    | 13.43     |          |

*df* = 118. \**p* < .01.

survivors reported higher scores in DASS as compared to the male survivors ( $M = 78.90$  and  $40.16$ , respectively).

The results given in Table 3 indicate significant gender differences in the level of depression, anxiety and stress among survivors of Lahore suicide bombings  $t(118) = 6.21$ ,  $t(118) = 7.50$ ,  $t(118) = 6.07$ ,  $p < .01$ , respectively. Moreover, the female

survivors reported more depression, anxiety and stress as compared to the male survivors ( $M = 25.51$  and  $12.34$ ); ( $M = 26.75$  and  $12.73$ ); ( $M = 26.63$  and  $15.08$ ), respectively. The results given in Table 4 indicate significant positive correlation between stress and depression; stress and anxiety; and anxiety and depression ( $r = .88$ ,  $.90$ ,  $.90$ , respectively).

Table 4

*Relationship between Anxiety, Depression, and Stress among Survivors of Lahore Suicide Bombings (N = 120)*

| Variables     | 2    | 3    |
|---------------|------|------|
| 1. Stress     | .88* | .91* |
| 2. Depression | -    | .90* |
| 3. Anxiety    | -    | -    |

\* $p < .01$ .

### Discussion

The findings of the current research suggest significant gender differences in depression, anxiety and stress reported by all the survivors of Lahore suicide bombing. The female survivors of suicide bombing reported higher degree of anxiety, depression and stress as compared to their male counterparts. These research findings are consistent with the earlier research findings (Delisi et al., 2003; Farooqi, & Tariq, 2010; Khan, Alam, Warris, & Mujtaba, 2007; Nasky, Hines, & Summer, 2009; Pat-Horenczyk et al., 2007; Pfefferbaum et al., 1999; Solomon, 2009; Solomon, Gelkopf, & Bleich, 2005; Summers & Winefield, 2009; Tolin & Foa, 2006 and Willenz, 2006) which suggest that the female survivors are more prone to develop depression, anxiety and stress as compared to the male survivors of terrorist attacks.

Furthermore, significant positive relationship was found among subscales of DASS among the survivors of Lahore suicide bombing and these findings are also consistent with those of the earlier research (Baker et al, 2009; Galea et al., 2002; Gautam et al., 1998; Hobfoll, Nisim,

& Johnson, 2006; Peltzer, 1999). Shalev et al. (1998) found significant positive relationship among all three sub-scales of DASS.

It may be argued that gender differences in depression, anxiety and stress of the survivors of suicide bombing may be attributed to a number of socio-cultural and religious factors. Among these are Pakistani women's feelings of insecurity, deep-rooted sense of threat, low self-efficacy, less tendency to use effective coping strategies than the Pakistani men as well as their inferiority as compared to Pakistani men. Their economic autonomy and mobility are restricted by the stereotypical roles and status assigned by the traditional society. Moreover, Pakistani females are brought up and socialized to become more passive, dependent, insecure and emotional as compared to their male counterparts. As a result, this stereotypical socialization process might have enhanced their vulnerability to depression, anxiety and stress whenever they encounter traumatic events like suicide bombing.

### Conclusion

The findings of the current research suggest significant gender differences

in level of anxiety, depression and stress reported by the survivors of Lahore suicide bombings. These findings can promote our understanding of the gender related issues of the survivors of the traumatic events like bomb blasts so that timely and effective gender-sensitive counseling and psychotherapeutic interventions could be introduced for the Pakistani survivors of the suicide bombings.

### *Limitations and Suggestions*

One of the limitations of the current research is that five survivors of Federal Investigation Agency and General Post Office were initially reluctant and fearful to give information because of their designations. Therefore, it may be argued that social desirability effect in case of these participants might have affected the reliability of the current research findings to some extent. In this research, multiple *t*-test was used for the analysis of the data because the population is not normally distributed and variance is not equal, therefore, it is strongly recommended to use MANOVA for future research.

### *Implications of the study*

It is also recommended that future research should be carried out in all those areas of Pakistan which are currently hit by the series of terrorist attacks so that generalizations could be made for diverse sets of population. The current research sample was taken from the Lahore city only; therefore, the generalizations cannot be made for whole of the Pakistani society. Moreover, cross-cultural research on

the psychological problems of the survivors of the bomb blasts is also recommended to understand the aftermath of such traumatic events across the globe.

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