The Level of Distress Among the Victims of War and Terrorism and the Role of Psychological Interventions in their Rehabilitation

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Abstract

The present study was carried out to investigate the psychological effects of war and terrorism and the role of psychological interventions in the rehabilitation of affectees. The sample included two hundred participants (N=200) from two districts of Khyber Pakhtunkhwa i.e. Swat and Buner based ,by using convenient sampling technique. It was further divided into two subgroups, males (n=100) and females (n=100).Pre and posttest design was used for the study because it was carried out in two phases. Demographic Information Sheet and Impact of Event Scale (IES) (Horowitq, Wilner, & Alvarez, 1979) were administered for the assessment. It was hypothesized that the Victims of war and terrorism will score high on Impact of Event Scale (IES) and the prevalence distress will be high among females as compared to males. It was also assumed that males will show improvement in decreasing symptoms of distress, than females after receiving psychological interventions. The results supported the hypotheses. Results of the research explored (p<0.05) that people who are the direct victim and those who are eyewitness of the traumatic event (war between army and militants) suffered from distress. In the second phase of study, results indicated that psychological interventions play a pivotal role in the rehabilitation of affectees.

Keywords

War and Terrorism, Stress, Male, Female, Psychological Interventions and Rehabilitation.

Introduction

Since time immemorial, especially the twentieth century, the world has experienced terrorism in different forms, faces and with varying different expressions. Therefore, we know that terrorism is not a modern trend. Undoubtedly, a terrorism disaster (whether an attack like that of 9/11 in 2001 or a natural event such as Hurricane Katrina in 2005, earthquake of Pakistan in 2005) have caused tremendous damage to individuals (e.g., buildings, roads, factories) and humans (e.g., injuries, deaths). The twentieth century seems to be the century of massive sufferings in human history, manifests a persistent increase in malicious and destructive activities. Yet, this was not the main challenge for the international community, until the hijack of aeroplanes and the attacks of 9/11 on the towers of World Trade Center and the Pentagon, the main symbols of American economic and military supremacy (Musarrat, 2009).

Method

Participants

The targeted sample for the present study was drawn from the two mediumsized districts of Khyber Pakhtunkhwa province. Khyber Pakhtunkhwa province is divided into 24 districts. The study included sample from District Buner and District Swat. Convenient sampling technique was used. The sample consisted of 200 adults (N=200), with the representation of both men and women from all walks of life. Further, two hundred sample (N=200) was divided into two groups. One hundred (n=100) were male respondents and one hundred (n=100) were female respondents from Swat and Buner. 100 respondents each from the two districts further equally divided between male respondents and female respondents. Average age of the sample was 40 years.

Instruments

For this research one information sheet and instrument were used namely Data Information Sheet (DIS) and The Impact of Event Scale (IES)

1. Demographic Information Sheet (DIS)

Demographic Information sheet was used to get information from the participants. Demographic Information sheet included Name, Gender, Area, Address and Date.

2. Impact of Event Scale (IES)

The Impact of Event Scale was used to measure the current subjective distress related to a specific event (Horowitq, Wilner, & Alvarez, 1979). The Impact of Event Scale (IES) consists of 15 items. The Impact of Event Scale (IES) consists of 15 items, 7 of which measure intrusive symptoms (intrusive thoughts, nightmares, intrusive feelings and imagery), 8 tap avoidance symptoms (numbing of responsiveness, avoidance of feelings, situations, ideas), and combining provide a total subjective stress score. Corcoran and Fisher (1994) found that the sub scales of the IES show very good internal consistency based on 2 separate sample groups. The coefficients ranged from .79 to .92, with an average of .86 for the intrusive sub scale and .90 for the avoidance subscale.

Horowitz' Impact of Event Scale (IES; Horowitz Horowitz et al, 1979) was created for the study of bereaved individuals, but soon it was used for exploring the psychological impact of a variety of traumas. It was constructed before the diagnosis of post-traumatic stress disorder (PTSD) was entered into the DSM III (American Psychiatric Association, 1980), and although many measures of PTSD symptoms have emerged (Wilson & Keane, 1997), the IES remains widely used.

Procedure

The sample of two hundred (N=200) participants were selected by using conveniently sampling technique from different areas of District Swat and District Buner. The sample was divided into two groups, hundred were males (n=100) and hundred were females (n=100). Fifty male (n1=50) and fifty female (n2=50) participants from District Swat and fifty male (n3=50) and fifty females (n4=50) from District Buner were selected. Criteria for selection of sample was convenient sampling technique.

Participants were approached at different mental health team clinics run by different non-governmental organization. Rapport was developed with the subjects. Pre and post-test design was used in the study because the study was carried out in two different phases i.e. Phase I and Phase II. In Phase I, data was collected to find out the psychological consequences (prevalence of psychological distress in victims) of war and terrorism. After three months, in Phase II, the same instrument was used for collection of data to analyse the role of psychological interventions in the rehabilitation of affectees from the same sample assessed in phase I. All the participants and Organizations (both National and International) were thanked for their cooperation in this study.

Intervention

After the advent of war on terrorism, almost everyone in the province of Khyber Pakhtunkhwa, in general, and District Swat and Buner, in particular, were facing different kinds of psychological problems. Different international non-governmental (INGOs) and national non-governmental organizations (NGOs) started providing mental health services. For the data collection purpose, different organization's mental health services were keenly observed and those who hired professional psychologists for providing psychological interventions were selected. They handled clients in a very professional way and most of the time applied counselling strategies (cognitive behavioral technique) depending on the problems that clients faced at that time.

Data was collected from clients who were taking individual counselling. Duration for each individual session was 45 minutes according to international standard. Those who were taking individual counselling and psychotherapy got surprised in initial session because before that the attitude of general public was developed that psychological problems can only be eradicated by using medicines. But after taking sessions, they were very much satisfied that their psychological healing is increasing day by day by attending counseling and psychotherapy sessions.

Control of Extraneous Variables

Controlling of extraneous variables is important to make it sure that dependent variable is changed because of the effect of independent variable. Controlling of extraneous variables in field experiment is difficult from laboratory experiment. During the study, the clients were asked not to take any other service during counseling and psychotherapy taking duration which they were receiving from those mental health clinics established by different international and national organizations (INGOs). After a traumatic event, it is a parameter that people are naturally healed upto 6 weeks. After 6 weeks, if people still remain in the same stressful condition, then they were advised to take counselling and psychotherapy services.

Inclusion / Exclusion Criteria

People who were the victims or eye witnesses of the traumatic event during war on terror were included.

The research focussed and included elderly people both males and females.

The present research did not focus on children and adolescents because that group of the targeted area were under special consideration of security agencies due to their close exposure to suicide attack training.

Individuals who visit mental health clinics were included in the study because approaching

Result

The present study is aimed to see psychological effects of war on terrorism and the role of psychological interventions in the rehabilitation of affectees. It is further directed to explore the psychological reactions shown by male respondents and female respondents of the community and to measure its level of intensity between male respondents and female respondents by using Impact Event Scale, Civilian Mississipi Scale and Geriatric Scale. Internal consistency and reliability of the scales were determined by using Cronbach's alpha. All the scales deemed reliable for the current study with alpha reliability of .84, .83 and .79 respectively. Following tables show the results obtained from the data analysis:

Table I:	Alpha I	Reliability	of IES	scale	(N=200)

Scale	No. of Items	Alpha	
Impact of Event Scale (IES)	15	.84	

Table I shows the alpha reliability of IES, GDS and CMS scales. Results shows that all scales are internally consistent and can be used for present sample.

Table II

Means, standard deviations and t-value of the stress scores of the male and female affectees phase I on Impact of Event Scale (N=200)

Scale		ale 100)	Female (n=100)				95% CI	
	м	S.D	М	S.D	t	р	LL	UL
Stress	25.34	7.20	31.18	9.70	4.80	0.001	-8.20	-3.4

 $df = 198 \ p < .0 \ 01$

Table II shows the mean, SD and t values of male and female affectees on stress scale. Result shows that there is a highly statistically significance at (p<.001, t=4.80) which means that females score high on perceived stress scale as compared to male.

Table III:

Means, standard deviations and t-value of the stress scores of the pretest and post-test of Affectees (phase II) on Impact of Event Scale (N=200)

Scale		Pretest 100)		Post-test 100)			95% CI	
	м	S.D	М	S.D	t	р	LL	UL
Pair I	28.25	9.00	23.70	9.84	5.99	0.001	3.05	6.05

 $df = 198 \ p < .0 \ 01$

The above table shows highly significant difference between the pretest and post-test of Affectees on stress scale by stress scores (t=5.99, p<.001). The figures show that the level of stress was high (M=28.25, SD=9.00) among the participants on pretest as compare to post-test (M=23.70, SD=9.84).

Table IV:

Means, standard deviations and t-value of the stress scores of the pretest and posttest of Male Affectees (phase II) on Impact of Event Scale(N=100)

Scale	Stress (n=	Pretest 50)		Post-test 50)			95% CI	
Scale	м	S.D	м	S.D	t	р	LL	UL
Male	25.35	7.20	20.94	9.06	4.33	0.001	2.38	6.42

 $df = 198 \ p < .0 \ 01$

Result indicates highly significant difference between the pretest and post-test of male Affectees on stress scale (t=4.33, p<.001). The table show that the pretest males have more stress (M=25.35, SD=7.20) as compared to post-test males (M=20.94, SD=9.06).

Table V:

Means, standard deviations and t-value of the stress scores of the pretest and posttest of Female Affectees (phase II) on Impact of Event Scale (N=100)

Scale	Stress Pretest (n=50)		Stress Post-test (n=50)				95% CI	
Scale	М	S.D	М	S.D	t	р	LL	UL
Female	31.18	9.70	26.48	9.86	4.13	0.001	2.44	6.95

 $df = 198 \ p < .0 \ 01$

The above table shows highly significant difference between the pretest and post-test of female Affectees on stress scale by stress scores (t=4.13, p<.001). The figures show that the pretest females have more stress (M=31.18, SD=9.70) as compared to post-test females (M=26.48, SD=9.86).

Discussion

The objective of this study was to examine the psychological consequences of war and terrorism among the victims in affected areas (Swat & Buner) of Pakistan and to investigate the role of psychological intervention strategies in the rehabilitation of affectees. Our findings indicate significant difference between phase I and phase II scores which shows tremendous role performed by psychological intervention in rehabilitation of affectees. In phase 1, it was hypothesized that affectees of war and terrorism will have high score on psychological distress, 2) psychological distress will be low in males than females.

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-Horenezyk 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 victims are more prone to develop psychological stress, depression and PTSD as compared to the male victims of war and terrorism.

The psychological effects of terrorism on threatened civilians have not been extensively investigated in the literature. Descriptions of gender differences in response to terror attacks are even sparser. Gidron (2002) reported that the prevalence of PTSD after terrorist attacks worldwide is estimated to be approximately 28%. Consistent with these results, Galea and colleagues (2002), who interviewed 1008 adults in Manhattan after the September 11 terrorist attacks, showed a substantial burden of acute PTSD and depression in the population after the attacks. Experiences involving exposure to the attacks were predictors of current PTSD, and losses as a result of the events were predictors of current depression. Research findings regarding gender differences in response to traumatic events are equivocal. Several studies have not identified gender differences at all (Amirkhan, Risinger, & Swickert, 1995; Aranda et al., 2001; Lomranz et al., 1994). Many researchers, however, report a female-to-male lifetime prevalence ratio of as high as 2:1 for PTSD symptoms, even when levels of exposure are lower in females as compared to males (Ai, Peterson, &Ubelhor,2002; Ben Zur & Zeidner, 1991; Breslau, 2001, Fullerton et al., 2001; Karanci et al., 1999;Saxe & Wolfe, 1999; Seedat & Stein, 2000). These data appear to be consistent with a review of 180 articles and chapters on 130 distinct samples involving over 50,000 individuals in 80different traumatic events (Norris, Friedman, Watson, Byrne, Diaz & Kaniasty, 2002). There viewed data reveal that in the aftermath of disasters, women appear to be at greater risk than men for developing long-term psychological problems, especially PTSD. The effects of gender were found to be greatest in samples from traditional cultures and within the context of severe exposure.

The study reveals that 26.7% of women and 19.8% of men have scored on psychological distress on the General Health Questionnaire(GHQ). However, this difference in gender with respect to psychological disorder is much less than reported by studies conducted on civilian and military populations.

Auerbach&Kilmann (1997) psychological interventions are the interventions in which different techniques and approaches are used like initial psychological and social methods for proper assessment/diagnosis, treatment and rehabilitation of different psychological and mental disorder. Psychological interventions are comprises of different planning and activities which included psychological therapy (psychotherapy), psycho educational treatments, counseling, activities with families, rehabilitation activities (from less to more structured activities such as leisure and socializing activities, interpersonal and social skills training, occupational activities or vocational training, sheltered employment activities) and provision of social support. Intake interviews, assessments and follow up psychopharmacology are not included in initial psychological intervention services.

Individual's strength and ability that they normally use effectively to cope in the face of a perceived challenge or threat is overwhelmingly affected by stressful life event when psychological sever distress prevailed (Auerbach&Kilmann, 1997; Everly & Mitchell, 1999; Raphael, 1986; Sandoval, 1985; Schwartz, 1971; Wollman, 1993). According to Caplan and Everly & Mitchell (1964, 1999), particular or narrow down it, a crisis or stress may be taken as a reaction/response situation wherein the following important changes can take place:

- Psychological homeostasis will be disrupted;
- Individuals coping mechanisms usually failed to reestablish homeostasis; and,
- It is based on evidence that there is functional impairment caused by psychological distress engendered by the crisis.

There is a huge difference and distinction between "Critical incident" and "crisis" as it is taken normally confused and mixed with each other. Critical incident in opposition of crisis reaction consider any stressor that has the strength to lead to crisis reaction in many people. Peculiarly, crisis reaction is the ultimate result of any sort of critical event (American Psychiatric Association, 1994; Everly & Lating, 1995; Flannery, 1994, 1995). Threatening situations or real death, serious injuries or any other direct or indirect threats to the affectees physical and psychological integrity will be considered Catastrophic, traumatic events or critical incidents. People can also be victimized by eye witnessing the causalities happening in front of them (American Psychiatric Association, 1994). If there happened anything contradictory or in opposition of one's belief system can also become a cause of being traumatic (Everly & Lating, 1995).

Since long time, for victims and affectees of all kind of traumatic events (disaster and critical incidents) psychological intervention has been proved an effective, important, unavoidable and front-line intervention especially in result of severe psychological distress and trauma (Everly, Flannery, & Mitchell, 2000; Everly & Mitchell, 1999). According to the definition of psychological intervention given by Everly & Mitchell (1999), "it is the provision of emergency psychological services and care to victims as to help those victim's in returning to normal and an adaptive level of functioning and to prevent or mitigate the potential negative impact of psychological trauma."

Conclusion

As a result of the sabotage activities carried out by terrorists, there will be large number of casualties like injuries, death, and destruction. Psychological impact is the ultimate goal i.e., create a situation of uncertainty, vulnerability and fear. Long lasting psychological reactions of terrorism, are the perpetrator's main political goals. Psychological reactions exert sever and persistent impact on human neurological system. That's because a neurological perspective is very important to develop the knowledge of terrorism and its long lasting impact on the lives of the people.

Consequently it is explained by Karanci (1999) including that all kind of terrorism activities have widespread long lasting impact on the people of the affected areas, psychological interventions will help and involves for the preparation of it, including social support and multiple levels within the community; respondents, professionals and community-based organizations. The approach is social rather than clinical, which is exploited in the natural mechanisms of community interventions for psychological support.

Limitations

Researchers face several unique challenges while conducting rigorous studies/researches and interventions based on evidence in the conflict areas. Researchers always face the problem of security and their lives are always at risk and other people working in mental health team are also at high risk because of the installation of landmines and unexploded ordinances. There is also security measure taken by peace keeping troops and restricted from general travel which creates hindrances while providing services in different sectors by organizations.

This study was limited to only two districts of Khyber Pakhtunkhwa i.e. Swat and Buner just because of security risks. General local conditions of these districts aftermath of conflict were better as compared to other areas of Khyber Pakhtunkhwa i.e. Waziristan Agency and Orakzai Agency etc. Replication of such study is possible in other districts of Khyber Pakhtunkhwa when complete control of the areas in ensured and minimizes the risks of security.

Recommendations

Psychological evaluation and assessment of the people of the targets area risks and needs after the advent of a conflict or disaster must be formulated and conducted with a focus on the types and strength/levels of symptoms experienced and formal diagnosis should be avoiding until two phases of emergency situations are elapsed. After the initial phases of the emergency situations that formal assessment and diagnosis will be made legitimately by the experts, then it will be helpful in providing treatment to illnesses people will face. Population and individual's resilience assessment if the integral to assessing risks.

Mental health support should be provided with relief activities. To achieve this goal, workers who are involved in rescue activities should also be given training for emotional first aid or treatment. One of easiest ways to deal with issue of coordination through help with cultural norms after post disaster requirement that help should be taken from local volunteers or residents. Local people related to health care profession and teachers can facilitate in the management of psychological impact of disasters. It is important that mental health problems of children should be reported as soon as possible and appropriate measures should be taken at school and home accordingly. As children spend much time with their family members, they can contribute a lot to save this purpose (Wooding & Raphael, 2004).

To help and prevent people from the onset of psychological disorder/trauma related illness especially in vulnerable groups of women and children required great investment in research to identify those risks.

With the help of conducting researches, it can become easy then to determine long term effects of terrorists attacks on people mental health (brain), physical health and specially on their behavior and will help us to understand that the effects of terrorism are seriously different form the effects of other disaster especially when there is continuity in terrorists actions.

If we want to know about the needs of the people when they are exposed to emergency situations like terrorism especially in country like Pakistan, new styles, ways and abrupt research planning should be formulated otherwise will not be able to know people's need then. Along this we will never be able to discover ways and techniques to identify who is at high risk, and what kind of intervention will be needed to eradicate and prevent people from developing psychological disorders on long term basis. Disaster planning and research findings should be incorporated more rapidly. Training in clinical and other schools and even in psychology departments, disaster preparedness programs and disaster/emergency response are not included in their syllabus which is an attention seeking situations. It is advised that such training program should be included in schools, colleges and universities syllabus for prior preparation for any sort of emergency situation.

References

- Ai, A. L., Peterson, C., & Ubelhor, D. (2002). War related trauma and symptoms of posttraumatic stress disorder among adult Kosovo refugees. Journal of Traumatic Stress,5(2), 157-160.
- American Psychiatric Association (1994). The diagnostic and statistical manual of mental disorders. (4th Ed.). Washington, DC: American Psychiatric Press.
- Amirkhan, J. H., Risinger, R. T., & Swickert, R. J. (1995). Extra version: A hidden personality factor in coping? Journal of Personality,63, 189-210.
- Angst, J. Gamma, A., Gastpar, M., Lepine, J. P., Mendlewicz, J., & Tylee, A. (2002). Gender differences in depression: Epidemiological findings from the European DEPRES I and II studies. European Archives of Psychiatry and Clinical Neuroscience, 252(5), 201-209.
- Aranda, M., Castaneda, I., Lee, P., & Sobel, E. (2001). Stress, social support and coping as predictors of depressive symptoms: Gender differences among Mexican Americans. Social Work Research, 25(1), 37-48.
- Auerbach, S. & Kilmann, P. (1997). Crisis intervention: A review of outcome research. Psychological Bulletin, 84, 1189-1217.
- Ben-Zur, H. & Zeidner, M. (1991). Anxiety and bodily symptoms under the threat of missile attacks: The Israeli scene. Anxiety Research,4(2), 79-95.
- Bolitho, F. H., Carr, S. C., & Fletcher, R. B. (2006). Public thinking about poverty: Why it matters and how to measure it. International Journal of Non-Profi t and Voluntary Sector Marketing, 12(1),13-22. doi: 10.1002/nvsm.220.
- Breslau, N. (2001). The epidemiology of posttraumatic stress disorder: What is the extent of the problem? Journal of Clinical Psychiatry,62(17), 16-22.
- Briere, J., & Elliot, D. (2000). Prevalence, characteristics and long-term squelae of natural disaster exposure in general population. Journal of Traumatic Stress, 13,661–679.
- Caplan, G. (1964). Principles of preventive psychiatry. New York: Basic Books.

- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. Journal of Personality and Social Psychology, 56(2), 267-283.
- Chen, C. C., Yeh, T. L., Yang, Y. K., Chen, S. J, Lee, I. H., & Fu, L. S. (2001). Psychiatric morbidity and post-traumatic symptoms among survivors in the early stage following the 1999 earthquake in Taiwan. Psychiatry Research, 105, 13–22.
- Crenshaw, M. (1995). Terrorism in context. Pennsylvania: Pensylvania State University.
- D'Aquila, P. S., Brain, P., & Willner, P. (1994). Effects of chronic mild stress on performance in behavioural tests relevant to anxiety and depression. Physiology and Behavior. 56(5), 861–867.
- Davis, C. G., & Nolen-Hoeksema, S. (2001). Loss and meaning: How do people make sense of loss? American Behavioral Scientist, 44(5), 726-741.
- Dela Corte, L. (2006). Lalógicadelterrorismo. Madrid: Alianza.
- Delisi, L. E., Maurizio, A., Yost, M., Papparozzi, C.F., Fulchino, c., Katz, c.L., etaJ. (2003). A survey of New York after the September 11, 2001 terrorist attacks. American Journal of Psychiatry, 160,780-783.
- Everly, G.S., & Mitchell, J.T. (2000). The debriefing 'controversy' and crisis intervention: a review of lexical and substantive issues. International Journal of Emergency Mental Health, 2, 211–225.
- Everly, Jr., G. S. & Mitchell, J. T. (1999). Critical Incident Stress Management (CISM): A new era and standard of care in crisis intervention (2nd Ed.). Ellicott City, MD: Chevron.
- Everly, Jr., G. S., Flannery, Jr., R. B., & Mitchell, J. T. (2000). Critical Incident Stress Management: A review of literature. Aggression and violent behavior: A review journal, 5, 23-40.
- Everly, Jr.,G.S. & Lating, J.T, Eds. (1995). Psychotraumatology: Key papers and core concepts in posttraumatic stress. New York: Plenum.
- Farooqi, N. Y., & Tariq, S. (2010). Gender difference in anxiety among Pakistani survivors of bomb blast. International Journal of Peace and Development Studies, 1(I), 20-30.
- Felsten, G. (1998). Gender and coping: Use of distinct strategies and association with stress and depression. Anxiety, Stress, and Coping, 11(4), 289-309.
- Flannery, Jr., R.B. (1995). Violence in the workplace. New York: Crossroad Press.

- Fullerton, C. S., Ursano, R. J., Epstein, R. S., Crowley, B., Vance, K., Kao, T., Dougall, A., & Baum, A. (2001). Gender differences in posttraumatic stress disorder after motor vehicle accidents. American Journal of Psychiatry,158(9), 1486-1491.
- Fullerton, C. S., Ursano, R. J., Vance, K., & Wang, L. (2000). Debriefing following trauma. Psychiatric Quarterly, 71(3), 259-276.
- Galea, S., Ahern, J., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J. & Vlahov, D. (2002). Psychological sequelae of the September 11 terrorist attacks in New York City. The New England Journal of Medicine, 346 (13), 982-987.
- Gibbs, M. S. (1989). Factors in the victim that mediate between disaster and psychopathology: A review. Journal of Traumatic Stress, 2, 489-513.
- Gibbs, M. S. (1992). Disasters: Their impact on psychological functioning, and mediating variables. In Gibbs, M. S., Lachenmeyer, J. R., & Sigal, J. (Eds.) Community Psychology and Mental Health, 195-213. New York: Gardner.
- Gidron, Y. (2002). Posttraumatic stress disorder after terrorist attacks: A review. Journal of Nervous and Mental Disease, 190(2),118-121.
- Green, B. & Solomon, S. (1995). The mental health impact of natural and technological disasters. In Freedy, J. & Hobfoll, S. (Eds.), Traumatic Stress: From Theory to Practice, 163-180. New York: Plenum.
- Horowitz, M., Wilner, M. & Alvarez, W. (1979). Impact of Event Scale: A measure of subjective stress. Psychosomatic Medicine, 41, 209-218.
- Karanci, A.N. (2008). Training of psychologist for the provision of help to victims of terrorism. Paper delivered at the British Psychological Society, I. J. Mansdorf National Research Council, Terrorism: Perspectives from the Behavioral and Social Sciences, N. J. Smelser and F. Mitchell (eds.), (Washington, D.C.:National Academies Press.
- Karanci, N., Alkan, N., Aksit, B., Sucuoglu, H., & Balta, E. (1999). Gender differences in psychological distress, coping, social support and related variables following the 1995 Dinal (Turkey) earthquake. North American Journal of Psychology,1(2), 189-204.
- Katz, C. L., Pellegrino, L., Pandya, A., Ng, A., &DeLisi, L. E. (2002). Research on psychiatric outcomes and interventions subsequent to disasters: a review of the literature. Psychiatry Research, 110(3), 201-17.
- Katz, C. L., Pellegrino, L., Pandya, A., Ng, A., & DeLisi, L. E. (2002). Research on psychiatric outcomes and interventions subsequent to disasters: a review of the literature. Psychiatry Research, 110(3), 201-217.

- Khan, N. S., Alam, S., Warris, S. H., & Mujtaba, M. (2007). Frequency of posttraumatic stress disorder and its association with types of physical injuries and depression in earthquake victims. Professional Medical Publication, 3(23), 386-389.
- Kinston, W. & Rosser, R. (1974) Disaster: Effects on mental and physical state. Journal of Psychosomatic Research, 18, 437-456.
- Laqueur, W. (2003). No End to War: Terrorism in the Twenty- First century. Newyork, NY: Continum.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal and coping. New York: Springer Publishing CO.
- Lindemann, E. (1944). Symptomatology and management of acute grief. American Journal of Psychiatry, 101, 141-148.
- Livanou, M., Bas, ogʻlu M, Marks IM, De SP, Noshirvani H, Lovell K & Thrasher S (2002a) Beliefs, sense of control and treatment outcome in post-traumatic stress disorder. Psychological Medicine, 32, 157–165.
- Lomranz, J., Hobfoll, S., Johnson, R., & Eyal, N. (1994). A nation's response to attack: Israelis' depressive reactions to the Gulf War. Journal of Traumatic Stress,7(1), 59-73.
- Mac Lachlan, M., & Carr, S. C. (2005). The human dynamics of aid. OECD Policy Insights, 10, Retrieved from http://www.oecd.org/dev/insights
- Maria, M. L., Fischer, C., & Fishen, M. (2004). Pakistan Under Seige: Pakistan After September 11, 2001. Maktaba Press, Lahore, P. 39.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. American Psychology, 56, 227–238.
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. American Psychology, 56, 227–238.
- Mitchell, J. T. & Everly, Jr. G. S., (2000). CISM and CISD: Evolutions, effects and outcomes. In Raphael, B. & Wilson, J. P. (Eds.) Psychological debriefing: Theory, practice and evidence. Cambridge, UK: Cambridge University Press.
- Musarrat, R. (2009). US war on terrorism and its impact on South Asia. Retrieved from http://www.pu.edu.pk/polsc/jops/currentissue.pdf/Razia.pdf
- Myers, J. K., Weissman, M. M., Tischler, G. L., Holzer, C. E., Leaf, P. J., Orvaschel, H., Anthony, J. C., Boyd, J. H., Burke, J. D., Kramer, M. and others. (1984). Six-month prevalence of psychiatric disorders in three communities 1980-1982. Archives of General Psychiatry, 41, 959-967.

- Myers, J. K., Weissman, M. M., Tischler, G. L., Holzer, C. E., Leaf, P. J., Orvaschel, H., Anthony, J. C., Boyd, J. H., Burke, J. D., Kramer, M. and others. (1984). Six-month prevalence of psychiatric disorders in three communities 1980-1982. Archives of General Psychiatry, 41, 959-967.
- Nasky, K. M., Hines, N. N., & Summer, E. (2009). The USS Cole bombing: Analysis of pre-existing factors as predictors for development of post –traumatic stress or depressive disorders. Military Medicine, 174(7), 689-694.
- Newman, E. (2006). Exploring the "root causes" of terrorism. Studies in Conflict and Terrorism, 29, 49-772.
- Nolen-Hoeksema, S. (1990). Sex differences in depression. Stanford, CA: Stanford University Press.
- Norris, F. H., Friedman, M. J., & Watson, P. J. (2002a). 60,000 disaster victims speak: Part II. Summary and implications of the disaster mental health research. Psychiatry, 65, 240-260.
- Norris, F. H., Friedman, M. J., & Watson, P. J. (2002b). 60,000 disaster victims speak: Part II. Summary and implications of the disaster mental health research. Psychiatry, 65, 240-260.
- Norris, F. H., Friedman, M. J., Watson, P. J., Byrne, C. M., Diaz, E., & Kaniasty, K. (2002a). 60,000 disaster victims speak: Part 1. An empirical review of the empirical literature, 1981-2001. Psychiatry, 65, 207-239.
- Norris, F. H., Friedman, M., Watson, P., Byrne C., Diaz E. & Kaniasty, K. (2002). 60.000 disaster victims speak: Part I. An empirical review of the empirical literature of 1981-2001. Psychiatry,65, 207-223.
- North, C. S. (2002). Somatization in survivors of catastrophic trauma: A methodological review. Environmental Health Perspectives, 110, 636-640.
- Pat-Horenczyk, R., Abramovitz, R., Peled, O., Brom, D., Daie, A., & Chemtob, C. M. (2007). Adolescent exposure to recurrent terrorism in Israel: Posttraumatic distress and functional impairment. American Journal of Orthopsychiatry, 77(1), 76-85.
- Pfefferbaum, B., Nixon, S. J., Krug, R. S., Tivis, R. D., Moore, V. T., Brown, J. M., et al. (1999). Clinical needs assessment of middle and high s6hool students following the 1955 Oklahoma City bombing. American Journal of Psychiatry, 156, 1069-1074.
- Quarantelli, E. L. & Dynes, R. A. (1985). Community responses to disasters. In B. J. Sowder, (Ed.). Disasters and mental health: Selected contemporary perspectives, 158-168. Rockville, MD: National Institute for Mental Health.

- Raphael, B. (1986). When Disaster Strikes: How Individuals and Communities Cope With Catastrophe. New York, Basic Books.
- Reinares (2003). Terrorismo global. Madrid: Taurus.
- Rona, R. J., Fear, N. T., Hull, L., Wessely, S. (2007). Women in novel occupational roles: Mental health trends in UK Armed Forces. International Journal of Epidemiol, 36, 319–326.
- Rubonis, A. V. & Bickman, L. (1991). Psychological impairment in the wake of disaster: The disaster-psychopathology relationship. Psychological Bulletin, 109, 384-399.
- Sandoval, J. (1985). Crisis counseling: Conceptualizations and general principles. School Psychology Review, 14, 257-265.
- Saxe G. & Wolfe J. (1999). Gender and posttraumatic stress disorder. In Saugh, P. A. and Brenner, J. D. (Eds). Posttraumatic stress disorder: A comprehensive text. Needham Heights, MA, US: Allyn& Bacon, 160-179.
- Schwartz, S. (1971). A review of crisis intervention programs. Psychiatric Quarterly, 45, 498-508.
- Seedat, S. & Stein D. (2000). Trauma and post-traumatic stress disorder in women: A review. International Clinical Psychopharmacology, 15(3), 25-33.
- Slovic, P. (1987). Perception of risk. Science, 236(4799), 280-285.
- Solomon, S. D., Green, B. L. (1992). Mental health effects of natural and humanmade disasters. PTSD Research Quarterly, 3(1), 1-8.
- Solomon, Z. (2009). Gender differences in PTSD in Israeli youth exposed to terror attacks. Journal of Interpersonal Violence, 24(6), 959-976.
- Solomon, Z., Gelkopf, M., & Bleich, A. (2005). Gender difference in reaction to terror events. Journal of Social Psychiatry and Psychiatric Epidemiology, 40(12), 947-954.
- Summers, J., & Winefield, H. (2009). Anxiety about war and terrorism in Australian high school children. Journal of Children and Media, 3(2), 166-184.
- Sundin, E. C. & Horowitz, M. J. (2003). Horowitz's Impact of Events Scale: Evaluation of 20 years of use. Psychosomatic Medicine, 65, 870-876.
- Taylor, S., Thordarson, D. S., Maxfield, L., Fedoroff, I. C., Lovell, K., & Ogrodniczuk, J. (2003). Comparative efficacy, speed, and adverse effects of three PTSD treatments: exposure therapy, EMDR, and relaxation training. Journal of Consulting and Clinical Psychology 71, 330–338.

- Tolin, D, F., & Foa, E. B. (2006). Sex difference in trauma and post-traumatic stress disorder. Psychological Bulletill, 6(132), 959-992.
- Wang X, Gao L, Shinfuku N, Zhang H, Zhao C & Shen Y (2000). Longitudinal study of earthquake-related PTSD in a randomly selected community sample in North China. American Journal of Psychiatry, 157, 1260–1266.
- Wenger, D. E., Dykes, J. D., Sebok, T. D., & Neff, J. L. (1975). It's a matter of myths: An empirical examination of individual insight into disaster response," Mass Emergencies, 1, 33-45.
- Willenz, P. (2006). Women are diagnosed with PTSD more than men, even though they encounter fewer traumatic events says research. Retrieved July 10, 2009, from http://www.apa.org/release/ptsdr ates.html
- Wolfe, J., & Kimerling, R. (1997). Gender issues in the assessment of Posttraumatic Stress Disorder. In J. Wilson & T.M. Keane (Eds.), Assessing psychological trauma and PTSD New York: Guilford, 192-238
- Wollman, D. (1993). Critical Incident Stress Debriefing and crisis groups: A review of the literature. Group, 17, 70-83.
- Wooding, & Raphael, B. (2004). Psychological impact of disasters and terrorism on children and adolescents: Experiences from Australia. Prehospital and Disaster Medicine, 19, http://pdm.medicine.wisc.edu.
- World Health Organisation. (2005a). Briefing notes on psychosocial/mental health assistance to the tsunami affected region. Singapore: WHO South East Asia Office. Retrieved from http://www.alnap.org/tec/pdf/who briefing note mentalhealth Feb 2005.p
- df World Health Organisation. (2005b). Gender considerations in disaster assessment. Geneva: WHO. Retrieved from

http://www.reliefweb.int/library/documents/2005/who-gen-11jan.pdf

- World Health Organisation. (2005c). Mental health and psychosocial care of children affected by natural disasters. Geneva:WHO. Retrieved from http://www.reliefweb.int/library/documents/2005/who-gen-11jan.pdf
- Yesavage, J. A., Brink, T.L., Rose, T. L., Lum, O., Huang, V., Adey, M., &, Leirer V. O. (1983). Development and validation of a geriatric depression screening scale: a preliminary report. Journal of Psychiatric Research, 17(1), 37-49.
- Zeidner, M. (1993). Coping with disaster: The case of Israeli adolescents under threat of missile attack. Journal of Youth and Adolescence, 22(1), 91-108.

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170