The Psychological Consequences of Disaster: Scope of Hazards and Disaster Management

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Abstract

Disaster is a complex multi-dimensional phenomenon having short and long-term ecological, political, economic, developmental, psychological and social impacts. Disasters can have substantial effects on a victim's mental health, according to psychological research. These effects manifest as Posttraumatic Stress Disorder and a number of other, less well-studied ailments and symptoms. There are more likely to be emotional repercussions when there is more stress, which can be defined in a number of different ways, within the tragedy. Although vulnerability elements within the victim work in nuanced ways, they appear to be linked to the level of stress the victim feels and the resources that are available to deal with it. Different approaches have been developed by the mental health industry to lessen the impact of disasters. Numerous strategies and therapies have been approved as effective interventions for catastrophe victims, despite the unsatisfactory findings of current research on single session debriefing.

Keywords: Disaster, Stress, Consequence, Vulnerability

The term "disaster" brings up gruesome pictures of people being adversely affected in numerous ways, including economically, socially, physically, and psychologically. In other words, a disaster is a complicated, multi-faceted phenomena with immediate and long-term effects on the environment, politics, economy, development, psychology, and society.

Common psychological responses to disasters:

To begin with, it's important to realise that any psychological or emotional response is not always bad because it can boost the odds of the victims' survival. When stress outweighs a person's ability to adapt to new events by controlling their reactions, it poses a threat to their mental health. After a calamity, a pot of emotional reactions may begin to boil. There are a number of common reactions that are felt by the majority of individuals impacted and involved, even if people react to traumatic events differently depending on their experiences, personalities, and other crucial aspects described in the paragraph above. Emotional (panic attacks, shock, fear, annoyance, anger, sadness, and guilt feelings), psychosomatic (sleep disturbances, eating problems, physical problems like muscle tension, palpitations, headaches, nausea, diarrhoea, or constipation, breathing difficulties, etc.), and cognitive (repeated thoughts and involuntary triggering of memories, nightmares, confusion, flashbacks, difficulty in concentrating and making decisions, memorization problems) are some of the common post These reactions typically "settle" during the first week. However, if symptoms are prolonged and severe, in addition to lasting for a month or longer, the person is quite likely to have one or more psychiatric problems. Psychology has a different definition of disaster than other disciplines because it is interested in trauma and stress. Post-traumatic stress disorder (PTSD) was conceptualised by the mental health community in the 1970s, following the Vietnam War and the study of its effects on veterans

as well as the study of the long-term effects of child sexual abuse (American Psychiatric Association, 2000). Later on in the chapter, we will define PTSD. Here, we are arguing that the distinction between victimisation from disaster and victimisation from any source has been somewhat muddled as a result of psychologists' interest in PTSD. Studying a larger group of victims may be helpful in comprehending disasters because, for example, the risk factors for PTSD in earthquake victims may be similar to the risk factors for PTSD in rape victims, and effective treatments may also be comparable.

Unless a significant number of people are involved, personal calamities like sexual assault or car accidents are not typically seen as a collective experience. The line of demarcation is not always clear. Our impressions of an event can change depending on its type and many qualities. Even if many other people were engaged in or saw the catastrophe, we might not view it as a tragedy if 13 people died in it, but 13 people died in the Columbine shootings, and that qualifies.

The study of disasters has evolved over time to become less descriptive and more quantitative in an effort to address some of the methodological issues raised by this research. Instead of debating whether disasters have major long-term psychological effects, researchers are now examining the types of effects that take place and what aspects of the disaster and the individual enhance the risk of emotional harm. Victim assistance programmes have been developed. The effectiveness of these therapies has received increased attention most lately. The methodology of disaster research, the degree of the psychological impact of disasters, the different psychological sequelae, the negative aspects of disaster, the vulnerability factors, the psychological interventions for victims, and the efficacy of these interventions will all be covered in turn in this chapter. After a mining accident in 1906 and an earthquake in Messina, Italy in 1908, Zurich conducted the first systematic study on the psychological effects of a disaster (Stierlin, 1909 and 1911). According to the study, survivors who talked about their sadness recovered more quickly. The earlier findings were supported by a study conducted after the Boston nightclub fire incident at Coconut Grove (Lindermann, 1944). According to early classical assessments of post-disaster psychological issues, between 25% and 75% of disaster survivors exhibited typical detached behaviour (referred to as "disaster syndrome"). Other research in this field were also reinforced by the discovery that psychological morbidity affected 30–40% of the disaster population within the first week (Raphael, 1986).

Numerous studies have shown that serious and persistent psychological issues result from disasters that expose people to the dead and dying, cause long-lasting social and communal upheaval, and cause significant amounts of destruction (Bodvarsdottir & Elklit, 2004). Increased psychological distress has been linked to earthquake exposure (Karanchi & Rustemli, 1995; Lima et al. 1993). As a result of technological and environmental disaster, PTSD prevalence rates were also observed to be higher (Acierno et al. 2006). Long-term impacts from these disasters were revealed by studies looking at the prevalence of psychological and psychiatric morbidity among disaster survivors (Salcioglu, et al. 2007). According to certain research (Bland, at al. 1996; Kato, et al. 1996), psychological anguish brought on by earthquakes may potentially be persistent. Both in western and Asian nations, posttraumatic stress disorder (PTSD) has been identified as a prevalent mental health issue among victims of natural disasters. The prevalence rate of PTSD connected to natural disasters in this region was reported to range between 8.6% to 57.3%, depending on evaluation methodology, tools, and timing.

Vulnerability components

Numerous traits of victims have been shown to make them more susceptible to the consequences of disasters. Socioeconomic Status (SES), resources available, the severity of prior psychopathology, age, social/family circumstances, gender, and ethnicity are only a few of the vulnerability factors. In terms of SES, Norris et al. (2002a) discovered that greater post-disaster suffering was associated with lower socioeconomic status in 13 out of 14 studies that examined socioeconomic status and catastrophe outcome. The disasters covered in the studies were floods, earthquakes, industrial disasters, and aviation disasters (Epstein et al., 1998; Lewin et al., 1998). People who are poor typically have fewer resources at their disposal to lessen the effects of

calamity. Pre-existing psychopathology increases the chance of acquiring trauma-related psychopathology because people with psychological disorders are more likely to experience additional suffering following a tragedy (Norris et al., 2002a). For instance, pre-disaster anxiety disorders, depression, and suicidal ideation have all been demonstrated to increase the risk of post-disaster psychopathology (Asarnow et al., 1999; Knight et al., 2000). Age-wise, middle-aged adults appear to be the group most impacted by disasters, according to Norris et al. (2002a). According to Thompson et al. (1993), this age group may be under more strain and difficulties, such as caring for and supporting a family, which may be exacerbated in the wake of a disaster. Vulnerability is influenced by the social network. For instance, a lack of social support, whether perceived (Dougall et al., 2001) or received (Udwin et al., 2000), may exacerbate post-disaster misery.

These risk variables interact with one another. Any one factor frequently interacts with other factors. We will use gender and minority or third-world ethnicity, two variables that Norris et al. (2002a) list as among the most reliable susceptibility indicators, to show this complicated interplay. According to Norris et al. (2002a), female disaster survivors were more adversely affected than male survivors in 94% of the 49 studies that looked into the topic. There are numerous reasons why this disparity could exist. For instance, as was indicated in the paragraph before, women are more likely to live in poverty than males are (Belle, 2000), and low socioeconomic position is a risk factor for post-disaster psychopathology.

The distinctions we frequently notice between the genders in how psychological discomfort is communicated may help to partially explain the gender difference. According to Nolen-Hoeksema (1990), women are more likely than males to recognise and report psychological problems. Because men are expected to be strong and powerful, they may repress psychological suffering after a disaster (Wolfe & Kimerling, 1997).

PTSD, depression, and other types of anxiety are the post-disaster reactions that are most frequently studied, as was covered in the previous section. Assessments of substance abuse and other acting-out behaviours, like interpersonal violence, are rare. Instead of expressing neurotic-type symptoms like despair and anxiety, men are more prone to convey their psychological distress through these behaviours (Myers et al., 1984). Women are more likely than men to have pre-disaster depression and the majority of anxiety disorders (Myers et al., 1984), which increases their vulnerability to disaster-related distress. In addition, women may be more prone to have certain events that can lead to the development of PTSD after a disaster. Women are more likely than men to experience rape and sexual assault (Kessler et al., 1995), and research has indicated that, compared to other types of trauma, unwanted sexual contact is more likely to cause PTSD (Breslau et al., 1997). According to Pulcino et al. (2003), a woman's likelihood of exhibiting PTSD symptoms following the September 11th attacks increased by 33% if she had previously experienced unwanted sexual contact.

The interrelationship of susceptibility variables is highlighted by the interaction of gender and various social and family factors. Women use their social network to process and work through challenges, whereas men often cope by making immediate, independent decisions (Kawachi and Berkman, 2000). One's social network may shift after a calamity (Kaniasty & Norris, 1997). In contrast to men, women's PTSD symptoms have been demonstrated to worsen as their access to social supports decreases (Pulcino et al., 2003). Due to the detrimental impact on their ability to cope, social network change, which may result in a reduction in social support, may be more damaging for women than for males.

There are probably other factors at play besides just how much trauma caused by disasters has been exposed to. Again, poverty limits minorities' access to resources after a disaster (Kaniasty & Norris, 1995). The likelihood of being exposed to communal violence before a disaster is also associated with low socioeconomic position. Similar to this, immigrants from minority groups or those living in undeveloped countries may be from cultures where trauma is likely to have occurred. This may include the interpersonal or group violence that is frequent in nations when there is political or social turmoil. The likelihood of developing post-disaster psychopathology increases with prior exposure to personal or societal stress. For instance, Perilla et al. (2002) discovered that the Black and Latino participants in their study had greater rates

of neighbourhood and personal trauma, and that the severity of their exposure was largely responsible for their higher rates of PTSD following Hurricane Andrew.

Minority groups' sensitivity may also be explained by culturally specific interpretations or expressions of distress. Prejudice, discrimination, or oppression may have been experienced by members of an ethnic minority group. These incidents may contribute to psychological vulnerability generally, but they may also be linked to the way trauma manifests. For instance, due to oppression experiences, African-Americans may become overly attentive to imagined threats, which may lead to the development of certain post-traumatic symptoms (Allen, 1996). Spanish-speaking people frequently relate the symptoms they feel to the Latino idea of susto, which denotes a sensation of terror (Kirmayer, 1996). The occurrence of disasters is congruent with this cultural idea because each one is a distinct traumatic event to which distress can be attributed. In this approach, PTSD symptoms following a disaster are pretty consistently expressed across cultures.

To sum up, these vulnerability factors appear to be mostly related to the level of stress experienced before, during, and after the disaster, as well as the resources available to deal with it. This is similar to disaster characteristics that lead to psychopathology. For instance, we have highlighted research suggesting that minority and female victims may have been more traumatised than white male victims before or during the tragedy (Perilla et al., 2002; Pulcino et al., 2003). Resources include financial and infrastructure differences between western and third-world cultures, social networks and how they may affect men and women differently, and coping mechanisms that may differ depending on culture and gender. Understanding risk factors can help us create interventions for catastrophe survivors at the individual and community levels.

Psychological Interventions for Victims

From a psychological standpoint, several people and organisations have written about catastrophe planning and interventions (e.g., Ehrenreich, 2001; Roberts, 2000). In the plethora of theories and methods proposed, Caplan (1964), the founder of community psychology and creator of the model of mental disorder prevention, offers a useful framework for considering psychological interventions for catastrophe victims. If stress is the primary contributor to psychopathology, as the community psychology model suggests, then lowering environmental stress is the greatest method to prevent psychopathology. This is primary prevention, which integrates psychology directly into the process of emergency preparedness as it relates to disasters. For example, psychologists may work on campaigns to persuade people not to build homes in flood plains, or they may look for ways to educate people about emergency preparedness, or they may try to change the law to require insurance companies to offer disaster insurance or to pay benefits quickly after a disaster. It is crucial for emergency managers to include psychology in all of their planning efforts since it has so much to offer in the areas of education and policy creation. In the Caplan model, secondary prevention entails spotting at-risk individuals and taking action to assist them. Secondary prevention as it relates to catastrophes calls for psychologists to do quick screening following disasters and to start therapies as soon as possible. Psychologists must once more be included by emergency managers in the immediate aftermath of a disaster.

This kind of preventive, which aims to lessen the stress of a crisis as it develops, is frequently referred to as crisis intervention. Helping survivors and the bereaved express their grief was a key component of Lindemann's groundbreaking research (1944) at the aforementioned Cocoanut Grove nightclub fire, with the hope that doing so might lessen their subsequent symptoms. According to Caplan's theory from 1964, a crisis marks a turning moment in a person's life. During a crisis, a person can either successfully deal with the situation or use other, less effective measures to deal with it.

The availability of resources is essential for post-disaster adjustment, as we discussed in the vulnerability section, and Caplan highlighted the provision of resources as a significant element of crisis intervention. Resources include both material (such as locating temporary housing for flood victims or locating missing

family members) and social (such as offering emotional support to a person who lost a family member in the flood and locating other people who can offer support) resources. As we've already said, social resources may be especially important for female victims. When emergency managers allocate resources after a disaster, psychologists ought to be involved. Another type of crisis intervention is aiding in the use of coping mechanisms. Although numerous crisis counselling models have been put forth and discussed (e.g., McGee, 1992; Roberts, 2000), the majority tend to be solution centred, placing an emphasis on the victim's strengths and finding suitable answers to the issues they face. In general, active problem-solving techniques outperform passive ones (Lazarus & Folkman, 1980, for instance). There are frequently inadequate answers to the crisis, independent of the person's coping mechanisms, which presents a challenge for psychologists using crisis intervention in catastrophic situations.

Critical incident stress debriefing (CISD), one sort of crisis intervention, has recently drawn a lot of attention. The model was created by Jeffrey Mitchell in 1982 and follows a rigid pattern. It is used with victims, family members, and especially rescue workers like firefighters and police officers. It is carried out in groups and consists of seven stages: introduction, facts about the crisis, thoughts about the crisis, feelings about the crisis, symptoms, teaching/information about stress and stress management, and re-entry (Mitchell & Everly, 2000). The effectiveness of CISD will be covered in the following section.

The practise of traditional psychotherapy is classified as secondary prevention. For PTSD victims, several therapies have been established. Therapists utilise exposure (e.g., Foa & Kozak, 1986) to force clients to revisit the trauma of the disaster event, which is similar to methods for other anxiety disorders. According to the hypothesis, when dealing with a traumatic incident, we employ avoidance tactics to lessen the suffering, and these tactics are a component of the symptom profile. While utilising different terminology than behaviourists, more psychodynamic therapists may attempt to help disaster victims face their emotions over their experience. Cognitive restructuring is typically used in therapy for PTSD sufferers. According to Janoff-Bulman and Frieze, disasters cause a shift in cognitions, and victims of disaster frequently hold false ideas about their safety, the possibility of future disasters, their own value, etc.

There are many types of therapy that have been established for different problems including depression and anxiety that may be brought on by disasters, too many to discuss here. These treatments are not particularly geared towards helping disaster survivors. Emergency managers must be able to offer some kind of therapeutic assistance to disaster victims and first responders. The Caplan model's tertiary prevention, which is less applicable to disaster relief operations, is preventing individuals who are already emotionally disturbed from getting worse. It may apply to long-term disaster victims, such as Vietnam War veterans, whose issues remain and who might require brand-new, as of yet undiscovered ways of treatment.

Conclusion

Any catastrophe brought on by either natural or man-made risks would have a wide range of effects on nations, damaging both their financial stability and all significant developmental initiatives. A crisis situation results in loss of life quality and productivity in addition to quantifiable and tangible harm and loss, all of which are still not defined or quantified. Any calamity has a profound effect on the survivors' mental health and has an impact both directly and indirectly on a nation's development. The availability of psychological and mental health resources and interventions varies greatly by country and culture, thus any tailored response in one country might not be appropriate in the event of a catastrophe in another. However, effective intervention strategies in one nation may be modified to meet the unique needs of a population in another nation that has been hit by a disaster. The magnitude and extent of the trauma experienced, as well as the associated elements that either make life conditions worse or aid in the quick recovery of the survivors in the wake of a tragedy, all directly influence the severity of symptoms. Additionally, because of these characteristics, service delivery in this sector will differ from location to location, community to community, and ultimately country to country. The ASEAN nations are still developing their own effective methods for the delivery of mental health services in the wake of a catastrophe, though. Additionally, if they adopt an

excellent practice from another nation, it can speed up their efforts in this area. Regular platforms for exchanging knowledge in this area would help all the nations overcome several obstacles in order to accomplish the goals.

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