The International Journal of Indian Psychology
ISSN 2348-5396 (e) | ISSN: 2349-3429 (p)
Volume 8, Issue 1, DIP: 18.01.061/20200801
DOI: 10.25215/0801.061
http://www.ijip.in | January- March, 2020

The International Journal of INDIAN PSYCHOLOGY

Research Paper

Disaster and mental well-being: an understanding

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ABSTRACT

Disasters are not uncommon events. No two disasters are exactly alike, but certain characteristics tend to be associated with specific reactions among survivors. India has been quickly urbanizing. Its condition of wellbeing, prosperity, and foundation limit are in a time of change and with the pace an understanding of disaster mental health is necessary which depends on the standards of 'preventive medicine. Pervasiveness of psychological wellness issues is seen as higher by a few times than that of the all-inclusive community. Alongside the diagnosable mental issue, influenced network likewise harbors enormous number of sub-syndromal manifestations. Larger part of the intense stage responses and scatters are self-constraining, though long haul stage issue require help from emotional wellness experts. Role of mental health professionals through community organizational work with collaboration of public and government sector are important. The social media and social network therapy can also play a significant role in the rehabilitation and welfare of these people.

Keywords: *Disasters, Mental Health, Rehabilitation, Cognitive Behavior Therapy.*

The word disaster ("bad star" in Greek) originates from a celestial thought that when the stars are in a terrible position an awful occasion will happen. Disasters can be just characterized as brutal experiences with nature, innovation or humankind (ADB, 2005).It is a particular disastrous occasion, that is, a stressor delineated by immense force, huge degree, suddenness, and putting exorbitant requests on individual coping. Similarly, the World Health Organization's (WHO) characterized disaster as 'a serious disturbance, biological and psychosocial, which extraordinarily surpasses the adapting limit of the influenced community' (World Health Organization, 1992).

A disaster by definition is a severe disruption, ecological and psychological, which exceeds the coping capacities of the affected community (BIS, 2007).It therefore implies from the definition that disasters place the affected individual under enormous pressure to cope and adjust effectively under psychologically adverse circumstances, failure in which can lead to a host of undesirable mental health consequences' disaster disrupts the social structure leading

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Received: January 7, 2020; Revision Received: March 10, 2020; Accepted: March 29, 2020

to collapse of social network and causes economic burden and physical injuries thus, exposing the individuals to the risk of undesirable psychological sequealae (Ahern et al., 2005).These in turn are associated with a definite impairment in the socio- occupational and interpersonal functioning both in the short and long term. They are also associated with a markedly worse quality of life of affected individuals, cause loss of work, and carry an added risk for suicide.

The Disaster Management Act 2005 of India, disaster is characterized as a catastrophe, setback, or grave event in any zone, emerging from characteristic or synthetic causes, or be mishap or carelessness which brings about significant death toll or human torment or harm to, and demolition of property, or harm to, or corruption of, condition, and is of such a nature or size as to be past the adapting limit of the network of the influenced territory.

From different definitions plainly there is nobody single worthy meaning of disaster. In any case, there are some basic qualities over all definitions.
They are:

a. unexpected beginning,
b. Unconventionality,
c. Wildness,
d. Enormous extent of annihilation,
e. Human misfortune and enduring and
f. Extraordinarily surpass the coping limit of the influenced network.

The classification of disaster differs as per the criterion of classification. For example, on the basis of their origin, they are classified as natural and manmade. Natural disasters are generally considered as 'Demonstrations of God' to rebuff individuals for their past deeds and are every now and again alluded to as 'Karma'. This attribution has positive results regarding coping and negative outcomes by method for upsetting arranging and preparedness. In terms of evoking mental health morbidity, natural disasters are mild in nature, human errors and technological accidents are moderate in nature and willful acts like terrorism are most severe in nature.

Disaster and Wellbeing

Wellbeing is a fundamental marker of a nation's improvement. The degree of improvement is a marker for the effect of any fiasco on wellbeing. Powerful wellbeing foundation is pivotal for compelling reaction and long haul recuperation benefits. This is particularly significant for a disaster prone, asset extended and high-thickness nation like India which sees repetitive little and medium calamities (Ahern et al., 2005). These variables sway both wellbeing framework and wellbeing results. South East Asia is particularly vulnerable to natural disasters. Disasters that have devastated the region include the Indian Ocean tsunami in 2004, which affected vast coastal lands in India, Indonesia, Sri Lanka, Thailand, Maldives and Myanmar; the earthquake in Kashmir in 2005; cyclone Sidr in Bangladesh in 2007; cyclone Nargis in Myanmar in 2008; flood in Uttarakhand in 2013; and the earthquake in Nepal in 2015 (Becker, Susan, 2007). The mental damage caused by such disasters often goes unrecognized. Defining ‘Disaster’ is inevitable because it poses a real challenge to any country to know what to include and what not, for planning, for research purpose, policy making, and legislation. Epidemiological revelations made by WHO show that the after effect of disasters on mental health problems ranges from mild distress to very severe (Salcioglu, Basoglu and Livanou, 2003; 2007; Satapathy, and Walia, 2006; 2007). Almost 20-40% of the affected populations suffer from mild psychological distress and 30-50% suffers from

moderate to severe psychological distress. There is a need to comprehend the impacts of disaster on wellbeing with the goal that prudent steps can be received to moderate the torment. Subsequently, this article endeavors to characterize, arrange and examine the management of disasters from emotional and mental wellness view point.

METHODOLOGY OF REVIEW

The electronic inquiry of articles distributed in 'Pubmed' from 1978 to March 2019. The term 'disaster planning' was presented in pubmed MeSH jargon as ahead of schedule as 1978. The MeSH expression, for example, 'disaster planning' [Mesh] were joined with different terms utilizing Boolean administrator (AND). A PUBMED look for distributed investigation including disaster psychiatry/ mental health was performed till 2019. Likewise, the reference areas of significant articles, and surveys were additionally screened along with the typical chain of importance of proof to compose the review.

Disaster Mental Health

Disaster mental health services are based on the principles of 'preventive medicine'. The principle of 'prevention' has necessitated a paradigm shift from relief centered post-disaster management to a holistic, multi-dimensional integrated community approach. It can be understood on the basis of six 'R's such as Readiness (Preparedness), Response (Immediate action), Relief (Sustained rescue work), Rehabilitation (Long term remedial measures using community resources), Recovery (Returning to normalcy) and Resilience (Fostering).

Phases of Disaster

Phase 1, the pre-disaster phase, is characterized by fear and uncertainty. The specific reactions a community experiences depend on the type of disaster. Disasters with no warning can cause feelings of vulnerability and lack of security; fears of future, unpredicted tragedies; and a sense of loss of control or the loss of the ability to protect yourself and your family. On the other hand, disasters with warning can cause guilt or self-blame for failure to heed the warnings. The pre-disaster phase may be as short as hours, or even minutes, such as during a terrorist attack, or it may be as long as several months, such as during a hurricane season.

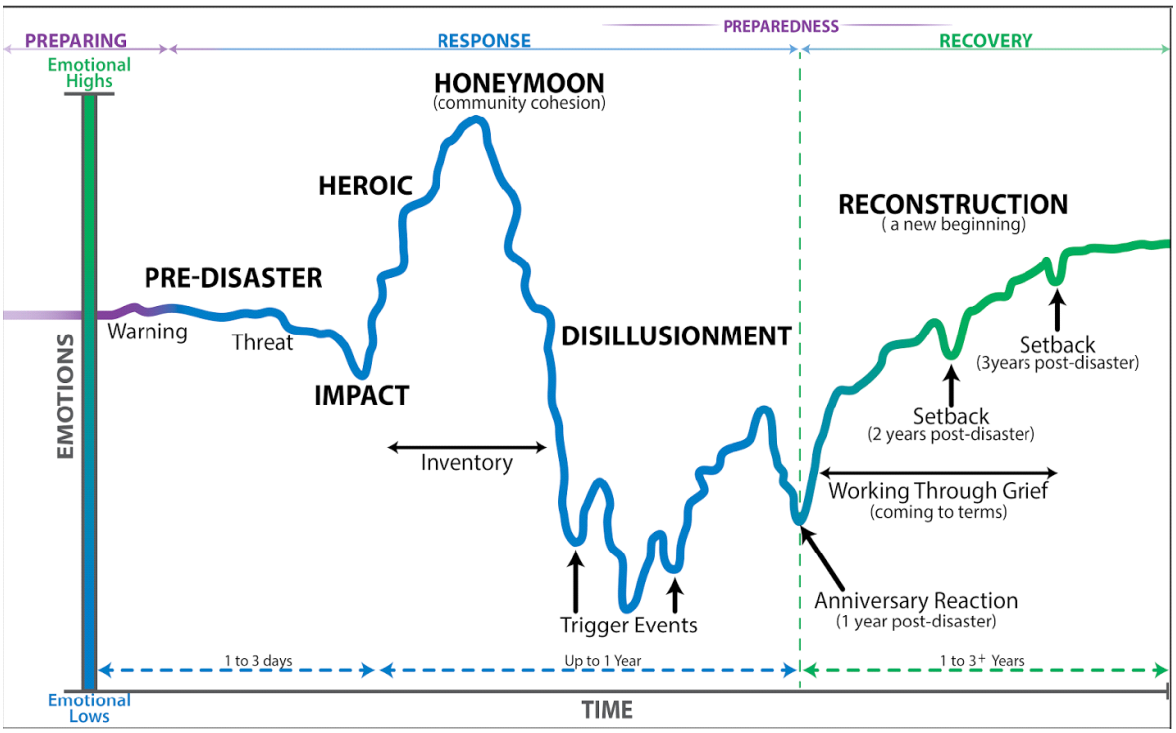
Phase 2, the impact phase, is characterized by a range of intense emotional reactions. As with the pre-disaster phase, the specific reactions also depend on the type of disaster that is occurring. Slow, low-threat disasters have psychological effects that are different from those of rapid, dangerous disasters. As a result, these reactions can range from shock to overt panic. Initial confusion and disbelief typically are followed by a focus on self-preservation and family protection. The impact phase is usually the shortest of the six phases of disaster.

Phase 3, the heroic phase, is characterized by a high level of activity with a low level of productivity. During this phase, there is a sense of altruism, and many community members exhibit adrenaline-induced rescue behavior. As a result, risk assessment may be impaired. The heroic phase often passes quickly into phase 4.

Phase 4, the honeymoon phase, is characterized by a dramatic shift in emotion. During the honeymoon phase, disaster assistance is readily available. Community bonding occurs. Optimism exists that everything will return to normal quickly. As a result, numerous opportunities are available for providers and organizations to establish and build rapport with affected people and groups, and for them to build relationships with stakeholders. The honeymoon phase typically lasts only a few weeks.

Phase 5, the disillusionment phase, is a stark contrast to the honeymoon phase. During the disillusionment phase, communities and individuals realize the limits of disaster assistance. As optimism turns to discouragement and stress continues to take a toll, negative reactions, such as physical exhaustion or substance use, may begin to surface. The increasing gap between need and assistance leads to feelings of abandonment. Especially as the larger community returns to business as usual, there may be an increased demand for services, as individuals and communities become ready to accept support. The disillusionment phase can last months and even years. It is often extended by one or more trigger events, usually including the anniversary of the disaster.

Phase 6, the reconstruction phase, is characterized by an overall feeling of recovery. Individuals and communities begin to assume responsibility for rebuilding their lives, and people adjust to a new "normal" while continuing to grieve losses. The reconstruction phase often begins around the anniversary of the disaster and may continue for some time beyond that. Following catastrophic events, the reconstruction phase may last for years (Gupta et al., 2009).



Human response to disaster can be classified as normal and abnormal. Where normal response include grief depending upon the severity of disaster while abnormal grief reactions can be grossly classified into delayed, absent, oscillating and exploding grief response. Abnormal or complicated because they interfere in the process of healing and also interfere in the biological, social and occupational functioning.

Disaster and Common Mental Disorders

Mental health disorders noted during disasters can be classified into acute phase (1-3 months) and long- term phase (>3 months). Majority of the acute phase reactions and disorders are self-limiting, whereas long- term phase disorders require assistance from mental health professionals.

Common disorders with the sufferers of disasters are: Adjustment disorders, depression, post traumatic stress disorder (PTSD), anxiety disorders, non-specific somatic symptoms and substance abuse (Norris, 1992; Rubonis, and Bickman, 1991). Researchers have assigned that the PTSD as the signature diagnosis among post disaster mental morbidity. Prevalence of PTSD reported in literature varies from 4-60%. Mood disorders, PTSD and substances use disorders are diagnosed frequently along with other psychiatric disorders. Depression is a well-known co-morbidity and can pose a challenge to any treating team (Bush et al., 2011; Vankar, and Mehta, 2004). Mental health morbidity continues to be prevalent even after 3-5 years in the disaster affected community. Most commonly noted mental health problems are as follows:

Mental health morbidity in disaster affected population (Sources: Math et al. 2006, Math et al. 2008a, Math et al. 2008b)

Common mental health problems among adults:

1. Relapse of any pre-existing psychiatric disorders Adjustment disorders/Abnormal grief
2. Anxiety disorders like panic disorders, phobic disorders NOS, Non specific anxiety symptoms and startle response
3. Acute stress reactions Insomnia
4. Depression/death wishes/suicidal ideas or attempts
5. Substance abuse & dependence (Monetary relief given is spent on substance abuse) Post traumatic stress disorders
6. Non-specific somatic symptoms such as dizziness, head ache, body ache, recollection of the disaster events through images & thoughts, night mares, night terrors and so forth
7. Dissociative symptoms Somatoform disorders

Common mental health problems among children:

1. Non-specific symptoms such as dizziness, vertigo, startle response, sleep wake cycle disturbances, clinging behavior, excessive crying, withdrawal, fear,
2. Anger, irritability, numbing of affect, food refusal and decreased appetite and regressive behavior. School refusal, school dropout and academic decline
3. Anxiety disorders like panic disorders, phobic disorders NOS, Non specific anxiety symptoms and so-forth
4. ODD symptoms
5. Conduct symptoms – like truancy, stealing, lying and so forth Post traumatic stress disorders
6. Depression, Somatoform disorders (Ghaffar, Abdul, Reddy, and Singhi, 2004)

Indian Studies

The first well-documented research study in this area in India was on the survivors of a fire disaster (Narayan, et al. 1987) and this revealed not only the symptoms of mental disturbances but also the reduced coping behavior of the families of the deceased.

A pilot phase study submitted to Indian Council of Medical Research (ICMR,2002) on mental health needs and services delivery models in the disaster (earthquake) affected population in Gujarat (India) highlighted some points :**Emotional state**: The most common emotional states immediately (with in 24 hour) after the earthquake were fear, thoughtlessness and state of shock (Subhan, Imron and Jain, 2010;). The other common states were sadness, panic, confusion and anxiety. People also reported some of the

physiological symptoms like palpitation, giddiness and numbness, which are present concomitantly with these emotional states (Hengesh, et al., 2002). Certain emotional states like sadness, anxiety, with their cognitive concomitants like hopelessness, helplessness, and indecisiveness, forgetfulness and concentration difficulties became more prominent n the subsequent days. People living in tents or damaged houses were worried about the forth coming summer and rainy season. **Psychological Disturbance**: Three levels of psychological disturbance have occurred or can be expected to occur (i) Mild to moderate psychological transient disturbance of emotion and/or thought, which occur in large population (70% to 90% of the population) (ii) Moderate to severe psychological disturbance, sub-syndromal psychiatric problems and acute stress related disorders(30% to 50% of population)(iii) diagnosable psychiatric disorders, mostly related to the stress, which may begin to occur any times after the 2-3 months of the disaster and will require specialist mental health services (5%-15%). **Mental Health Morbidity:** Majority of people (85.5%) of people who were administered GHQ were found to be positive three weeks post disaster indicating a high level of psychological problems. The common psychiatric illnesses found were depressive disorder, panic disorder, generalized anxiety disorder and post-traumatic stress disorder. The children and women were having psychological problem more frequently than men. **Coping Mechanisms**: Increased religiosity was the commonest coping mechanism which manifested in form of expressing enhanced faith in and surrendering the fate to the God. Similarly, the maladaptive coping pattern at community level as revealed comprised of denial of magnitude of stress, nature of adjustment required and the resultant psychological distress. **Holistic Approach:** A small village Visamo has been created by some NGO joining hands together in Ahmedabad to provide the relief and rehabilitative services to about more than 200 families rendered homelessness after earthquake. The unique feature of Visamo was the holistic approach adopted by the organizers to provide a multitude of relief measures in an integrated manner. Thus the relief services at Vasamo included basic amenities like cooked food with tea/coffee, purified drinking water, hygienic washroom and bathing facilities and medical treatment facilities. **Communities**: Communities and population can and do take care of their emotional and psychological needs with their own resources, with considerable extent. The mental health services need of large proportions of the affected population can be served by the relief and rescue workers and health care providers. Specialist mental health expertise can be useful and is required for (a) services for relatively smaller proportion of the population (b) sensitization and training of the rescue/relief workers and health care providers who can take care of the needs of larger proportion of the affected population. **Media**: Media had played a key role in timely mobilization of national and international support in the earthquake affected area. The media, specially the local print media has play significant role by publishing and reinforcing local socio-cultural protective coping mechanisms of the people (Kar and Bastia, 2006; NDMA, 2010).

Various studies have shown a link between disaster and mental health in which a pilot phase study was done on mental health needs and services models in the disaster (earthquake) affected population in Gujarat which was submitted to Indian Council of Medical Research (ICMR,2002). Similarly, in a study, mental health issues were seen in survivors of cyclone in Andhra Pradesh in 1996 in which need for psychological rehabilitation and need for generating mental health awareness among the community was seen. The studies on the Bhopal gas disaster (Sethi, et al. 1987; Murthy, 1990; Cullinan, et al. 1996) reported increased neuro-psychiatric symptoms among the survivors attending different health care facilities. Increased psychiatric morbidity was also reported from the Bombay riots (Shetty and Chhabria, 1997), the Marathwada earthquake (Aghase, 2004; Sharan, Pratap et al., 1996), Orissa super cyclone (Sekar, 2004; Kar and Bastia, 2006)). Some studies highlighted the

importance of both mental health of workers) and the mental health of disaster affected people (Murthy, 2000). While, some studies reported peoples' needs and feelings of vulnerability (Parasuraman and Acharya, 2000) as important mental health indicators of people affected by disaster, other studies focused on the extent of poverty, homelessness and violence (Lohokare and Davar 2000), thus indicating the risk of mental health in people in disaster affected areas.

ROLE OF MENTAL HEALTH PROFESSIONALS IN DISASTER

The provision and delivery of mental health services should be a part of any community's or organization's disaster plan. Disaster preparedness and response have become an unfortunate reality, and the creation of readiness teams and plans have become a frequently reviewed topic by senior managers and community leaders. It is imperative that mental health professionals prepare and train community members for disaster response.

There is much research in the mental health community surrounding the provision of disaster mental health services as well as a national "train the trainer program" for disaster mental health service delivery. Evidence based approaches have been developed which can be easily adapted by mental health professionals with varying skill levels, i.e.: Psychological First Aid (Shah, Bela and Mathur, 2010; Sharan, Pratap et al., 1996). There is much to learn from survivors of disasters, as we review and continue to track the mental health needs of those affected by both national disasters like 9/11 and local disasters, such as flooding. The strength and resilience individuals display at the time of a disaster, as well as in the months or years following a disaster is amazing (Murali, Kar, and Jagadisha, 2002; Murthy and Isaac, 1987).

CONCLUSION

Disasters are complex events requiring complex and comprehensive responses. Planning and preparedness are highly essential to meet challenges (Gupta, Kapil, 2007; Juvva, and Rajendran, 2000; Sekar, 2004). Disaster management is a continuous and integrated cyclical process of planning, organizing, coordinating and implementing measures to prevent and to manage disaster effectively. Thinking from 'when' to 'if' and 'how' completes the cycle of management which seeks professional help who can provide psychological first aid along with community based group interventions focusing on history taking to interventions targeting high risk population and also encourage to avoid labeling the survivors as mentally ill and rehabilitation programs should be culturally appropriate (Satapathy and Bhadra, 2009). Involving the local affected community not only helps in capacity building but also in community participation.

Along with this debriefing, cognitive behavior therapy, art therapy; informal education; group discussions; drama; structuring of daily activities; engaging in activities such as yoga, meditation, prayers, relaxation, sports, and games; spiritual activities; providing factual information; educating parents and teachers. They are intended to provide important components of psychosocial rehabilitation such as normalizing, stabilizing, socializing, defusing of emotions and feelings, and restoration of a sense of identification with others and of safety and security. Debriefing is successfully used and implemented in military combat settings and in relief workers (Jha, Ayan and Basu, 2016; Joseph, 2000). There are randomized controlled studies to support the findings that early intervention CBT group had less of PTSD when compared a control group. These will not only help in the recovery of milder and sub-syndrome symptoms, but also in the prevention of adverse mental health consequences.

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Acknowledgements

The author appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author declared no conflict of interest.

How to cite this article: P Kumar, H Singh & Nazli (2020). Disaster and mental well-being: an understanding. *International Journal of Indian Psychology*, *8*(1), 474-483. DIP:18.01.061/20200801, DOI:10.25215/0801.061