

1. INTRODUCTION

Disasters are among the phenomena that capture the attention and concern of scientists in all disciplines due to the significant threat they pose to humanity. In the comprehensive dictionary, a disaster is defined as a great calamity and extensive destruction. From this linguistic definition, we find that disasters have a profound impact on humanity, posing immediate or delayed dangers, such as earthquakes and massive fires followed by numerous repercussions and complications.

Disasters are broadly categorized into three main types or classifications:

A. Natural Disaster: These result from natural phenomena such as earthquakes, volcanoes, floods, hurricanes, and others. They are characterized by their rapid occurrence, and in some cases, their likelihood can be predicted through specialized centers and sensing devices. An example is the earthquake in Chlef in 1982.

B. Human or Man-Made Disaster: This type occurs due to human activities, such as chemical factory explosions, mine collapses, dam bursts, airplane crashes, and more. These disasters often happen suddenly and are rarely predictable. They have a relatively limited and localized impact compared to natural disasters. An example is the 1975 incident at the Abid Zinc and Lead Mine in Tlemcen, where six individuals lost their lives, leaving significant psychological effects on the affected population and the victims' families.

C. Mixed or Hybrid Disaster: This type is a result of both human actions and natural interventions, such as blocking natural waterways, constructing buildings, diverting rivers, and more. This type of disaster contributes to staggering economic and social consequences that are difficult to imagine, as the elements of surprise and unpredictability are present in this type of disaster.

2.The Psychological Impact of Natural Disasters:

Several results and effects resulting from natural disasters have been identified in general, including mental health disorders and psychological imbalances. Studies indicate that fifty-one percent of individuals in the most affected areas of Hurricane Andrew in the United States met criteria for new disorders after the disaster, including post-traumatic stress disorder, acute depression, and anxiety disorders (David et al, 1996)

This information was repeated after Hurricane Katrina in 2005, with a recorded level of post-traumatic stress disorder reaching 62.5% for young children who stayed in the disaster area, and a high level of common psychological disorders such as oppositional defiant disorder, and separation anxiety disorder (Scheeringa and Zeanah, 2008). Weaver et al. (1989) refers to an increase in psychosomatic and somatoform disorders, anxiety, and depression in a sample of 200 individuals interviewed with the elderly before and after severe floods in Southeast Kentucky. These results were replicated with the same analytical discussions following the recent floods in the United Kingdom (Paranjothy et al., 2011)

In the events of the Central Java earthquake in Indonesia in 2006, researchers in their report found that the most vulnerable and affected by the disaster were children and workers who were in enclosed spaces and witnessed the disaster under the roof. It also showed higher levels of symptoms consistent with post-traumatic stress disorder as defined by the statistical manual of mental and psychological diseases in the available diagnosis, in addition to two symptoms of cultural and behavioral such as decreased academic motivation, deterioration of social output, and absence of the family system (Widyatmoko et al., 2011).

In an extended study by Bryant et al. (2014), it was indicated that during the Black Saturday bushfires in Australia in 2009, the research team discovered that the bushfire disaster was positively associated with the risk of post-traumatic stress disorder, depression, severe psychological distress, and panic attacks.

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In general, we observe through these important studies that trauma levels are fundamentally linked to a known outcome during the disaster, indicating disorders that appear within the first few days of the disaster and based on multiple variables: psychological preparedness, cultural and social context. These results highlight the severe psychological impact of disasters, suggesting an urgent and utmost importance of providing comprehensive mental and social health care, which should be accessible in areas affected by major disasters, especially those with students, workers, or employees in various sectors in confined spaces, as indicated by the study (Wang et al., 2000).

A large number of reports on disasters indicate that the psychological effects post-disaster significantly exacerbates if primary measures for psychological interventions and social protection are not taken. This is due to various and widespread factors, assessing the resulting damage as catastrophic. Psychological care plays a fundamental role in returning to normal life and social integration (Galea et al., 2005)

The studies and reports reviewed indicate that susceptibility and preparedness are crucial, and being affected by previous disasters or traumatic experiences associated with the disaster have a significant impact on the outcome of psychological disorders and the impact of the disaster. Factors like age determine psychological vulnerability. The elderly, children, and women are noticeably more affected (Werritty et al., 2007), and these groups are more prone to post-traumatic stress disorder and general psychological morbidity than younger adults following the Sichuan earthquake (Jia et al., 2010).

Additionally, factors at the population level determine susceptibility to psychological and mental disorders after a disaster. The social and economic factors of the population play a significant role in determining the extent of risk and psychological impact, for example (Lavigne et al, 2008). In Bangladesh, it has been recorded that the poorest and most socially backward populations are often unable to live away from the river due to economic constraints, making them more vulnerable and significantly affected during catastrophic

seasonal floods (Mutton and Haque, 2004), despite their comprehensive awareness of risk reduction, which affects them in most rainy seasons in regarding global Bangladesh (2010). This is attributed to factors such as population and expansion in high-risk areas, lifestyle changes, and demographic shifts (Kunkel et al., 1999).

From what has been narrated, natural disasters generally result in several disorders, the levels of which are subject to economic, cultural, social, and psychological factors. Therefore, psychological and social intervention in the first days or hours following a disaster is of utmost importance, as it provides responders with an opportunity to prevent mental health disorders and impairments in the community. The concept of intervention falls under the category of emergency programs or what is known as the intervention protocol. Through studies of significant importance, it is observed that programs with a cognitive-behavioral approach are among the most used and most important in terms of results. This is indicated by the INSERM report, 2004, which stated that cognitive-behavioral therapy is among the most effective treatments in the research study presented by the center in the year two thousand and fourteen.

3. Brief Cognitive Behavioral Intervention

The brief cognitive behavioral therapy (CBT) is among the cognitive-behavioral therapies that emerged from the third generation of cognitive-behavioral treatments. This technique is designed to assist individuals in a short period and in urgent cases, such as disasters and others. Cognitive-behavioral therapy combines cognitive and behavioral therapies and has strong empirical support in treating mood disorders, anxiety, and depression as well (Stephen, 1998).

The basic hypothesis of brief cognitive-behavioral therapy is that it is difficult to directly change emotions. Therefore, this therapy targets emotions by changing the thoughts and behaviors that contribute to creating painful feelings. Painful situations and events are an important factor in reinforcing disturbed individuals.

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Cognitive-behavioral therapy equips individuals with a set of skills that enable them to perceive their thoughts and emotions correctly and logically, and to identify the impact of situations, thoughts, and behaviors on emotions; and improve feelings by changing dysfunctional thoughts and behaviors. It works on building the process of acquiring everything the individual needs to overcome crises and maladjustment, and cognitive-behavioral therapy techniques are collaborative between the therapist and the client. During the acquisition of skills and homework, this is what distinguishes cognitive-behavioral therapy from "other therapies". The therapist must use session time and distribute it to teach the client new constructive skills to address the symptom problem of the disorder, not just to discuss the problem with the patient or provide advice. (Jeffrey A. et al, 2008)

As for the brief cognitive-behavioral therapy or brief cognitive therapy, it involves compressing and reducing the techniques of cognitive-behavioral therapy from 12-20 sessions to 4-8 sessions. In summary, cognitive-behavioral therapy focuses on specific treatments for a limited number of patient problems. The client is required to concentrate and cooperate with a pre-established contract by the therapist, where the patient understands the limited number of sessions, and because the patient is also required to be diligent in using the techniques, the therapist constantly assists in their exercises quickly and effectively, and uses additional reading materials and homework to help develop the therapeutic approach.

4.Emergency Protocol for Trauma Cases: Trauma is among the disorders that directly follow a disaster, and it is one of the strong psychological effects that cause various disorders, primarily post-traumatic stress disorder, specific and generalized anxiety disorders, depression, and various mood disorders. It is a top priority in interventions to alleviate trauma in affected individuals, as this intervention can protect the individual from a large proportion of disorders.

In psychological literature, trauma is defined as a strong event capable of causing physical and psychological disturbances that affect the personality structure, or it can pass as

a transient crisis. Trauma is most often followed by a series of physical and psychological disorders, which continue in the form of post-traumatic stress syndrome. The clinical trauma chart includes significant symptoms such as instability, physical weakness, psychological fatigue, memory loss, regression, escape into addiction and alcohol abuse, and somatic symptom disorder. (Sillamy. N, 1999)

Authors in the field of psychology note that the concept of trauma is essentially linked to the traumatic event, characterized by its suddenness or unpredictability (Lévy Pradère, Baubet, Taieb, 2004). From these definitions, we find that trauma resulting from a traumatic event can pose a significant risk and plunge its bearer into various disorders in the days following the event, as pointed out by the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5, 2013). In this latest edition, scientific bodies agreed on the importance of classifying trauma and stress-related disorders in a separate axis, after they were previously classified under the anxiety axis in DSM-IV. This highlights the significant attention trauma receives due to its danger to individuals in societies suffering from disasters. This axis focuses on the following diagnostic categories: reactive attachment disorder, disinhibited social engagement disorder, post-traumatic stress disorder, acute stress disorder, adjustment disorder, as well as other specified and unspecified trauma- and stress-related disorders.

5.Choosing the Protocol for Intervention

The emergency protocol we will discuss in the session program was chosen based on purely scientific and research foundations, as follows:

a. Appropriateness of the Cognitive-Behavioral Approach: The brief technique of the cognitive-behavioral approach is suitable for addressing the symptoms of trauma. This approach has been found effective in changing negative thought patterns and behaviors associated with trauma.

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- b. Based on Numerous Experiences and Efficacy:** The decision to use this protocol is based on numerous experiences demonstrating its effectiveness in treating disorders resulting from trauma, including depression, anxiety, panic disorders, and others.
- c. Focus on Current and Situational Condition:** Cognitive-behavioral therapy (CBT) focuses on the individual's current state and their situational context, rather than delving into past experiences, which can be crucial for immediate and effective intervention in trauma cases.
- d. Monitoring and Assessment:** The protocol allows for swift and concise monitoring and evaluation. This is important in emergency situations where quick assessment and adjustment of the intervention may be necessary.
- e. Acceptance by Clients:** This type of intervention is generally well-received by clients due to its logical and practical nature. CBT is known for being structured, goal-oriented, and often providing clients with practical tools and strategies that they find useful and effective.

It's important to note that while CBT is widely used and effective for many, the suitability of any therapy depends on the individual case, and flexibility in approach is key in mental health interventions.

6. Techniques Used in the Emergency Protocol

The techniques selected for this protocol generally include:

- a. Relaxation and breathing control techniques**
- b. Working on rationalizing negative thoughts that cause emotions**
- c. Activation, integration, and problem-solving**

7. Duration of Treatment in the Protocol

The duration of brief or condensed cognitive-behavioral therapy can vary from one patient to another. Despite the variation in the number of sessions, which depends on many factors, as mentioned, the number of sessions ranges from four to eight and can slightly exceed this. Each session lasts between thirty minutes to an hour or an hour and a quarter.

Field experiences indicate that some cases require significant follow-up after the sessions due to their psychological fragility and inability to overcome the crisis.

8.Temporal Distribution of Sessions in the Emergency Protocol

The intervention is divided into three stages that encapsulate the treatment, as follows:

- a. The introductory phase and establishing trust with the client in one session
- b. The diagnostic phase and setting the treatment plan in one or two sessions
- c. The intervention phase followed by evaluation and monitoring

The following table presents an example of a detailed plan outlining the sequence of sessions and the construction of techniques until the end of the brief treatment:

Session	Session Content	Possible Techniques
First Session During Day 1 and 2	"Directing the patient to cognitive behavioral therapy. Assessing the patient's fears." Establish Initial Treatment Plan/Goals.	● Directing the patient ● Conceptualizing the case ● Setting goals
Second session During day 3 and 4	Continue to assess the patient's fears. Continue setting initial goals Or Begin the identified intervention techniques	Working on maladaptive thoughts, behavioral activation, and problem-solving, relaxation
Session 3 During Day 4	Continue with previously started intervention techniques	Working on maladaptive thoughts, behavioral activation, and problem-solving, relaxation
Session 4 During day 5 and 6	Refining previously initiated intervention techniques	Smoothly revisiting previous techniques after the client has learned, reviewing the client's previous thoughts and beliefs

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		about the situation.
Session 5 During Day 8	Continue with previous techniques	Assisting the client in overcoming their problem after evaluating the treatment through the technique of thought building.
Session 6 During Day 9	Continue intervention techniques. Discussing termination of therapy and preparation for ending Maintaining changes	Review of techniques Ensuring the client's proper and positive response position Informing the client that they can continue the techniques at home during the week, and that therapy will end in the next session
Session 7: Final Session on Day 10 and Follow-up After a Week	Ending Treatment and Assisting the Patient	Ending Treatment and Maintaining Resulting Changes. Sustaining Changes and Setting Follow-up Time

It is of utmost importance for the therapist to encourage the client to think flexibly in determining the duration of therapy. Time-limited therapy, agreed upon with the client, can be positive in accepting possible techniques, and can also provide an additional incentive for both patients and therapists to work efficiently and effectively. However, the exact duration of the therapy is likely to be determined by a range of factors.

It is worth mentioning in this protocol the need for the therapist to engage the patient and to prepare the treatment plan together, logically following the contract known in cognitive-behavioral therapy. It is also not expected of you to strictly adhere to a "specific timetable" for progress or topics. Instead, the sessions should be flexible and adaptable in dealing with all applications of brief cognitive-behavioral therapy. For example, it is often beneficial to work within a "limited framework for the session" where the patient receives four to six sessions of "active" therapy, followed by one or more follow-up sessions that occur at increasing intervals after the active treatment phase (e.g. 2 weeks after the treatment with an additional booster after 4 weeks from that).

9.Reference

1. **Bryant**, R. A., Waters, E., Gibbs, L., Gallagher, H. C., Pattison, P., Lusher, D.,... & Forbes, D. (2014). Psychological outcomes following the Victorian Black Saturday bushfires. Australian and New Zealand Journal of Psychiatry, 0004867414534476.
2. **David**, D., Mellman, T. A., Mendoza, L. M., Kulick-Bell, R., Ironson, G., & Schneiderman, N. (1996). Psychiatric morbidity following hurricane Andrew. Journal of traumatic stress, 9(3), 607-612, Empirically supported psychological interventions for social phobia in adults: a qualitative review of randomized controlled trials K. Ponniah¹ * and S. D. Hollon²
3. **DSM5**(APA, 2013), Diagnostic and statistical manuel of mental disorders, New School. Library, Washington, DC, L.
4. **Galea**, S., Nandi, A., & Vlahov, D. (2005). The epidemiology of post-traumatic stress disorder after disasters. Epidemiologic Reviews, 27(1), 78-91.
5. **Inserm** (dir.). Psychothérapie : Trois approches évaluées. Rapport. Paris : Les éditions Inserm, 2004, XII- 553 p. - (Expertise collective). - <http://hdl.handle.net/10608/146>

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6. **Jeffrey.A. CULLY, PH.D. ANDRA L. TETEN, PH.D,** 2008, a therapist s guide to brief cognitive behavioral therapy, Published by the Department of Veterans Affairs, South Central Mental Illness Research, Education, and Clinical Center (MIRECC).
7. **Jia, Z., Tian, W., Liu, W., Cao, Y., Yan, J., & Shun, Z.** (2010). Are the elderly more vulnerable to psychological impact of natural disaster? A population-based survey of adult survivors of the 2008 Sichuan earthquake. *BMC Public Health*,10(1), 172.
8. **Kunkel, K. E., Pielke Jr, R. A., & Changnon, S. A.** (1999). Temporal fluctuations in weather and climate extremes that cause economic and human health impacts: A review. *Bulletin of the American Meteorological Society*,80(6), 1077-1098
9. **Lavigne, F., De Coster, B., Juvin, N., Flohic, F., Gaillard, J. C., Texier, P., ... & Sartohadi, J.** (2008). People's behaviour in the face of volcanic hazards: perspectives from Javanese communities, Indonesia. *Journal of Volcanology and Geothermal Research*, 172(3), 273-287.
10. **Mutton, D., & Haque, C. E.** (2004). Human vulnerability, dislocation and resettlement: Adaptation processes of riverbank erosioninduced displacees in Bangladesh. *Disasters*, 28(1), 41-6
11. **Paranjothy, S., Gallacher, J., Amlôt, R., Rubin, G. J., Page, L., Baxter, T., ... & Palmer, S. R.** (2011). Psychosocial impact of the summer 2007 floods in England. *BMC public health*, 11(1), 14.
12. **Scheeringa, M. S., & Zeanah, C. H.** (2008). Reconsideration of harm's way: Onsets and comorbidity patterns of disorders in preschool children and their caregivers following Hurricane Katrina. *Journal of Clinical Child & Adolescent Psychology*, 37(3), 508-518.
13. **Stephen Bisbey, Lori Beth Bisbey** · 1998, *Brief Therapy for Post-Traumatic Stress Disorder: Traumatic*, ed Willi

14. **Wang**, X., Gao, L., Shinfuku, N., Zhang, H., Zhao, C., & Shen, Y. (2000). Longitudinal study of earthquakerelated PTSD in a randomly selected community sample in north China. *American Journal of Psychiatry*, 157(8), 1260-1266.
15. **Werritty**, A., Houston, D., Ball, T., Tavendale, A., & Black, A. (2007). Exploring the social impacts of flood risk and flooding in Scotland. Edinburgh: Scottish Executive.
16. **Widyatmoko**, C. S., Tan, E. T., Seyle, D. C., Mayawati, E. H., & Silver, R. C. (2011). Coping with natural disasters in Yogyakarta, Indonesia: The psychological state of elementary school children as assessed by their teachers. *School Psychology International*, 32(5), 484-497.