

Disaster preparedness to reduce anxiety and post-disaster stress

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Question

- What interventions are currently done at the preparedness level/pre-disaster stage so that the communities' situational anxiety and post-traumatic stress disorder is minimised during the actual disaster?
- What indicators of impact are commonly used to assess these and what is the evidence of impact against these indicators?
- What is the evidence around such interventions targeted to people with pre-existing disabilities, including those with mental health issues?

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Definitions

Disaster preparedness: This refers to measures taken to prepare for and reduce the effects of disasters. That is, to predict and, where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences.

Disaster preparedness provides a platform to design effective, realistic and coordinated planning, reduces duplication of efforts and increase the overall effectiveness of National Societies, household and community members' disaster preparedness and response efforts. Disaster preparedness activities embedded with risk reduction measures can prevent disaster situations and also result in saving maximum lives and livelihoods during any disaster situation, enabling the affected population to get back to normalcy within a short time period.

Disaster preparedness is a continuous and integrated process resulting from a wide range of risk reduction activities and resources rather than from a distinct sectoral activity by itself. It requires the contributions of many different areas—ranging from training and logistics, to health care, recovery, livelihood to institutional development (International Federation of the Red Cross and Red Crescent website, <https://media.ifrc.org/ifrc/what-we-do/disaster-and-crisis-management/disaster-preparedness/>).

Psychological preparedness: This is the ability to manage and cope with one's emotional response during a disaster, with the purpose of bettering one's cognitive and behavioural response (Malkina 2013).

People with disabilities: A disability may be generally defined as a condition which may restrict a person's mental, sensory, or mobility functions to undertake or perform a task in the same way as a person who does not have a disability (Disability Works website, <http://www.dwa.org.au/whatisadisability.htm>).

1. Summary

This report focuses on disaster mental health preparedness, which is a significant reduction method to protect individuals from detrimental psychological effects arising from disasters. Disasters are stressful events not only for individuals who suffer from personal loss but also for the community at large (Khankeh et al., 2011). During the past two decades, natural hazards have affected more than 3 million families around the world (Roudini et al., 2017). The research of Clay et al. (2014) demonstrated a positive connection between disaster preparedness and mental health, and probability of a mental disorder following disasters is due to an absence of preparedness. Disaster mental health preparedness is focused on in the literature and there are many examples of this.

Additionally, there does seem to be some recognition of people with disabilities in disaster preparedness, for example the World Disasters Report 2018 has a section focused on people with disabilities, but the mental health disaster preparedness does not seem to specifically focus on people with disabilities as a group more vulnerable to psychosocial issues. Many of the documents appear to pay lip service to people with disabilities by including one sentence stating that they should be provided for, there was particular mention of people with disabilities living in institutions. Some authors have identified that physically disabled people are more likely to suffer adverse mental health effects in a disaster situation. Additionally, factors associated with mental illness may interfere with the ability to cope with the trauma of disaster. Data from a survey conducted by Humanity & Inclusion in 2015 reveals high levels of exclusion from humanitarian assistance and services for persons with disabilities and access to mental health services is a particular gap (IFRC 2018).

Disaster mental health preparedness

Disaster preparedness refers to measures taken to prepare for and reduce the effects of disasters. That is, to predict and, where possible, prevent disasters, mitigate their impact on vulnerable populations, and respond to and effectively cope with their consequences. The first section of this report focuses specifically on disaster mental health preparedness. It is now widely accepted that the psychological symptoms of trauma resulting from devastation to lives and livelihoods of affected people remain much longer and sometimes throughout their entire life span, unless addressed. Therefore, it is important to include psychosocial components of mental health protection and treatment of the affected persons in disaster risk preparedness and management to make it a comprehensive package. Several articles made the important point that countries with strong mental health services are better prepared for disasters and can assist with the response, so investing in national health services can be an important part of preparedness plans.

Impact

The second section focuses on the available evidence looking at the impact of interventions. The literature suggests that more research and evaluation is required to evaluate the efficiency and effectiveness of mental health interventions to reduce the impact of disasters. Mental health experts have limitations, especially in relation to insufficient knowledge, and practices concerning mental health preparedness.

People with pre-existing disabilities

The third section looks at people with pre-existing disabilities, including mental health conditions. People with disabilities suffer disproportionately and are at greater risk of suffering decreased mental health during disasters, which could perpetuate a cycle of poverty and isolation that is heightened during disasters (IASC, 2007). Persons with pre-existing physical disabilities and those with chronic physical and mental health conditions are at increased risk for suffering additional co-morbidities as a result of a natural disaster. Disaster preparedness practitioners have come up with interventions that reduce the vulnerability of people with disabilities in the shape of physical preparedness. However, very limited attention has been given to the preparedness to mental health risks; disabled communities might be more prone to developing situational anxiety and post-traumatic stress disorder after a disaster. However, there is often not specific interventions looking at mental health impacts of disaster on people with pre-existing mental health issues or pre-existing disabilities. It is also important to consider the stigma around disability and mental health and whether this impacts on disaster preparedness planning in different cultures. Several articles suggested strengthening disability groups as part of preparedness to ensure there is a strong support structure ready to support people during disaster situations.

The research indicates that individuals with pre-existing, severe physical, neurological or mental disabilities or disorders may be at increased risk of adverse health consequences following disasters due to a lack of preparedness (Clay et al., 2014). The experience of dealing with disasters has demonstrated that psychosocial characteristics and mental health are vital in disaster preparedness and management. In vulnerable countries around the world at high risk of natural catastrophe, disaster mental health preparedness should play a vital role (Roudini et al., 2017).

2. Preparedness interventions to reduce psychological effects of disasters

The evidence suggests that natural disasters have a potentially negative impact on mental health, with increasing levels of Post-traumatic Stress Disorder (PTSD), depression, anxiety, and use of psychotropic medications in populations post-disaster (McCabe et al., 2014). Several articles have made the important point that countries with strong mental health services are better prepared for disasters and can assist with the response, so investing in national health services can be an important part of preparedness plans. Preparation plans for mental health and psychosocial support (MHPSS) should be integrated into general national health emergency response planning, and should indicate priorities for the allocation of limited resources. In general, countries with mental health services that are community-based and integrated with general health services will be better prepared for a mental health response in the case of a disaster (IASC, 2015). Long term interventions and civil society building can be the key to reducing anxiety and stress in the future. One of the basic needs includes the requirement of continuous mental health care in the community (Khankeh et al., 2013).

It is now widely accepted that the psychological symptoms of trauma resulting from devastation to lives and livelihoods of affected people remain much longer and sometimes throughout their entire life span, unless taken care of. Therefore, it is important to include psychosocial components of mental health protection and treatment of the affected persons in disaster risk

preparedness and management to make it a comprehensive package. A four-tier system of mental health intervention and counselling has been proposed in line with the existing healthcare system and resources available in the country to make it sustainable. At the core of this programme is the mobilising and training of volunteers from the community on psychosocial intervention, counselling and rehabilitation, backed up by three layers of trained health workers and mental health professionals (Dorji, 2006).

Psychological preparedness differs from household or physical preparedness in that what is referred to is an intra-individual and psychological state of awareness, anticipation, and readiness - an internal, primed, capacity to anticipate and manage one's psychological response in an emergency situation (Roudini et al 2017). Individual and community psychological preparedness in the natural disaster context has proven to be one of the most effective resilience-conferring strategies available in the context of natural disasters. A better understanding of one's own and other's psychological response in natural disaster warning situations helps people to feel more confident, more in control and better prepared, both psychologically and in terms of effective emergency planning. Being cooler, calmer and more collected is also a substantial aid to family members and others who may not be as well prepared for what is happening. Psychological preparedness can assist people to think clearly and rationally, which in turn may reduce the risk of serious injury and loss of life during disasters (Malkina, 2003). Therefore, individuals and communities need to prepare psychologically for confronting a disaster. People are not fully aware of disasters and the mental effects on human's health, so natural disaster mental health preparedness is frequently unnoticed due to the more immediate and basic physical needs in disaster situations (Roudini et al 2017).

Examples of preparedness interventions

Indonesia: Existing policies did not include psychosocial efforts in the disaster preparedness plan. However, mental health and psychosocial relief efforts are now being integrated into the disaster preparedness plan of Indonesia. To further implement the plan, a strong community mental health system is being developed. This system will be able to deliver mental health and psychosocial interventions on a routine basis and could be scaled up in times of disasters (Setiawan and Viora, 2006).

Myanmar: Community mental health preparedness plays a crucial role in responding to public health emergencies in every country. Although governmental organisations and assistance agencies have a significant responsibility, mental health preparedness is not adequately included in the government's responsibilities in Myanmar. However, Myanmar has established a National Disaster Preparedness plan and actions to recognise mental health were taken in the pre-disaster phase of the plan, such as connecting the psychosocial section with the existing national structure and creating inter-ministerial management with Social Welfare, Home Ministry, and Department of Relief. They developed a mobile training team and exchange visits to other countries to improve knowledge regarding preparedness for disaster were also included in the pre-disaster phase. This research demonstrated that mental health facilities should be improved to have a fortified community mental health structure and be part of the routine of health care system. This consideration facilitated the creation of a significant community mental health structure, which served the immediate as well as the long-term needs of the community, and it was intended to become a part of the standard health care delivery system in Myanmar.

Individuals and families continue to organise prearranged efforts with the help of governmental and non-governmental support (Htay, 2006)

Public education and warning communication intervention: Morrissey and Reaser (2003) show that the pre-disaster situation is a critically significant time for prevention and mitigation. Psychological factors and procedures during this threat period are of considerable importance for effective coping and adaptive reacting. The aim of the research was to test, evaluate, and improve a pioneering natural disaster public education and warning communication intervention with focus on tropical cyclone preparation and response. In this research, the material was derived from “Stress Inoculation Theory”. Avoidance coping, previous traumatic experience, and anxiousness were found to often co-exist in mental health context.

Disease outbreak planning: Health systems that centre on large psychiatric institutions as the only service for mental health problems impede effective disaster response in an emergency. Prioritising the development of community mental health services – integrated with general health services – is thus essential to prepare for a mental health response during and after emergencies. In some countries, the majority of mental health care workers are employed in large psychiatric institutions. In such cases, it can be important to create a memorandum of understanding with the institutions and the Ministry of Health for the release of key mental health professionals to participate in the emergency response. Speciality mental health care, including hospitals that offer acute or long-term care, should be included in post-disaster infection prevention and control planning, training and service delivery strategies. They must also receive all relevant supplies, and should not be shut down or made inaccessible for people in need (IASC, 2015). Engaging community members in the disaster planning process is vital to facilitate intervention if an outbreak occurs.

Thailand: After the 2004 tsunami, the Department of Mental Health in Thailand established a national instruction for mental health. Interventions were cited as a tool for preparedness for disasters based on the lessons learnt from the psychosocial relief efforts and mental health effects of the tsunami. In this research, social interventions for the affected community were integrated into the general mental health care. The mental health care delivery system will deliver the everyday requirements of the community and can be quickly scaled up in times of a disaster (Panyayong and Pengjuntr, 2006).

New Orleans: Tierney (2006) describes a situation where mental health was not taken into account and the negative effects of this. Many low-income individuals stranded in New Orleans after Hurricane Katrina were policed more than they were assisted: “Instead of having their needs addressed in a timely manner, those stranded in New Orleans after Katrina were not so much assisted as they were policed. Literally treated like criminals, they were confined to shelters under strict control. Later they were transported, again under the control of law enforcement agencies and the military, to over forty states around the country, without even having the opportunity to choose where they would be sent. Family units were broken up and sent in different directions” (Page 122)

3. Indicators of impact

Roudini et al. (2017) conducted a literature review searching for studies on community disaster mental health preparedness and found 810 articles. They focused on 14 articles. In total, 9 out of

the 14 studies (64%) were conducted in developed countries, 5 of the 14 papers (35%) were focused on developing countries, and 2 papers (14%) were done on an international level. Regarding the demographics of the papers, 20% focused on children and adolescents, 74% on adults, and 6% of papers focused on women. Their review analysed research that addresses the effectiveness of mental health interventions to reduce the impact of disasters. They reached the conclusion that more effort is required to evaluate the efficiency of these interventions. It also emphasised the limitations of mental health experts, insufficient knowledge, and practices concerning mental health preparedness in Asia. Therefore, they suggested that an advance study is necessary on the topic of mental health preparedness for disasters. They also noted that the experience of dealing with the 2004 Indian Ocean tsunami emphasised the fact that disaster preparedness strategies must meet the mental health and psychosocial needs of the community.

Additionally, Roudini et al. (2017) found that there are some restrictions in the published qualitative studies, such as a lack of discussion on the philosophical basis of the research, because the belief structure of the researcher influences the interpretation of the research. Therefore, it is essential to discuss the philosophy underpinning the research, the role of the investigators and their relationship with contributors, any potential biases or assumptions of the researchers, and the sampling procedure. Regarding responses and feedback about the used methods and programmes, there is limited evidence regarding their effectiveness or impact and a lack of monitoring of the system.

Malkina (2003) writes that pre-impact psychological assessment and intervention has been an area of surprising omission in multidisciplinary writings about human response to natural disaster. This is not to say that an extensive literature on human response to natural and man-made hazards does not exist, but much of this discourse relates to either post impact stress and coping issues or organisational preparedness and response.

Age and Disability Consortium (2018) suggests involving people with disabilities to fill in the gaps in health staff training, involving them in developing training modules to fill these gaps. Additionally, providing training to mental health and psychosocial support staff on the rights of people with psychosocial disabilities would increase the impact of these programmes. IASC (2007) also states that the impact of disaster preparedness could be increased if strategies for reducing discrimination and stigma of people with mental illness and/or mental disability are implemented. One IASC (2007) study also used 'steps are taken to protect the most vulnerable people, including those with chronic mental disabilities' as an indicator of impact.

4. People with pre-existing disabilities

There does seem to be some recognition of people with disabilities in disaster preparedness, for example the World Disasters Report 2018 has a section focused on people with disabilities, but the mental health disaster preparedness does not seem to specifically focus on people with disabilities as a more vulnerable group. Many of the documents appear to pay lip service to people with disabilities by including one sentence stating that they should be provided for. Some authors have identified that physically disabled people are more likely to suffer adverse mental health effects in a disaster situation (Math et al., 2015). Additionally, factors associated with mental illness and substance use disorders may interfere with the ability to cope with the trauma of disaster (Tierney, 2006).

Roudini et al. (2017) conducted a literature review on this area and found a lack of information on disaster mental health preparedness for vulnerable groups such as children, women, people living with disabilities, and the elderly. Assessment efforts for mental health preparedness training in general and those related to vulnerable populations such as people with disabilities, children, women, and elderly people in particular should be encouraged (Choudhury et al., 2006; Morrissey and Reser, 2003; Sharma et al., 2015; Udomratn, 2008).

Humanity and Inclusion (2015) found that the psychological impact is the second most important personal impact of a humanitarian crisis with 38% of psychological stress and/or disorientation, and 32% of diminished and/or loss of self-confidence. This is to be linked to the direct physical impact that comes first (54%) but also to numerous destructuring factors of the environment of persons with disabilities having an impact on their autonomy and emotional wellbeing. Among those are social and economic effects such as the loss of income (50%), the loss of shelters/home (39%) or the internal displacement (38%), and, understandably the loss of family members (32%) and caregivers (13%), who often represent primary support for persons with disabilities. While these types of impact are likely to be faced by many other affected people regardless of disability, those results highlight the need to pay specific attention to addressing the psychological impact of the crisis on persons with disabilities.

Age and Disability Consortium (2018) state that mental health and psychosocial support services provided as part of the response, both community-level and specialist services, should be accessible to everyone who needs them, including older people and people with disabilities. For example, through inviting families to visit the centre or volunteer there, being mindful of the stigma often attached to mental health services. Covering transportation costs for people who have difficulty reaching services and the person accompanying them. Ensuring that people with psychosocial disabilities have access to therapeutic support provided as part of the mental health and psychosocial support service, if they need this (Age and Disability Consortium, 2018). Data from a survey conducted by Humanity & Inclusion in 2015 reveals startling levels of exclusion from humanitarian assistance and services for persons with disabilities. Of respondents to the survey, all of whom had some form of disability, 70% indicated that health services were a priority for them in the event of a crisis; yet only 33% said the services were available during a crisis. The results were similar for other sectors, such as water, shelter and food; and other sources indicate that access to mental health services is a particular gap.

The Disability Inclusive Disaster Risk Reduction Network (DiDRRN) website states that persons with disabilities may be placed at increased disaster risk due to cognitive or physical impairments. These factors may limit the ability of a person with disabilities to access information and/or to act on that information. To date, the disaster risk reduction (DRR) community has paid little attention to widening the active participation of persons with disabilities in disaster reduction activities and approaches. Similarly, little attention has been paid to addressing the environmental barriers and constraints that persons with disabilities face within a DRR context. As such, the way in which DRR is most usually done continues to exclude and denies access to potentially life-saving information and procedures for the most at-risk within communities (DiDRRN website).

Disaster preparedness planning does mention people with disabilities, for example: vulnerable people within the community (e.g., pregnant women, children, older persons, persons with

disabilities, the homeless, persons with severe persistent mental illness) should be identified with the assistance of cultural leaders. Specific plans should be developed for other community members to act as liaisons and to provide support to these persons following disasters. Many individuals living with severe and persistent mental disorders or mental disabilities may reside in long-term care institutions (PAHO 2012). IFRC are particularly looking at collected disability disaggregated data to ensure no one is left behind. These persons require special attention, as they form a particularly vulnerable group:

Recommendations for institutionalized persons with mental disorders

- Ensure that at least one agency involved in health care accepts responsibility for ongoing care and protection of people in psychiatric institutions.
- If staff has abandoned psychiatric institutions, mobilize human resources from the community and the health system to care for people with severe mental disorders.
- Provide basic training and supervision for those mobilized to provide care.
- When the condition of the patient allows, care should be provided outside of an institution.
- Protect the lives and dignity of people living in psychiatric institutions, ensuring that patients' basic physical needs are met.
- Monitor the overall health status of patients and implement or strengthen surveillance of their human rights.

Source: PAHO 2012

However, these are not specific interventions looking at mental health impacts of disaster on people with pre-existing mental health issues or pre-existing disabilities. It is also important to consider the stigma around disability and mental health and whether this impacts on disaster preparedness planning in different cultures.

Examples of DRR planning that mention disability and mental health

Disaster planning for the homeless: Edgington (2009) looks at disaster planning, including mental health preparedness planning for homeless people. The circumstances of homelessness and inadequate systems of care have contributed to high rates of mental illness, addiction, and poor physical health among people who are homeless. Individuals with serious mental illness may have a difficult time dealing with the abrupt disruption to their lives. The pandemonium of the emergency response may trigger symptoms of PTSD, a disorder common to many homeless people. For people in recovery, disasters disrupt support systems and create a whirlwind of emotions that interfere with the recovery process. Others who are currently using substances may have difficulty dealing with the disaster or worse may experience symptoms of withdrawal. People who are homeless also experience higher rates of acute and chronic illnesses. Health Care for the Homeless providers are a resource for caring for the behavioural and primary health care needs of people who are homeless. Disaster shelter workers should be trained to recognise symptoms and have access to trained professionals who can offer immediate assistance.

Nepal: According to the UN report post-earthquake in Nepal (2015); difficulty in accessing emergency services and relief materials in a crisis situation not only has an impact on the household's ability to cope with the immediate impact of a disaster but can also have bearings on

the mental and psychosocial wellbeing of the disaster victim. Therefore, it is crucial that vulnerable groups such as persons with disabilities are targeted via specific risk reduction, emergency response and recovery measures.

Ebola preparedness: IASC (2015) mentions people with disabilities, but not specifically as a group that are more vulnerable to mental health issues post-disaster and the mentions are only brief. They state that messages should be shared in relevant languages and should be accessible (to those who are not literate, have sensory disabilities, are generally not mobile or are in neglected situations such as prisons, special schools or institutions), empathetic (showing understanding of the situation), adapted to the audience (e.g. children) and culturally relevant. Also that a system for tracking vulnerable individuals (e.g. unaccompanied children, persons with disabilities and the elderly) should be established.

Myanmar: The National Disaster Risk Reduction Plan for Myanmar (2017) mentions the identification, implementation, monitoring and evaluation of priority actions will be 'inclusive' and address the special needs of women, children, people with disabilities and the elderly population. It also mentions developing training packages on "do's and don'ts" related to various disasters specific to type of disability and also spoke of using sign language as a form of communication. However, it does not mention mental health, anxiety or stress at all.

Nepal: Handicap International (2009) look at mainstreaming disability in disaster planning, they consider disability and mental health and the barriers, but does not look at this group as being more susceptible and more in need of disaster mental health preparedness planning. It states that barriers can be linked to:

- a) *Social environment:* Political, economic and legal factors: e.g. disaster management frameworks and policies that do not address disability issues. Poor financial situation of a household with a person with a disability. Socio-cultural factors (attitudes of people, popular beliefs, discrimination): e.g. people with disabilities not having equal access to food distribution, shelter and livelihood opportunities.
- b) *Physical environment:* Natural environment: e.g. hilly area, cliffs. Built space: e.g. inaccessible shelters, inaccessible water and sanitation systems (WATSAN).
- c) *Inaccessible information and communication:* e.g. early warning systems that cannot be understood by people with disabilities.

Other areas that impact people with disabilities more than the general public: Age and Disability Consortium (2018) found that older people and people with disabilities who have difficulty eating or accessing food may be more at risk of micronutrient deficiencies. This can have severe consequences for their mental and physical health, their immune system and their functional abilities, and this risk can be exacerbated in emergencies, when food rich in micronutrients becomes less available and older people, children and adults with disabilities who need support to eat and drink may become separated from their families or caregivers. IASC (2007) also states that people with severe mental disabilities may wander, exposing themselves to hazards that most other people can avoid.

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Key websites

- Disability Inclusive Disaster Risk Reduction Network: <http://www.didrrn.net/>
- CBM: <https://www.cbm.org/>

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