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PSYCHOSOCIAL CONSEQUENCES OF DISASTERS

PREVENTION AND MANAGEMENT

DIVISION OF MENTAL HEALTH
WORLD HEALTH ORGANIZATION
GENEVA

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This document examines the taxonomy of disasters, their epidemiology and their psychosocial consequences. It goes on to describe techniques and strategies of psychosocial response to disasters, with an emphasis on the possible models of supervision and training by mental health professionals.

DIVISION OF MENTAL HEALTH
WORLD HEALTH ORGANIZATION
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INTRODUCTION

Background

UN General Assembly Resolution 42/169, adopted on 11 December 1987, designated the 1990s as a decade for natural disaster reduction: this resolution reminds its readers that natural disasters, such as those caused by earthquakes, windstorms, tsunamis, floods, landslides, volcanic eruptions, wildfires and other calamities, have killed about 3 million people worldwide over the past two decades, adversely affected the lives of at least 800 million more people, and resulted in immediate economic damage exceeding US$ 23 billion. "The smallest and poorest countries are affected most severely by natural disasters, and the poorest and most disadvantaged members of a disaster affected community are likely to experience the most serious consequences" (UNDRO, 1984). Therefore in the majority of developing countries, consequences of disasters, because of their severity and frequency, represent a real public health priority.

Several agencies of the United Nations have developed programmes which could help countries to be better prepared to cope with natural and man-made disasters. WHO is participating in this effort and has produced this document as part of its contribution to countries' preparedness, prevention and mitigation of the effects of disasters worldwide.

There are two United Nations Offices dealing specifically with matters related to disasters namely the UN Disaster Relief Co-ordinator's Office (UNDRO), which provided inputs into the development of this document, and the Office of the UN High Commissioner for Refugees (UNHCR). WHO is currently collaborating with UNHCR in the development of a manual on refugee mental health, with an emphasis on applications in refugee camps in developing countries.

Within WHO, the Division of Mental Health collaborates with the Division of Emergency Relief Operations, to provide a psychosocial input into the activities of the latter programme. The WHO Regional Office for the Americas (the Pan American Health Organization) is also very actively involved in this area and has produced a slide programme on Mental Health Management in Disaster Situations (in Spanish and English).

There has been a general tendency in the past to consider that the basic needs of the populations affected by a disaster were to be met essentially in terms of providing shelter, food, sanitation and immunization against epidemics. Their psychosocial needs were seen as something too secondary to attract the attention of relief agencies and relief workers. Over the last few years however, a different trend has become evident and there is now wide recognition of the fact that populations affected by a disaster have special psychosocial needs.

WHO's role in disasters has gradually shifted from providing emergency relief to incorporating also disaster preparedness, including involvement in training and in the assessment of possible future needs. One of WHO'S strategies for emergency preparedness and response is strengthening the national capacity to cope with disasters. WHO's target for the Eighth General Programme of Work, covering the years 1990-95, is that by 1995 "70% of all countries will have developed master plans appropriate to their particular circumstances to deal with the health aspects of emergency and disaster situations" (WHO, 1987). Since in many countries disasters, because of their frequency and severity, lead to adverse affects on mental wellbeing, these master plans should include a mental health component.

In general, the key activities for coping with disasters and disaster risks are essentially preparedness, which involves all actions designed to minimize loss of life and damage, and to prepare for timely and effective rescue, relief and rehabilitation should disaster strike; prevention, which may be described as measures designed to prevent phenomena from causing or resulting in disasters or other related emergency situations; and finally mitigation, which means reducing the effects of an extreme hazard on man and his environment once it has occurred.

The importance of preventive measures and preparedness, the integration of an emergency response within regular WHO programmes, and the linkage with development have been emphasized in the resolutions adopted by WHO in 1981 and 1985. Each of these aspects of coping with disasters should include consideration of the related psychosocial components. These can have an impact on people's behaviour before, during and after a disaster occurs, as well as being important in influencing the overall patterns of post-disaster morbidity.

Definition and description of disasters

Definition

A disaster is a severe disruption, ecological and psychosocial, which greatly exceeds the coping capacity of the affected community. However, what constitutes a disaster for one community might not necessarily do so for another. The difficulties of conceptualization arise because, "upwards a disaster is unlimited, downward one has to draw a line somewhere". In common daily usage, the term "disaster" refers to a great misfortune causing widespread damage and suffering. There is, however, no consensus on a scientific definition of the term: there are in fact more than 40 different definitions of disaster in the literature (Korver, 1987).

The disaster concept is a very complex, multi-dimensional phenomenon. An event may be a disaster along certain dimensions, such as ecological, economic, material, psychological or social, but not along all of these in any one event. Often the number of human lives lost is an important criterion for defining a disaster.

The definition may be dependent upon the event itself, or solely on the consequences of the event. The term disaster ordinarily emphasizes fast, destructive change. This may exclude permanent problems from the disaster definition, for instance famine in many parts of the world, even when the consequences of the starvation are disastrous. To declare an event a disaster may influence, among other things, the amount of help offered. The concept also has emotional and political implications.

Much of the confusion in defining a disaster is caused by the diverse interests of those dealing with the event, be it in medicine, sociology, political science or ecology. The definition adopted usually reflects the role of the organization using that specific definition.

From a psychosocial perspective, it is important to consider both the medical disaster definition (an emergency situation in which the victims are so numerous that the treatment needs far outweigh the resources available at the moment; here there is an immediate need to bring in extra resources) and the sociological.

Common elements to be considered in the conceptualization of disasters include:

1. A disaster disrupts the social structure and cannot be handled by the usual social mechanisms. This disruption may create more difficulties than the physical consequences (Quarantelli, 1980).

2. There are several important variables which can moderate the impact of disasters. These include, the ability of the victims to adjust psychologically, the capacity of the community structures to adapt to the crisis and the amount of help available.

3. The concept of disaster changes over time and among different cultures. Among some populations, especially in developing countries, a lengthy first-hand experience of coping with natural disasters has produced the creation of specific "disaster sub-cultures", which are likely to affect their pattern of psychosocial reactions to the disaster situation.

4. Since catastrophic events are frequent in many developing countries, this may raise the threshold for an event to be considered a disaster. Nevertheless this should not lead to a failure to recognize and respond to the adverse effects that may occur, even with repeated disasters; these effects may undermine the morale and resources of the community even further, and may lessen its capacity to adjust.

Taxonomy

There are many possible ways to classify disasters which may have important consequences with regard to the way people react and the types of help required.

From the prevention and preparedness viewpoint, the following classification is generally used:

Natural disasters - Earthquake, flood, cyclone, hurricane, tornado, landslides, volcanic eruption, drought.

Man-made disasters - Technological disasters such as toxic, chemical and nuclear accidents, dam collapse or transport accidents.

Man-made disasters are caused by human failures or accidents, or are due to violence or war. The feeling that someone is to blame may make it more difficult for victims to cope with the situation. However, a clear distinction between what is man-made and what is natural is sometimes impossible, because of the increasing effects of man's actions on the overall ecological balance or other human contributions.

For instance in an earthquake, the poor construction of buildings can contribute significantly to damage and loss of life. The failure of authorities to provide adequate warning of a "natural" danger can contribute to the loss of life and damage. Any rise in the level of the oceans due to pollution causing a "greenhouse" effect, may increase the likelihood of floods. Famine may strike certain parts of countries, not just because of drought and crop failure but also because of transport problems, hindering the movement of food. Bush fires may or may not be started by man. These examples are just a few amongst many possible ones that demonstrate the blurring that can exist between natural and man-made disasters.

The speed of occurrence is another important dimension to be considered in assessing disasters and their consequences on the affected population. Perhaps the most well known typology of disasters however, is that of Barton (1969). He suggested four main dimensions: scope of impact (geographical, number of people); speed of onset (sudden, gradual, chronic); duration of impact (e.g.repeated episodes); and social preparedness of the community.

A further important dimension has been added (Green, 1982) which refers to whether disasters are central or peripheral with respect to a geographic community. In one which happens to a group of people who have come together by chance (e.g.an airplane crash), survivors return to their respective geographic communities where the physical setting and social support networks are still intact. Such disasters could be considered geographically peripheral. An intermediate type, according to this dimension, would be one which occurs to a group of people within a community and, hence, affects the whole community in some sense, but where there still unaffected members of the community and the physical settings (homes, neighborhoods) remain unchanged.

The most central type of disaster would be one in which the whole physical and organizational structure of the community is changed (e.g.earthquake, floods, etc.), because homes are destroyed, people are relocated in different surroundings with strangers, etc. In this central type the traumatic aspects are not limited to the impact of the physical event itself, but may continue for a relatively long period of time and include many subsequent additional traumas, changes, and disruptions especially of a psychosocial kind, requiring further adjustments.

Transnational character of many disasters

Many disasters are transnational or international in their effects and impact. For instance nuclear or toxic accidents may have effects on many countries across frontiers and at considerable distances from the place where the event occurred. The nature of frontiers (legal, official, political) cannot prevent this, and there are many implications for disaster response. Similar problems may arise in international transport accidents such as air crashes.

An adequate response to such transcultural disasters has to be set up at the same transnational level. This means that international coordination by a specialized health agency such as WHO is indisputably needed in terms of preparedness and intervention programmes, in order to ensure consistent and uncontradictory responses in the various countries affected. Moreover WHO is in a special position to ensure a common scientific international language among the various researchers and clinicians active in the medical and psychological field. The adoption at an international level of the 10th Edition of the ICD is an important step in this direction (WHO, 1990).

Epidemiology of disasters and morbidity profiles of the affected populations

Estimates of the major disasters which occurred worldwide (excluding the United States) from 1900 up to 1988, indicate that, in these 9 decades, about 339 million people have been affected by floods, with a total of 36 million rendered homeless; 26 million have been affected by earthquakes, with similar numbers affected by typhoons and cyclones, creating another almost 10 million homeless people; finally, 3.5 million have been affected by hurricanes, resulting in 1.2 million people without homes. From 1970 to 1981, floods were the most frequent disaster, comprising more than one-third of all disasters occurring in that decade. Windstorms were the next most frequent disaster (one fourth of the total number), while earthquakes caused the greatest number of deaths and monetary loss.

The actual numbers killed in disasters is estimated to be some 3 or 4 times higher in developing countries than in the developed. The striking difference however is in the number of survivors who are affected, which is estimated to be some 40 times higher in the developing countries. One must presume that this indicates a massive psychosocial as well as physical need for this latter group.

The geographical distribution of disasters between developed and developing countries deserves attention, as there seems to be a relationship between the location of a disaster on the one hand, and the severity of its consequences on the other. Out of the 109 worst natural disasters which occurred between 1960 and 1987, as selected and studied by Berz (1989), 41 occurred in developing countries; however, the number of deaths caused among the affected populations was far greater in the developing countries (758.850 deaths in developing countries as compared to only 11.441 in developed countries).

In general the number of deaths and injuries and the amount of damage is closely related to the prevailing level of economic development. The UNDRO manual (1984) shows a list of disasters for the period 1960-81 resulting in the greatest numbers of people killed. All occurred in countries characterized by a low-income economy: Bangladesh (633.000 deaths), China (247.000 deaths), Nicaragua (106.000 deaths) and Ethiopia (103.000 deaths).

The extent of risk among many populations, especially in developing countries, has increased over the last few decades due to increasing population size, greater population density in vulnerable areas and the strong tendency of large populations towards urbanization. There has also been a concurrent increase in the magnitude of certain types of man-made disaster. Very little however is known about the stress-related disorders caused by such events, which represent an important area in need of investigation.

In disaster situations certain vulnerable groups tend to exist. High mortality may be seen among elderly people and young children. Children up to 2 years old may show lower mortality than their elder brothers or sisters, perhaps because parents protect their youngest children but cannot afford to help older ones. Pregnant or lactating women and persons already suffering from existing disease are also more vulnerable, as are the poor or certain minority groups who might for instance, have no choice but to live in flood-prone areas.

The morbidity: mortality ratio, as well as its relation to property destruction, is specific to each type of disaster. For example, in big earthquakes the ratio of morbidity: mortality is usually 3:1. Floods show high mortality rates but few injuries. Hurricanes cause fewer injuries and deaths, but great loss of property.

EPIDEMIOLOGY AND DESCRIPTION OF PSYCHOSOCIAL REACTIONS TO DISASTER

Historical perspective

The first systematic studies of the psychological and psychiatric consequences of a disaster were undertaken by Eduard Stierlin (1909) from Zurich who investigated 21 survivors of a mining disaster in 1906 and 135 persons two months after the earthquake in Messina in Italy in 1908. The history of traumatic neurosis in European medicine is well described by Fisher - Homberger (1975) who demonstrated that the understanding of the disorder during the 19th and early 20th century was very much influenced by political, military, economic and other factors, with an over-emphasis on an organic basis for traumatic neurosis. However, during World War I the psychological nature of the disorder was better understood.

During World War II, the study of how civilian populations reacted to disaster traumas was further advanced. The air raids against cities was the background for a series of valuable investigations carried out in England during the early war years. A striking finding was that the expectations of "mass neuroses" in a bombed civilian population did not occur. Unfortunately the war time psychiatric experiences have not been fully incorporated into the disaster literature, although psychosocial interventions in disasters have been influenced by insights gained during war, lately the Vietnam war. Among wartime psychiatric cases both stable as well as vulnerable personalities were found, but the latter did not recover within weeks as did the former. The military psychiatric experiences from World War II influenced civilian clinical practice with the introduction of the therapeutic community, group treatment, forward psychiatric treatment and crisis intervention.

Of special note is the Coconut Grove night club fire disaster in Boston in November 1942, which claimed the lives of 491 persons. This disaster has come to occupy a special position in disaster psychiatry because it represents one of the first systematic civilian studies on the acute psychological reactions in victims of physical injury, danger traumas and loss traumas (Lindemann, 1944). Until the 1970s however, the psychosocial disaster literature was periodic and unintegrated. Since the 1970s a rich literature, largely American and Australian, has been published. There is also important work in other languages (German, Russian, Spanish and French). As a research field, however, the study of the psychosocial consequences of disasters is still relatively untouched.

Phases of emotional reactions to disasters

Emotional reactions may be divided into the immediate experience during the disaster and those reactions occurring after the event, some of which may appear soon and others late.

A. The immediate experience

The immediate reactions reflect the most horrifying dimensions of disaster related to severe physical injury, exposure to extreme danger, witnessing death of close ones or mass deaths and injuries, traumatic experiences of helplessness, hopelessness, separations, and the need to choose between helping others or fighting for one's own survival. Maladaptive reactions during exposure to a disaster such as paralyzing anxiety, uncontrolled flight behaviour and group panic, may be incompatible with survival. In studies of disaster behaviour the individual's level of preparedness, disaster training and education have appeared as the most important determinants of a good outcome (Weisaeth, 1989). (Being able to cope in the immediate trauma situation also came out as a strong protector in terms of longer term psychiatric sequelae).

Panic is said to be rare in natural disasters, but in crowded areas like subways, trains and skyscrapers, disasters can evoke panic more easily. Health education programmes and previous training in simulated disaster situations can help affected populations to avoid panic and respond more appropriately.

B. Emotional reactions after the "event"

Many different emotional reactions may occur after a disaster. In the beginning many people feel numb, or even elated and relieved, often with strong positive feelings about having survived. Gradually however, the stress effects may show, although these reactions are usually relatively short-lived and may be considered a normal reaction to a traumatic experience.

Common post-disaster reactions include intense feeling of anxiety, which may be accompanied by "flashbacks" or intrusions and frightening memories of the experience. There may be nightmares, waking the person with panic. Any reminder may trigger these feelings, and the person may try to avoid all such reminders or to shut out feelings (avoidance response). Anxiety and intrusive memories or reexperiencing, especially of life threatening or gruesome encounters with death, may alternate with numbness and

avoidance. The affected person may also be highly aroused, as he or she is fearful and trying to protect himself or herself from a return of the frightening experience. Normally all these reactions settle over the first weeks. If however, these reactions are maintained at a high level and for more than a few weeks, they represent a post-traumatic stress disorder (PTSD). Occasionally the symptoms may not appear for several months or more. Spontaneous recovery occurs in the majority of cases but in a small proportion the conditions can last many years.

In silent toxic or nuclear disasters, when no impressive destructive event occurs, the external danger may be invisible and people are likely to focus on their physical health. Uncertainty and insecurity may create anxiety and fear reactions and their accompanying somatic symptoms may induce a false perception of being physically ill, resulting in pressure on somatic health services.

Epidemiology of psychological disorders following a disaster

As stated by Perry and Lindell (1978) and by UNDRO (1984), different views have been expressed by various authors about the extent of psychological disorders following a disaster. Some hold the position that disasters represent catastrophic events producing adverse psychological reactions among most victims, while others suggest that the extent of the problem has been overestimated, and that psychological problems due to the stressful event(s) appear only among people with a preexisting vulnerability. The latter view can be found especially in some of the sociological literature, mainly from the US. There may be certain reasons why this view has been put forward: (a) some of the disasters cited involved little loss of life and mainly involve material damage, (b) poor detection methods were used to find psychological disturbance.

There may be a tendency in some cases to dismiss certain severe psychological reactions to disaster as only "natural". It should be noted however that severe bruising and fractures may be quite "natural" reactions to a fall from a height, but this does not diminish the intensity of the suffering or obviate the need to help those affected.

Up to few years ago, little was known about the psychiatric epidemiology of disasters in developing countries. In fact with the exception of some recent work in the United States and Australia, very little is known of the true incidence of psychological traumas and related disturbances following disasters even in developed countries. Previous research was based on unsystematic clinical observations or crude indicators of psychiatric morbidity such as admissions to psychiatric hospitals (e.g.Ahearn, 1981). Only following disasters in recent

years in Colombia 1985, Mexico 1985 and Puerto Rico 1985, have systematic studies been carried out. They suggest that victims present marked and prolonged psychosocial problems whose prevalence is significant. Because of the often devastating physical impact which natural disasters have on populations living in developing countries and because of the scarcity of resources there, interventions have generally been confined to rescue and to the provision of basic medical care, with a corresponding neglect of psychological needs and related epidemiological research and intervention. Furthermore, the existence of some clear "disaster sub-cultures" among populations with lengthy experience in coping with natural disasters, especially in developing countries, makes it difficult to apply findings from research carried out among populations only exceptionally affected by a disaster". The different culture patterns, social structures, and coping behaviours may reasonably modify the incidence, the severity, and the psychosocial outcome, pointing to a need for specific research on these populations.

The specific behavioural pattern, characterized by a stunned, dazed, and apparently disengaged behaviour, called "disaster syndrome", has been described as a response to impact and immediate aftermath. It is said to occur in about 25% of those affected by disaster (Frederick, 1981; Raphael, 1986). On the other hand Duffy (1988) has stated that a "disaster syndrome", represented by the immediate post-disaster reaction, is present in up to 75% of victims during the first hours or days after the event. Anxiety or anxiety-related reactions are extremely common. They may continue from the high arousal that comes with impact or, more often, emerge after a latent period of a few hours or days. In different studies which employed the GHQ to assess the psychological status of the victims of the disaster, the percentage reacting over the first weeks as shown by the questionnaire score seems to vary from 70% or more to 20%, in large part correlating with the severity of the experience. Levels may remain high in the early weeks. Then, by 10 weeks, there is usually a significant drop with a gradual decrease continuing over the first year (Raphael, 1986).

Disturbances may carry over from the immediate disaster experience impact phase to the immediate post-disaster phase: for example in some industrial disasters studied, about 15% of the affected populations displayed the derealization/apathy symptoms of the disaster syndrome with absence of emotions, lack of response, inhibition of outward activity with stunned, shocked and dazed appearances. Disorganized flight behaviour is common, whereas brief psychotic reactions occur only in a small minority. The physical symptoms of anxiety and stress are more frequent. These symptoms are important in that they hamper the person's ability to carry out planned actions, and may become the starting point of a somatization process (which can be misinterpreted as physical injury, illness, toxic poisoning etc.).

According to Raphael (1986), psychological morbidity tends to affect some 30-40% of the disaster population within the first year following it. At two years, levels are generally less but with a persistent level of morbidity that seems to become chronic for some individuals and for some disasters. Disasters that are man-made and with high shock and destruction show persisting levels of over 30% severe impairment. Contrasting findings from different studies can be explained in terms of differences in sampling methods, methodologies, diagnostic categories, and types of disasters under study, as well as differences in interpretations of the same data. More specific evaluations of morbidity patterns have examined mortality, psychosomatic illness, mental health problems, physical symptomatology, consultation-based health care utilization, hospital admission and alcohol and drug usage. Mental health problems, as defined by a range of different measures, are shown as increased in systematic studies. The diagnostic inconsistencies among different studies and different research groups are especially important. The ICD-10 (WHO, 1990) provides a useful conceptual framework for clinicians and researchers active in this field, recognizing three main diagnostic categories of disorders caused by exceptionally stressful life events producing an acute stress reaction, or by a significant life change leading to continued unpleasant circumstances which result in an adjustment disorder. The four main diagnostic categories are: (i) acute stress reaction (F43.0); (ii) post-traumatic stress disorder (F43.1); (iii) adjustment disorder (F43.2); and (iv) enduring personality change after a catastrophic experience (F.62.0).

A recent thorough review has analyzed the relationship between disasters and subsequent psychopathology for 52 studies which used quantitative measures (Rubonis & Bickman, 1991). The authors examined relationships among four sets of variables: (a) the characteristics of the victim population, (b) the characteristics of the disaster, (c) the study methodology and (d) the type of psychopathology. In the studies examined, between 7 and 40% of all subjects showed some form of psychopathology. The type of psychopathology with the highest prevalence rate was general anxiety (almost 40% of the studied subjects), although its variability is also among the highest. Phobic symptoms (32%), psychosomatic symptoms (36%) and alcohol abuse (36%) appeared to show slightly lower levels of prevalence, with depression (26%) and drug abuse (23%) somewhat lower still. Using meta-analytic techniques, the authors showed that in these studies a positive relationship emerged between disaster occurrence and psychopathology, indicating an increase of approximately 17% in the prevalence rate of psychopathology (compared with a predisaster or control-group rate) as a result of a disaster. The number of female victims in the samples studied, the death rates, and the amount of time that had elapsed since the disaster, event were all directly related to the amount of psychopathology. Finally, higher impairment estimates were found for naturally caused disasters (e.g.volcanic eruptions) as

opposed to those caused, at least in part, by humans (e.g.nuclear accidents). This latter finding however contradicts much of the literature published so far.

The severity of the stressor (for example threat or loss) has been strongly correlated in all studies, with the severity of the pathology or reaction engendered, although other vulnerability factors are also important. The main clearly defined syndromes that appear following disasters are the PTSD, the survivor syndrome and the disaster bereavement syndrome. As regards the first, social withdrawal contributes most to impairment. An interesting finding from some studies is that irritability, anger and aggression increased over the four-year follow-up. Irritability is in fact, a very common reaction, and is perhaps especially so with "man-made" disasters in which a human agency can be blamed. Bereavement disorders, when chronic, are notoriously resistant to treatment.

Relationship between type of disaster and the type and severity of reactions

The severity of psychosocial reactions to a disaster will depend on many factors in the individual and the community. Where there is great loss of life there is likely to be much grief and perhaps disruption of family and community life. Loss of homes and property may destroy the sense of the community and create stress in association with the hardships. Where support is available and some meaning can be made of what has happened, and especially when there are opportunities for individuals and the community to be actually involved in their own recovery, the outcome is likely to be better. Where there is obvious blame, human negligence, malevolence or violence, and little support, the outcome is likely to be adverse. Similarly when there is little support or people feel helpless and unable to take charge of their own recovery, this also has a negative effect on the outcome.

Specific psychosocial consequences following disaster

Grief

For those people who have experienced significant loss, the emotional reactions which occur after the disaster are likely to be those of grief. There may be grief for the loss of loved ones, or home, treasured possessions, livelihood or community. The emotional reactions of grief include sadness, distress, anger and longing and yearning for what has been lost. The bereaved person may be preoccupied and miserable. Usually grief reactions diminish to some extent by 4-6 weeks, although stresses may complicate or prolong them and anniversaries may induce recurrences. For some of those who have suffered losses, grief may become chronic and the emotional reaction may intensify into severe depression.

Social pathology

Social pathology following a disaster has been investigated in only a few studies. Increases in alcohol and drug consumption have been described, while social withdrawal, particularly in association with numbing, can be the most frequent form of morbidity in interpersonal relationships. The prolonged stress of the aftermath, the preoccupation with painful memories or losses, or the disruption of home, family and community life and even work, may all adversely affect adjustment. Family conflicts and problems may occur. Children may be overprotected and sometimes family violence may result. For most families and individuals these problems are short lived and transitional, but for some they are delayed or become chronic. Others may respond to the challenge of the disaster and appear to show greater strength and coping, so that rather than social pathology or community breakdown, there may be enhanced social and community functioning.

Secondary psychosocial stressors

Certain specific stresses can arise in the wake of disasters, consequent upon social changes. These include the displacement of individuals to other geographical areas, housing people in camps, unemployment, inactivity and lack of recreational possibilities, the fostering of dependency in survivors, general disruption of the social fabric and the breakdown of traditional forms of social support. "Temporary camps" providing inadequate facilities, are known to house victims for years. Disruption of families can also have important psychosocial consequences upon the members and particularly on small children with no accompanying adults.

Vulnerability

When disaster is not followed by new and additional stressors, early prediction based on an evaluation of risk factors (risk situations, risk individuals and risk reactions) may be possible, thus allowing the health workers to concentrate their interventions on high risk cases.

An immediate adverse psychological response to trauma can be a predictor of PTSD. Thus screening instruments measuring the mental state shortly after a disaster can be used to identify risk cases. By combining this with individual risk factors (such as previous psychiatric impairment) and the intensity of disaster stress exposure, high predictive power has been achieved.

The results from longitudinal studies can be summarized as follows: after exposure to a brief disaster trauma, a person without marked premorbid vulnerabilities may experience the symptoms of a post-traumatic stress reaction but should be expected to gradually overcome and finally to recover completely from these symptoms, provided that the conditions are made favorable for rehabilitation, that qualified treatment is offered when needed and that the person is motivated to work with his problems. The majority of survivors who develop long-standing PTSD have been found to suffer from some kind of pre-morbid vulnerability.

Stress upon rescuers

There are two categories of rescuer: the non-professional and the professional. The stress upon the non-professional rescuers may resemble that on the victims, inasmuch as they may be caught up in the impact of the disaster. As volunteers or bystanders in the interim period before professional help arrives, they may suffer the terrible trauma of not being able to achieve success in their rescue attempt. Also for the professional, failure to be able to rescue victims, especially children, is a significant stressor, comparable only to the loss of a colleague. Even a professional rescuer, such as a fireman, may be overwhelmed by the scope of a big disaster as compared to an individual catastrophe. The available resources usually seem too small, creating feelings of powerlessness and of being terribly alone. As always, stress is better endured when experienced as an active participant rather than as a passive victim. In disasters affecting people one knows personally, such as in company and community disasters, rescuers especially need to adopt a very "professional attitude".

Exposure to death and dead bodies has been repeatedly identified as a major stressor following all such events. Children's bodies are the most toxic of exposures (Ursano, 1987). The psychosocial consequences on both survivors and rescuers of a large number of dead bodies also presents needs to be taken account of, and is probably best dealt with by having certain formal procedures laid down on how to deal with this situation. However, certain unnecessary "hygienic" measures reflecting people's fear of dead bodies, more than any actual health danger, can lead to considerable psychological distress in the survivors.