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INTRODUCTION

Disaster situations, i.e. cyclones, earthquakes, flash flood, severe drought, landslides, fire, chemical and nuclear mishaps, and other major industrial disasters have two dimensions: (a) a physical dimension and (b) a psychological dimension. Thus, in such situation not only physical infrastructure like railroads, roads, telecommunication lines, parks, schools, market places, places of worship, dwelling units, means of livelihood (e.g. live stocks) get damaged and devastated, but also devastated and ravaged is psychological fabric and wellbeing of individuals and community. The psychological ravage may vary from what is called "disaster syndrome (state of being stunned, dazed and apathetic) to severe psychotic disorders. It may, in some cases result in self-destruction by individual in form of suicide. All this entails that psychological support must be an integral part of planning, relief, rescue and rehabilitation efforts in disaster situations.

Though the immediate effect of such psychological emotions and stress are not visible as physical destruction, yet overcoming such psychological scare may take as much time and resource of the community and family as the physical rehabilitation

PSYCHOLOGICAL REACTIONS IN DISASTER (NORMAL)

People emotions and feeling in disaster situation may be categorized into two broad categories (i) Ordinary Cognitive, emotional, behavior and somatic reactions in extraordinary situations which are slightly deviate from the normal pattern of such reactions (called normal reactions), and (ii) Psychological distress reactions which overwhelm the coping capability of individual and community and which may affect the psychological wellbeing of people.

The common cognitive reactions in disaster situation include dreams and nightmares about the disaster; continuous reconstruction of disaster situation in mind; inability in concentrating and remembering things; questioning one's faith and religious beliefs; flooding of thought or memories with disaster episodes etc. The disaster situation also put resource and data limitation on human thought process.

It is well established fact that human performance is optimal under moderate level of anxiety. Disasters create high level of anxiety and stress rendering non-optimal conditions for utilization of resources of mind (called resource limitation of functions). Similarly, all kinds of relevant information necessary for taking optimal decision are not available to decision makers due to state of affairs, thus, there is obvious data limitation on cognitive function of decision makers.

The normal emotional reaction in disaster situation may include feeling numb, withdrawn or disoriented or experience uneasiness, anxiety and fear when disaster situations and things are revisited in mind, feeling of lack of enthusiasm and commitment, feeling of depression, feeling of sudden anger without warrant or on sight provocation, intense irritability or feeling of sense of emptiness,

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helplessness about the future. To summarize emotional chaotic feelings may broadly categorised as feeling of freezing or feeling of fighting.

Common behavioral response in disaster conditions may include being over protective of self and one's family, isolating oneself from others or seeking company of others to overcome the anxiety, showing alarm and startling response in ordinary conditions, problems in getting sleep or startling asleep; indulging in non-meaningful over activity to avoid thoughts related with disaster conditions, being tearful or crying. for no apparent reasons.

Normal schematic reactions may include insomnia, stomach aches, headaches, increased muscular tensions, increased heart beat and fluctuating body temperature. All this may worsen as sizes accumulate, even culminating in acute illness.

One significant finding emerging from studies of disasters is that few. If any, victims are left untouched by the experience either at the time of the event or later. The psychological consequences may persist for months, years, or even the duration of a victim's life.

It is clear that one cannot predict from a: person's usual level and style of functioning how he will respond to a disaster. In fact, emergency clinicians should be aware of the fact that psychiatric patients do not necessarily have more difficulty than other people coping with disaster.

One other crucial finding of disaster research is that although individual responses to disasters vary widely, they nonetheless conform to a consistent pattern over time.

PSYCHOLOGICAL DISTRESS REACTIONS IN DISASTER

These common intellectual, emotional behavioral and somatic reactions are modulated by coping capabilities of the individual which in turn, are a complex mechanism conditioned primarily by experience of one's developmental process. Usually, developmental experience which nurtures strong belief and philosophical orientation to life may help people cope better in disaster conditions. A large number of people, over the time with a little help of family and friends do overcome these reactions. But some people are not able to cope with the disaster situations and they show symptoms of various psychological distress ranging from mild neurotic reactions to severely incapacitating psychotic reasons.

The major neurotic symptoms which can be noticed in a disaster conditions in a community are :

1. Anxiety neurosis: Anxiety is felt in so many situations that it appears to be free-floating and diffuse without any specific cause even often disaster might have been a long past.

2. Phobic neurosis: Extreme and irrational fear and avoidance of an object or situation which might have happen to related to disaster. For example, people ran away from the vicinity of Kandla Port in 1999 when they heard that a cyclonic depression is forming over Arabian Sea because their tragic experience with earlier cyclone.

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3. Obsessive neurosis: Flooding of mind with persistant and uncomfortable thoughts. For example, people in earthquake hit area often report that they have feeling of earth shaking again.

4. Depressive neurosis : Abnormally prolonged dejection associated with inner conflict or personal loss.

Psycho-Somatic disorder are reaction that represent the visceral expression of affect which may be long prevented from by consciousness. These disorders may include common cold, Rhenitis (congestion of the nasal mucous membrane and blood vessels of the eyes), bronchial asthama, cardiovascular disorders, peptic ulcer, loss of appetite etc.

Disaster situations are characterized by scarcity of resources of day-to-day use. Such scarcity may result in psycho-pathic behaviour (e.g. abduction of responsibility, heartlessness, insincerity, incapacity for love and attachment, lack of empathy etc.) even in normal person. Such behaviour has to be stopped by intervention of significant other groups i.e. Police, NGOs, Psychologists, family and friends etc. because conditioning of such behaviour has high cost for community.

In extreme cases, a significant portion of people residing in disaster affected area may even show psychotic disorders i.e. schizophrenia (a disorder marked by delusions, hallucinations, expression of extreme inappropriate emotional response, and disturb behaviour which may include regression and withdrawal); manic depression (retardation of thought, pervading feeling of sadness, sleep disturbances, retarded motor actions or abnormal elation of mind; hyper activity etc.), and even in some cases suicide may also be committed by people to get out of their "meaningless existence or cumbersome life."

PSYCHOGICAL SUPPORT

Both normal and psychological distress reactions in the disaster need psychological support so that people showing normal reaction under disaster condition may quickly get into the normal way of thought and action as exhibited by them in day to day life and people with high degree of psychological distress may be calmed. With the help of psychological professional such psychological disturb people can be assimilated in the community life. Psychological support can be defined as the psycho-social help any one can give to other people in stressful, critical, traumatic or life threatening situation. This support must be client centered i.e. showing respect for person, active listening, taking care of the person and talking to person in such a way where he feel assured while walking through or exploring painful experience associated with disaster. Thus psychological support can be provided by almost any one able to feel and show concern and empathy by understanding the experiences of those affected by the disaster. The need in such cases are considerate and empathatic listening and behaviour so that victim feel assured about talking about disaster and gradually he overcomes feeling and trauma associated with such situation. Friends and family can provide most valuable kind of psychological support in cases of normal reactions. But in cases of acute psychological distress, the person has to be looked and treated by clinical psychologist or psychiatrist as the case happen to be.

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Figure1 – Psychological reaction to Disaster situations and Psychological Support System

Figure-1 presents reactions to disaster situations and kind of psychological support which may be provided in such situations. As can be seen from the Figure-1 for normal reactions, support from family and friends might be sufficient to come out of normal reactions to disaster situation to day-today normal way of thought and action. Similarly, mild form of neurotic behaviour and and psychopathic reactions may be tackled at the level of family, friends, NGOs and social support group or psychologist. Psychological distress resulting in psycho-somatic or psychologist/psychiatrists. These conditions may even require hospitalisation of persons affected by such psychological distress.

PSYCHOLOGICAL WELL-BEING OF RESCUE AND RELIEF WORKER

Another essential dimension of psychological support in disaster situation is need for psychological help to rescue and relief worker. In disaster conditions, workers engaged in rescue and relief works are called upon to work for long hours without food and rest to mitigate the suffering of the

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community. Such stressful situations may sometime, threaten the well being of the rescue and relief worker. In such circumstances, the scene managers i.e. politicians, beaurocrats, police officials etc. must be sensitized to stress being faced by rescue and relief workers so that they can relieve any worker on the brink of nervous breakdown.

PSYCHO-PHYSIOLOGICAL REACTION TO STRESS

Here, it would not be out of place to discuss the psycho-physiological dimensions involved in stress in some detail. People in stress situation show general adaptation syndrome (GAS) which consists of three stages (i) Stage of alarm; (ii) Stage of resistance and (iii) stage of exhaustion.

Alarm reaction is essentially a biological defense mechanism. It has two phases. First, an initial phase of disorganized shock and second in which organism counters the shock by attempting to restore the homeostatic balance, primarily by release of hormone adrenaline.

In stage of resistance, the persons continued attempt to restore psychological balance is generally successful and an adequate adaptation to stress situation does happen.

In exhaustion stage, the person is not able to maintain the homeostatic balance due to addition of certain new stress or person coping capability giving way because of lack of psychological support. The person in such situation ends up fighting stress or and he is not able to retain homeostatic balance. The person may in such cases surrender to illness (physical as well as psychological) or in some cases death may also result.

This general reaction to stress clearly shows how critical is psychological support for people in disaster situation. Such psychological support in disaster situations help people in adaptation to stress, thereby, arresting their reaction to stage two (resistance stage) of GAS. Such support also help in restoration of homeostatic balance of the person. To conclude, we may say that disasters are characterized by asymmetry and non-linearity. In such situation, physical as well as psychological support system of the community is suddenly uprooted. The psychological well being of the individual in such abnormal situation is product of individuals coping capabilities and psychological support provided by the significant ones.

THE HUMAN RESPONSE: BIO-PSYCHO-SOCIAL MODEL

It is important for anyone working with adults who have been through a disaster to understand how the whole individual is being affected. This means that a disaster does not affect only a person's mind and emotions, but also other aspects of their health and functioning.

The human response to disaster occurs simultaneously on three different but related dimensions: biological, psychological, and social. These three dimensions comprise what is known as the **Bio-Psycho-Social Model**. These three aspects of human functioning can be compared to the three legs of a stool.

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PHASES OF DISASTER – EMOTIONAL POINT OF VIEW

Emotional reactions to disasters have predictable patterns according to some researchers. Starting from left to right, this graph illustrates the general progression of the disaster effects and reactions on communities. six stages of emotional highs and lows are *pre-disaster*, *impact*, *heroic*, *honeymoon*, *disillusionment* and *reconstruction*

Pre-Disaster Phase:

The amount of warning a community receives varies by the type of disaster. Perceived threat varies depending on many factors.

Impact Phase:

The greater the scope, community destruction, and personal losses associated with the disaster, the greater the psychosocial effects.

Heroic Phase:

This phase is characterized by high altruism (unselfishness) among both survivors and emergency responders. Emergency responders actively begin search and rescue missions, direct assistance to people, and resources begin arriving. During this phase people struggle to stay alive. Goal is to prevent loss of lives and to minimize property damage.

Honeymoon Phase:

Here survivors feel a short-lived sense of optimism. May last from two weeks to two months. These massive relief efforts enhance the morale of survivors, and people are appreciative of that help. Survivors hope things will recover quickly and life will return to normal.

Disillusionment Phase:

Over time, survivors go through an inventory process where they recognize the limits of available disaster assistance. Optimism fades, as the realization of what happens begins to settle in, and disappointment, resentment, anger and frustration become evident. This leads into the Disillusionment Phase where survivors are coming to grips with reality of their situation. This phase may last from several months to a year or more. Certain trigger events, such as the anniversary of the disaster, can prompt survivors to re-experience negative emotions related to the disaster.

Reconstruction Phase:

Gradually, the emergency responders leave, and people start to assimilate the shock of what has happened and begin to reconcile themselves to the "new reality." Survivors experience setbacks and work through their grief, eventually readjusting to their new surrounding and situations. People realize that they must do for themselves and grief and anger is gradually replaced by acceptance. No miracles happen. Those left in place will have to solve problems and rebuild their shattered lives. It

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is a process that will continue for several years as the "new normal" functioning is gradually reestablished.

Coping with Disasters

Coping can be thought of in various ways. One way is as an "ego process" that operates to reduce emotional tension, but here we're equating "coping" with "mastery" over a stressful situation (Folkman and Lazarus 1980). Others consider coping as a "trait" (Conway & Terry, 1992), but people don't respond identically to all stressful life events. Finally, coping can be seen as an interaction between how a person sizes up an event as impacting their decision-making.



Adapted from Zunin & Myers as cited in DeWolfe, D. J., 2000. Training manual for mental health and human service workers in major disasters (2nd ed., HHS Publication No. ADM 90-538). Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services.

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