

Basic mental health content 2

OVERVIEW OF CHAPTER

- Description:** Introduces “building-block” knowledge to guide post-disaster intervention
- Purpose:** To present the basic content for understanding survivor reactions and formulating post-disaster interventions.
- Content:** Basic concepts of mental health:
- Stressor/stress reactions
 - Coping and adaptation
 - Loss and mourning
 - Social support
 - Crisis response and resolution
- Learning Objectives:**
- To identify theories of stressor/stress response, coping and adaptation, loss and mourning, social support systems, and crisis response and resolution.
 - To identify basic building blocks of knowledge to guide post-disaster intervention.
 - To acquire the knowledge needed to recognize survivors' reactions and formulate post-disaster interventions.

STRESS/STRESSOR RESPONSE

This chapter is designed to convey knowledge about stressor/stress response, coping and adaptation, loss and mourning, social support systems, and crisis response and resolution. This body of knowledge is presented in a concise and summarized manner, bearing in mind that crisis teams work in emergency situations and face time constraints, both for training and post-disaster operations.

Stressors	Events or situations that elicit physical or psychosocial reactions in a particular individual under specific conditions (trauma).
Reactions	Biological or psychosocial responses of an individual to a stressor, which vary in intensity, effectiveness, and appropriateness of responses.
Effects of Stress	Physical or psychosocial results and cumulative consequences of the reaction; some are positive or favorable.

Reactions to stressful events depend on the characteristics of the events, individuals' resources, the task required, and the characteristics of the social environment. The outcome may result in growth, temporary difficulty, and/or psychopathology, depending on the pervasiveness and persistence of the stressor. In general, the stress system may be viewed as fluctuating, open-ended, dynamic, and changing constantly.

Further, the outcome of a stressful event may be exacerbated by many life events, including:

- life timing,
- reactive resources,
- support systems,
- opportunity or ability to act on the environment,
- meaning or symbolism attached to the experience, and
- interpretation of the situation.

Stress can relate to a person's psychophysical condition at a specific point in time. A variety of environmental stimuli can produce stress, and different individuals respond differently to the same stimuli.

Some people appear immune to stressors, while others are particularly vulnerable to the conditions that produce personal disequilibrium. Stress states produce psychobiological responses of varying lengths that are determined by the number, frequency, intensity, duration, and priority of the demands placed on the coping system of an individual reacting to a traumatic event.

Specifically, an individual's reactions to stress vary, depending on the:

- context (level of trauma),
- force of the stressor (trauma),
- individual's health status,
- types of support systems in the community,
- family network, and
- habitual patterns of human interaction.

Stress responses are manifested by specific symptoms consisting of changes in the biological system that have been induced by a group of stimuli or stressors. Using the notion of life preservation as a regulatory system within the body, stress can be viewed as an outcome of the drive for self-preservation when one is impacted by external events.

The theory of equilibrium views stress as related to cognitive processes. When an individual faces a threat, he/she appraises what has happened. When an individual anticipates psychological or physical harm, the stress response increases and may immobilize the individual or cause feelings of hopelessness expressed as helplessness.

Researchers have described stress as the outcome of disrupting customary activities. The source of that disruption may be antecedent, mediating, or intervening factors. These factors, which act to increase or decrease stress, consist of prior events (stressors) that have not been fully resolved, internal and external constraints, affective cognitive processes, and the individual's social expectations and supports.

Social and psychological characteristics are modifiers that define the context in which the stressor-reaction-consequence sequence occurs and produces individual variation in the reactions sequence. Social support systems facilitate the development of coping strategies that help people keep distress within tolerable limits, maintain self-esteem, preserve interpersonal relationships, and meet the requirements of new situations by rehearsal.

■ COPING AND ADAPTATION

Coping

Behavior that protects the individual from internal and external stresses; coping behavior implies adaptation, defense, and mastery.

Another interrelated concept that helps to explain disaster behavior is coping and adaptation. This section will review the meaning of coping, the interrelationship of coping to stress and socioemotional support systems, and the elements of coping behavior directed toward adaptation.

Coping behavior protects us from becoming psychologically and physiologically disorganized. Coping usually incorporates action-oriented behavior responses, as well as cognitive, emotional, and perceptual appraisal processes. In coping, the individual may attempt to change the source of the stress or redefine the threat situation in terms of meaning or degree of severity. The individual also attempts to find an accommodation and compromise, such as passive acceptance, resignation, religious believe, or belief in destiny.

Protection behavior usually takes three paths:

1. Altering the conditions that are producing painful stress responses.

Example:

"Dr. Brown, if you insist that I remain in the hospital for a few more hours, I will follow your advice, even though I believe that I should go and check my home to see what the hurricane did to it."

2. Redefining the meaning of the stress-producing experience to downgrade its significance.

Example:

"We were lucky that no one in our family died and only a few members were injured when the roof fell in." Or, "It was lucky that the earthquake was at 4:30 a.m. when the highways were empty."

3. Manipulating the emotional consequences in order to place them within manageable bounds.

Example:

"I am ashamed to complain about my damaged home when others lost so much more."

■ COPING MECHANISMS

Coping is behavior that is designed to prevent, delay, avoid, or manage tension and stress. Coping is not unusual or rare behavior; in fact, all individuals employ coping at some time.

Most individuals learn individualized ways of dealing with stress. Although these ways vary, coping methods usually follow a pattern of:

- avoidance,
- alteration.

- management,
- prevention, and
- control of undue emotional expression.

Coping mechanisms may take three different forms:

1. The individual may attempt to change the source of strain or stress. This action presumes knowledge and perception of its causes. Attention is focused on changing the situation before strain or stress occurs. The aim of this strategy is to avoid a threatening situation.

Example:

"It is time for us to leave the house now."

2. The individual may attempt to redefine the situation so as to control the degree of stress and lessen or buffer its impact. Redefinition is a means of managing the significance and gravity of the problem situation. Cognition and perception are important in this process. Redefinition allows the individual to say that the problem situation is not important enough to be upset about. This may be done by making comparisons and then concluding that things could be worse or by selectively ignoring the negative aspects and emphasizing the positive.

Example:

"This storm appears to be diminishing in force and will not do extensive damage."

3. Coping responses may attempt to manage stress so the individual can continue to function as normally as possible. This action is essentially an effort to keep stress within controllable boundaries and bring about an adjustment to stress without being overwhelmed by it. This involves a variety of responses, including denial, withdrawal, passive acceptance, undue optimism, avoidance, or even magical thinking.

Example:

"Dr. Ross, as soon as the cast is dry, I think I can start helping other injured people. I always like to feel useful."

Coping accomplishes the following:

- Containment of the distress within limits that are personally tolerable,
- Maintenance of self-esteem,
- Preservation of interpersonal relationships, and
- Acceptance of the conditions of the new circumstances.

Positive Coping Skills

- Ability to orient oneself rapidly
- Planning of decisive action
- Mobilization of emergency problem-solving mechanisms
- Appropriate use of assistance resources
- Ability to deal simultaneously with the affective dimensions of the experience and the tasks that must be carried out
- Appropriate expression of painful emotions
- Acknowledgement of pain, without obsessing over troubled feelings
- Development of strategies to convert uncertainty into manageable risk
- Acknowledgement of increased dependency needs and seeking, receiving, and using assistance
- Tolerance of uncertainty without resorting to impulsive action
- Reaction to environmental challenges and recognition of their positive value for growth
- Use of non-destructive defenses and modes of tension relief to cope with anxiety

Coping is the behavioral response to stress and strain that serves to protect the individual from an incapacitating emotional overload.

Overwhelming stress is always associated with crisis and is the emotional discomfort felt by individuals experiencing persistent problems or undue demands. It emanates from unusual, uncommon, or unexpected pressures, such as the fear of undergoing surgery or the impact of a natural disaster. Associated with a particular event or situation, stress differs from anxiety or depression, both of which are also reactions to traumatic events.

Negative Coping Skills

- Excessive denial, withdrawal, retreat, avoidance
- Frequent use of fantasy, poor reality testing
- Impulsive behavior
- Venting rage on weaker individuals and creating scapegoats
- Over-dependent, clinging, counter-dependent behavior
- Inability to evoke caring feelings from others
- Emotional suppression, leading to "hopeless-helpless-giving up" syndrome
- Use of hyperritualistic behavior with no purpose
- Fatigue and poor regulation of rest-work cycle
- Addiction
- Inability to use support systems

Coping is intertwined with one's social and emotional resources. It is made easier, or it is hampered and prevented, by the nature of the individual's social matrix. This matrix may include the network of interpersonal relationships with family, friends, neighbors, co-workers, and small group associations. It is to this social system that the individual turns first when seeking support, understanding, or aid in problem resolution.

Coping also depends on the individual's emotional or psychological tools, including personal characteristics and individual strengths and weaknesses. These resources include the individual's ability to communicate a sense of self-esteem and a capacity for bearing discomfort without disorganization or despair.

Communication skills facilitate expression of the problem and provide the means for seeking help to resolve it. Self-esteem refers to the individual's positive feelings toward him/herself; its absence would indicate low self-image.

Coping strategies use a set of complex patterns of thinking and behavior to provide adequate responses to a situation so that the internal responses do not continue to be painful. If an individual is unable to achieve this objective, the response can be detrimental.

LOSS AND MOURNING

Loss, mourning, and grief reactions are concepts of particular use in disaster work. Although a discussion of loss usually focuses on death, losses resulting from a disaster may also include:

- property destruction,
- sudden unemployment, and
- impaired physical, social, or psychological processes.

THE POST-DISASTER MOURNING PROCESS

Grief is a natural, reflexive, psychological response that begins in childhood following a loss of any kind. Grief is part of the process of healing that depends on the depth and character of the loss, as well as the condition of the person.

Mourning and grieving	The reaction produced by loss, especially the death of an important individual or symbolic objects in a person's emotional life.
------------------------------	--

Barriers that impede the process of grieving and mourning include:

- Unmet basic needs during childhood;
- Multiple previous losses;

- Nature of the relationship with the person who is gone, such as ambivalence, over-dependency, or unresolved conflicts;
- Circumstances of the sudden loss, such as whether it was brutal or whether the body is unrecoverable;
- Cultural values, such as “stiff upper lip and no crying.”

Many professionals have pointed out that disaster survivors go through a five-step process of mourning:

1. Denial
2. Rage/anger
3. Bargaining
4. Depression
5. Acceptance/resignation

These five stages do not always occur, nor do they always appear in a specific order. The stages and their order are strongly influenced by an individual's total personality and philosophy of life. Therapeutic intervention helps the mourner move through the process if he/she is “stuck” at one stage or has difficulty achieving resignation.

The processes of mourning, grieving, and bereavement involve cognitive elements that are frequently expressed as physical or psychological symptoms. The process begins with recognition and awareness of the loss. The individual needs to come to grips with reality in emotional as well as intellectual terms. When only an intellectual acceptance of loss occurs, the chance of emotional maladaptation increases.

The process of grieving takes a person from shock through acute distress to resignation. Along the way, the individual may suffer physical discomfort, susceptibility to illness, withdrawal into apathy, or increased hostility toward others, and he/she may become totally isolated.

A predominant reaction is a strong defense of denial; that is, survivors appear to be preoccupied with activities or conversations that do not include mentioning the loss. This delayed reaction appears to facilitate coping with uncontrollable emotions.

To understand the role of bereavement, it is important to look at the quality of the personal relationships that have been severed. A high percentage of survivors cannot move beyond the hopeless, “giving-up” stage. This, in turn, is associated with different levels of depression, including interference with all the decision-making functions necessary for survivors to reorganize their lives. Because of this inability to deal with all the human and bureaucratic interactions necessary to obtain relief resources from agencies, the crisis feelings intensify. The continuation and intensification of survivors' apprehension about the crisis stimulates a circular down-spiral, leading to a lack of energy, depression, passivity, loss of self-esteem, and helpless behavior.

Ultimately, the way a survivor deals with problems during a period of emotional stress influences whether he/she emerges from the crisis with increased susceptibility to mental distress or an increased likelihood of improved coping capacity after the disaster.

■ SOCIAL SUPPORT SYSTEMS

Social network/ support system	The group of individuals who influence each other's lives by fulfilling specific human needs. For the individual, the social network often provides respect, approval, and self-definition. The linkages in a social network of supports depend upon the type and quality of communication among members.
Emotional resources	The ability to draw on past experience to deal with the stress of a problem and resolve it. Emotional resources enable a person to withstand the pressures of stress, anxiety, and depressive feelings and to have the confidence to set goals and take effective action. When these resources are not sufficient to withstand tension, the individual may succumb to stress and express nonadaptive behaviors.
Social resources	The sum total of an individual's relationships, which form a network of social linkages or interrelationships with other individuals and groups and enable the individual to identify and enlist sources of emotional reassurance.

The social and emotional resources of a disaster survivor are related to past experiences of stress and crisis, loss and mourning, and coping and adaptation. The individual's emotional and social support network will greatly influence how effectively he/she overcomes a disaster experience. For this reason, the post-disaster worker must be keenly aware of the types of social and emotional resources available to survivors. This awareness allows the worker to help link the survivor to the social matrix and increase his/her ability to cope with disaster stress responses.

Traditional, stable, and structured social groups tend to promote strong bonds, and thus help protect their members against post-crisis pathological outcomes. However, this infrastructure may be impaired or disappear in major disasters. Workers who provide assistance post-disaster must be alert to the existence of social and emotional support systems and their use by disaster survivors.

Studies have shown that successful coping by disaster survivors is often directly related to the use of support systems. Immediately after a calamity, individuals who rely primarily on their linkages to relatives and close friends and less so upon neighbors and formal or volunteer organizations generally are able to deal effectively with the stresses of the catastrophe. Even years later, these disaster survivors have stronger ties to their social support system than before the catastrophe.

In dealing with a stressful event, an individual usually first calls upon a reserve of internal emotional mechanisms to resolve the problem at hand. When personal mobilization fails, the individual then uses the supports of a social network. This

coping strategy, which relies first on personal and then on social resources, is the generalized pattern for most individuals.

However, people who are overwhelmed with severe stress will often tend to rely first on social resources. If they fail, they employ their own emotional resources, limited as they may be under the circumstances; as a result, they may withdraw, express helplessness, and isolate themselves.

Clearly, the quality of one's social network and the sociocultural context of the individual acting within it are significant determinants of coping behavior. The social network may be a major force in maintaining certain forms of behavior or an important factor in determining the degree and direction of change. In either case, the network of relationships in the disaster setting may provide the support to change or not to change, and it may facilitate efforts to adapt or not to adapt, depending on the social and cultural values at work in the situation.

In times of stress, individuals may use both formal and informal support systems to help them manage their problems. Group affiliation as a means of developing one's social support network is necessary when individuals have been displaced, relocated, or have suffered severe isolation. This network provides the individual with information, advice, protection, and reinforcement of individuality and worth.

■ CRISIS RESPONSE AND RESOLUTION

Crisis A crucial period or turning point in a person's life that has both physical and emotional consequences. A crisis is a time-limited period of psychological disequilibrium, precipitated by a sudden and significant change in an individual's life situation. This change results in demand for internal adjustments and the use of external adaptation mechanisms that are temporarily beyond the individual's capacity.

■ CRISIS THEORY

The crisis model has considerable significance for post-disaster workers. The model conveys an understanding that certain life events produce a loss of habitual modes of behavior due to the personal turmoil, tension, and emotional upset that accompany stress response. The model also identifies crucial periods when an individual is faced with ongoing decisions that have long-term implications for subsequent life styles and levels of adjustment.

Individuals will give different meaning to an event depending on:

- their perception of what has occurred;
- their past experience with hazardous events; and
- their success or lack of success in managing its impact.

Consequently, a crisis will differ depending upon the people or society involved. Some groups will define a certain event as producing crisis, while others will not.

The final phase of crisis involves finding appropriate defenses and ways to master painful feelings during a period of turmoil. This process of reconstitution involves marshaling personal and social resources in the search for equilibrium and effective functioning. Individual activation of the skills that are necessary to cope emerge during this final phase.

In coping with a crisis, an individual may attempt to:

- change, reduce, or modify a problem;
- devalue an event by seeking satisfaction elsewhere; or
- become resigned to what has happened and then attempt to manage the resulting stress.

The individual in crisis may be seen as affected by an interplay of dynamic changes, which, in turn, are continuously influenced by natural, biopsychic mechanisms designed to bring about a state of balance and personal equilibrium. There are both inputs and outputs of energy and information into the system.

The essential point of crisis is that the intensity of the energy exceeds the capacity of the organism to adjust and adapt. The individual is overwhelmed and the system goes into a state of disturbed biologic rhythms and temporary disorganization.

The severe fluctuation of an individual in the face of a crisis event is associated with the disorganization of psychological and somatic systems. The consequences of this fluctuation include severe personal tension and stress. The imbalance may be induced by such events as the death of a loved one, loss of income or property, illness, relocation, or other important personal factors.

As a secondary consequence, changes in role patterns and in usual or expected behaviors often produce problems in interpersonal relationships. As these changes occur, the individual tends to develop new patterns and behaviors to manage stress and therefore diminish discomfort and pain.

The stress response is likely to produce a pathological outcome if it is severe and/or prolonged. If the combination of events that encompass the experience of the disaster are prolonged or severe, the survivor may develop problematic psychological or behavioral mechanisms to cope with the situation.

Crisis theory is based on the following assumptions:

Assumption:

Disasters are stressors that produce an impact on survivors, resulting in a crisis situation that affects biological, psychological, social, and behavior systems.

Assumption:

Integration and synthesis of complex phenomenology data allows the development of a comprehensive formulation that conceptualizes the situation of the survivor at a specific point in time after the disaster. This clarifies the situation for the post-disaster worker and makes it possible to develop a psychological intervention.

Assumption:

At the moment of impact, a survivor's behavior will depend on prior life factors and the survivor's interpretation and definition of the threatening event.

Assumption:

To understand the individual in stress, it is necessary to look specifically at the chief complaints and the presenting problems of the survivor, the relationship of those presenting problems to precipitating factors, and a description of relevant prior life events as part of the assessment and indications for crisis intervention.

The initial impact of a stressor may produce a level of stress stimulated by:

- type and duration of the disaster;
- degree of loss;
- survivor's role, coping skills, and support systems; and
- survivor's perception and interpretation of the catastrophe.

These reactions represent different stages of the crisis resolution process and follow several developmental phases. These disaster-produced reactions may also be influenced by other random environmental events of a traumatizing nature, such as failure of bureaucratic reconstructive efforts and other disappointments, which have been called the "second disaster."

■ ORGANIZING PRINCIPLES FOR UNDERSTANDING CRISIS

Survivors whose lives have suddenly been disrupted by a disaster, and who may also be receiving help to heal physical traumas, must develop a coping behavior. Psychological observation and interviewing techniques can be used to understand this set of behaviors and to evaluate the degree of distress in order to offer assistance and support.

Through observation and interviewing, the disaster worker can identify the following:

- Individual personality traits;
- Type of historical events that have influenced the individual's level of development;

- Survivor's usual coping mechanisms and available methods to deal with the crisis when confronted with physical and psychological trauma;
- History of the disaster and how it physically impacted and personally affected the individual.
- The survivor's reactive behavior and personality skills for adapting to the new post-disaster situation.
- Social and post-disaster support system available to the survivor and use of those resources to support healing and recovery.
- Level of support of the medical/social matrix as measured by the degree of community organization versus the disorganization of both the official emergency unit and the disaster assistance agencies.
- The social balance between the availability of support systems resources and the intensity of the stressors, adding further difficulties in obtaining adequate medical and psychological aid.

All of these variables influence the balance between adaptive and non-adaptive behavior and may heighten the vulnerability of survivors and their specific needs before psychological equilibrium can be regained. They will determine the interactive set of responses that influence the course of crisis resolution as they interact with the disaster conditions.

Survivors first call on their own personality skills to adapt. If they are unable to deal with the multiple events occasioned by the catastrophe, they next try to access sources of support in an effort to gain assistance from emergency personnel. If these resources are unavailable or inadequate to meet the life event demands produced by the disaster, the survivors may turn to their culturally provided beliefs, values, and symbols. In post-disaster behavior, many survivors take advantage of all available resources simultaneously and in a complementary manner.

As hours go by in the aftermath of a disaster, some survivors are not able to cope with their problems and continue to express anxiety, apathy, anger, nightmares, insomnia, and difficulty in interpersonal relationships. At some point in the survivor's crisis resolution behavior, the worker will encounter a juncture that will lead either to a healthy or a pathological endpoint. The crisis worker needs to acquire the skills and the knowledge to assess the situation and bring to bear therapeutic intervention procedures that will support and guide the survivors toward achieving the best potential outcome in the situation. This objective necessitates planning logistics and training crisis counseling personnel.

Crisis personnel may also be exposed to post-disaster stress and express emotional problems in the aftermath of a disaster. Relatives of survivors, medical professionals, and disaster relief workers are all vulnerable to the consequences of post-disaster stress. Crisis workers may expect emotional problems from the impact of a natural catastrophe, including reactions such as fear, shock, psychic numbing, anxiety, depression and psychosomatic complaints.

■ EMOTIONAL REACTIONS

It has been recognized that several stages of crisis resolution occur following a disaster. These stages overlap, and survivors may go back and forth with no clear distinction between stages. This emotional vacillation is a normal reaction in survivors experiencing stress responses, and their emotional state may fluctuate for some time.

In the early period, the survivor may deny the reality of the situation or the physical impact of the trauma. A survivor may verbalize acceptance of what has happened or even admit being grateful that it was not worse. This lack of emotional reaction to the reality of discomfort or change signals a need to defend him/herself from fully registering the consequences of the trauma. The level of accommodation to all the manipulations necessary for medical intervention may vary from mild complaints to exaggerated complaints to feigned unconcern.

As the survivor allows the reality of the new situation to sink in, a new set of symptoms may appear:

- Episodes of strong emotional reaction that will overwhelm the denial defense;
- Restlessness, anxiety, extreme talkativeness or reluctance to talk, passive resistance to medical advice, sudden brief episodes of irritation or signs of frustration;
- A helpless, indecisive reaction to orders;
- Evidence of psychic disorganization, with the passage of time and according to the degree of somatic trauma,;
- Episodes of fear, mood swings without crying episodes, and resentment of minor demands made by the emergency professionals.

An important type of behavior described as “survivor’s guilt” needs to be monitored. This behavior is defined as the ambivalent feelings of being happy to be alive, while at the same time feeling guilty about being alive when others have died or suffered worse injuries. This behavior can be antecedent to feelings of depression or paranoid ideation, and it can be the precursor of paranoid clinical depression.

Post-traumatic stress disorder

Psychic trauma is a process initiated by a catastrophic event that confronts an individual and presents an acute, overwhelming threat to survival. When the event occurs, the central nervous system loses the capacity to control the disorganizing effects of the experience and a state of disequilibrium ensues. The event propels the individual into a traumatic state lasting for as long as the brain systems need to return to an organized state. The individual has a need to make sense of the new world view—that is, the why and how of the event that has occurred and what it means.

A person’s genetic, constitutional, and personality make-up, state of mind when the event occurred, psychological level of development, existing support systems, as well as the content, intensity, and duration of the event, all contribute to the severity of the traumatic effect.

The central feature of post-traumatic stress disorder is the development of characteristic symptoms after experiencing a psychologically traumatic event, or events outside what is usually considered the normal range of human experience.

The characteristic symptoms include:

- Reliving the traumatic event;
- Numbing of responsiveness to, or involvement with, the external world.
- Autonomic, dysphoric, or cognitive symptoms.

The reactions to and consequences of the disaster effects can produce varied behavioral and emotional expressions, including the following:

- The survivor may have obsessive repeated memories of the event and become preoccupied with them. These memories may appear in dreams or nightmares.
- The survivor may also have periods of feeling distant or detached. This detachment may intermittently disturb social relationships.
- The survivor may experience symptoms of autonomic arousal and increased sensitivity to strong noises or unfamiliar situations that recur many months following the psychic trauma of the disaster.
- The survivors may complain of impaired memory and difficulty in carrying out usual daily tasks.

These subtle changes in personality and sense of social effectiveness are difficult to differentiate from the preexisting emotional characteristics of the individual or the acute response to the impact of the disaster. Nevertheless, these changes in functioning should all be considered by the crisis worker in the diagnostic evaluation of the quality of the stress response, the level of psychic trauma, and the psychological sequelae of crisis resolution. If the worker notices that there is no change in the severity of behavior dysfunction after one or two months, he/she should ask for a consultation or referral to a mental health clinic.

■ THE BIO-PSYCHO-SOCIO-CULTURAL SYSTEM *

■ KEY CONCEPTS SUPPORTING AN UNDERSTANDING OF SURVIVORS:

- The organism is a dynamic, evolving system of information exchange and processing
- A disaster stimuli.
- It exists in an ever-changing environment where information transfer occurs within and between the brain and the environment - Internal sensory processing of disaster impact.

* Based on Weiner H. *Perturbing the organism: the biology of stressful experience*. Chicago: University of Chicago Press; 1992.

- The interrelationship of subsystems consists of a large variety of communication signals transmitted in a regular or irregular rhythmic manner - Disorganization of usual patterns after disaster.
- The organism is an intricate communication system of information exchanged by means of signals coming from external and internal sources and affecting the rhythm of these communication signals (neurological, hormonal, endocrine) - The total biological shifts following disaster stimuli.
- Stressful experience perturbs these rhythms and affects function, at times disorganizing them - Chance of outside patterns stresses individuals.
- Function is a unifying and dynamic concept that focuses on an integrated approach of the organism in its world. The patterns of physiology and behavior are inextricable - Coordinated by outside disorganized, unfamiliar events of disaster.
- Any perturbation of one component of the organism will lead to a change in function, which forms the basis of stress response theory. - This supports the basic biological disturbance to understand post-disaster behavior.
- Specific integrated, coordinated, and appropriate responses to each stressful experience occur. At times, depending on individual characteristics, these responses may be inappropriate, excessive, or inadequate, in which case symptoms may occur which depend on predisposition and disaster characteristics - During the sequential phases post-disaster we can observe how functions change. ■

READING LIST

- Cohen S, McKay G. Social support, stress and the buffering hypothesis: a theoretical analysis. In: Baum A, Singer JE, Taylor SE (eds.). *Handbook of psychology and health*, Vol. 4 Hillsdale, New Jersey: Lawrence Erlbaum; 1984: pp. 253-267.
- Cook JD, Bickman L. Social support and psychological symptomatology following natural disaster. *Journal of Traumatic Stress* 1990;3:541-556.
- Hobfoll SE, Freedy JR. The availability and effective use of social support. *Journal of Social and Clinical Psychology* 1990; 9:91-103.
- Horowitz MJ. *Stress response syndromes*. 2nd edition. Northvale, New Jersey: Jason Aronson; 1986.
- Lazarus RS, Folkman S. *Stress, appraisal, and coping*. New York: Springer; 1984.
- Lindemann E. Symptomatology and management of acute grief. *American Journal of Psychiatry* 1944;101:141-148.
- Solomon SE. Enhancing social support for disaster victims. In: Sowder B (ed.). *Disasters and mental health: selected contemporary perspectives* Washington, D.C.: Government Printing Office; 1985: pp. 107-121. (DHHS Publication No. (ADM) 85-1421).
- Warheit GJ. A propositional paradigm for estimating the impact of disaster in mental health. In: Sowder B (ed.). *Disasters and mental health: selected contemporary perspectives* Washington, D.C.: Government Printing Office; 1985: pp. 196-214. (DHHS Publication No. (ADM) 85-1421).
- Weiner H. *Perturbing the organism: the biology of stressful experience*. Chicago: University of Chicago Press; 1992.
- Wilkinson CB. Aftermath of a disaster: the collapse of the Hyatt Regency Hotel skywalks. *American Journal of Psychiatry* 1983; 140(9): 1134-1139.