Post traumatic responses in disasters: A community perspective

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Community Resilience - From Improvising to an integrative model for preparation, intervention and rehabilitation in manmade and natural disasters

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The public reaction to disaster is one of the less researched subjects. Despite the hundreds of studies on the impact of disasters on humankind , it is almost always on the individual and sometimes the family. Not only is it individually oriented it is mostly focusing on the post traumatic effect of the disaster despite the fact that most of the affected population do not have prolonged PTSD symptoms or chronic PTSD. The literature on emergency preparedness mostly related to ensuing results, costs and physical damage, while human behavior is mentioned as only a marginal aspect of this preparedness. In addition, it is usually discussed from an organizational-command perspective that views the people involved as innocent victims in the best case, and in the worst case as an unruly rabble or mob that is liable not only to get in the way, but also to disrupt the efforts of government to minimize damages, rebuild infrastructures and restore order as quickly as possible (Ben Nesher et al., 2003).This finding is true both for man made as well as natural disasters.

The fact that the affected public (a term that in our opinion is preferable to "victims" which has morbid connotations) function according to different rhythms during different stages of the disaster is understood as an obstacle to returning to "business as usual". Initially the population reacts more quickly than the authorities do, because it reacts immediately to what is occurring. Later on its rhythm is slower as the residents gradually become aware of the extent of the blow and the personal, family, economic and psychological significance of the disaster. This gap is an organizational psychology obstacle that obstructs decision makers' attempts to plan emergency and crisis preparedness.
According to the International Federation of Red Cross and Red Crescent Societies, each year from 1991 to 2000, an average of 211 million people were killed or otherwise affected by natural disasters. On average, natural disasters accounted for 88% of all disaster deaths in the last decade, and 83% of all those killed by natural disasters were Asians (Walter, 2001).

Some may be surprised to learn that in January 2002 within 4 months of the Twin Towers disaster, when the clearing of the debris was still at its height, insurance companies had already assessed the damage at $19 billion. However, this calculation of the damages incurred neglected to take into account the long process of emotional

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rehabilitation, treatment of the families of the affected public and of those who experienced the terrible disaster firsthand, as well as those in the outer circles of vulnerability.

The studies that survey emotional responses tend to emphasize their pathological aspect. In fact, according to Israel Health Ministry estimates (Ben Gershon, 2003), in some cases the ratio between physically injured and emotionally reacting individuals can be as high as one to 15-20. Following the Iraqi missile attacks on population centers in Israel during the Gulf War in 1991, Solomon reported that 70% of the affected public was psychologically affected (Solomon, 1995).

On at least two occasions North revealed a rate of post traumatic responses ranging from 30-50% among those exposed to various (natural and man-made) disasters (North et al., 1992, North et al., 1999). In our opinion, this data distorts the overall picture and creates confusion between symptoms and functioning. Is there really existing literature that points to worldwide and even local epidemiology, of a post traumatic response on the part of the masses whose ability to function as a community is adversely affected for years? On the contrary, in a critical review (Ozer et al., 2003 page 54) claim that "between 50%-60% of the American population will be exposed to traumatic events, but only 5%-10% will develop PTSD.". Rubonis and Bickman (1991) examined the relationship between disaster occurrence and psychopathology outcome for 52 studies they found a small but consistently positive relationship between disasters and psychopathology—with differences in the powerfulness of findings attributable to differences in research methodology.
Many types of natural disasters strike without warning and, even with advanced information, people frequently feel powerless in the face of the overwhelming experience of nature unleashed. Natural disasters leave survivors with no one to blame, and survivors often turn on themselves, questioning what could have been done to bring the family and community to a different outcome. Certain natural disasters, such as floods, famines, wildfires, and hurricanes, are recurring, wearing down the resilience of their victims. Still according to Sandman (1999) when we deal with natural disasters people are more tolerant to God's acts that is the power of nature that in most cases as stated above, by far outnumber man made disasters in its impact and devastation.
There is some concern that various experts among mental health professionals are "prophesying doom" to decision makers, loudly proclaiming hither and thither in interviews to the media about the consequences of traumatic distress reactions following exposure to disasters and describing them as a phenomenon that affects vast numbers of people. If the syndrome is mentioned in its broad sense (for example, not necessarily as deriving from terrorism-related disasters) we believe that data should be supplied about the general effects on the population. For example, it could be mentioned that the cost of not treating all of those with post traumatic syndromes can be as high as three billion dollars (Kessler, 1997). In our opinion, non-specific reports and panic elicit at least the following three responses from the authorities:

- A request for de facto proof that the masses are panic stricken and overwhelmed by fears, and dysfunctional.
- If the phenomenon really affects such a large portion of the population, then perhaps it is actually the norm, and not an anomaly?

- A request for treatment designed for a mass phenomenon, as opposed to expensive and ongoing individual treatment.

There is also a danger of over-generalizing the preventive approach. The preventive approach has a well-ordered ideology that rests on an analogy to preventive medicine, but with scant evidence of similar effectiveness. With respect to disease control via the development of various inoculations, the scientific and absolute proof show that the diseases are eradicated or controlled or that if they do emerge, their spread can be curtailed with clear and vigorous measures so that they do not develop into another disaster, such as a widespread epidemic. An illustrative example is the SARS epidemic in 2003 when an international effort to curtail the epidemic included such measures as insisting that suspected carriers be quarantined, monitoring the body temperature of international travelers and having them complete medical questionnaires before disembarking from airplanes.

With respect to psychological prevention, on the other hand, there is some doubt as to the effectiveness of the programs. An example is Garland's report about programs for suicide prevention (Garland et al., 1989). Those who believe in primary prevention (and the authors of this article are among them) claim that in the absence of these programs the phenomenon would be more widespread. However, we do believe that they must assume the burden of proof.

The concept of "preparation" has often been understood as primary prevention the purpose of which is to prevent the development of a disaster and on the level of fantasy, perhaps even the very occurrence of disaster. This chapter relates to preparation on two levels: preparation as prevention of psycho-social morbidity and preparation in the sense of preparation of responses from the system that will reduce damages in the wake of an emergency (i.e. mitigation).

As most of the data in the literature relies on individual studies we, in this chapter will examine these findings trying to built a community perspective . The goal is to understand inductively the social/community significance of these findings by relating to the extent of the identified distress, its duration and the amount of time that passes until it fades. We will also survey the most current literature on resilience that describes what has been found to be effective in helping families and communities coping with disasters. The last section of the chapter will focus on the various systemic models that have been developed in Israel since the 1980s, in response to the needs of the population during emergency situations, and will also point out those areas not currently covered by those models. Based on this analysis we will propose a multi-dimensional or meta-model that is a basis for future responses. We will also provide recommendations for maintaining and developing community resilience, in light of the research and current practice in this field.

Community implications of research findings about reactions to disasters

In a critical review about the influence of disasters on populations, Norris et al. surveyed 80 disasters that affected 50,000 people. Two thirds of those surveyed reported post traumatic reactions, while more than a third reported depression, anxiety and stress and in a few cases, panic. About 10 per cent reported health problems and

psycho-social problems. The authors concluded that the more resources lost in the disaster (regardless of their sources) the greater the psychological stress. Psychological resources such as optimism and a sense of being in control are liable to collapse during an ongoing disaster. Social resources, especially unity and a sense of social support, are greatly affected by the results of a disaster and their loss is a decisive factor, affecting the mental health of the victims.

There is a significant rise in symptoms related to Post Traumatic Stress Disorder among those who were in close geographical proximity to a disaster. These include: hyper arousal, irritability, invasive memories of the event, sleep disorders, depression and sadness. These symptoms decrease with the passage of time, but to a lesser extent than with other less-exposed populations, and there are many cases in which the severity of the symptoms does not lessen over time (Shacham, 2000).

There are also reports of a rise in complaints about various aches and pains, eating disorders, increased alcohol consumption, smoking and drug abuse as well as a general sense of insecurity (Pfefferbaum et al., 1999). Behavioral variables of distress following a disaster that have been identified through research include: absenteeism from work and school; avoidance of public places, travel and modes of public transport; and hostile behavior and violence directed at minorities. Children, individuals, families, and communities respond in specific ways to natural disasters that can be differentiated from how they respond to technological and complex disasters—for example, researchers have found that the number of suicides following some natural disasters experience an upswing that lasts for some time after life has begun to return to normal (Krug et al., 1999),

As mentioned previously, in most cases the post traumatic symptoms fade quite dramatically in the first few weeks or months following the event, unless the damage is so extensive that the individual or community is unable to recover. Such extensive damage would comprise injury, death of loved ones and especially children or youths (Sela, 1996) or when there is severe collateral damage, such as the destruction of community infrastructures – houses, buildings and more. Both the cost and the lethality of natural disasters vary by type. The average number of deaths by natural disasters is seven times greater than the number of persons killed or affected by conflict. In a study of 568 elementary school children surveyed three months after Hurricane Andrew, La Greca et al. (1996) found a high (30%) prevalence of PTSD symptoms. However in 2002, in their summary of the research linking PTSD and natural disasters, La Greca et al. (2002) state that “existing evidence suggests that rates of PTSD symptoms decline over the first year following natural disasters" (p.119) Briere and Elliott (2000) completed a national survey of the prevalence, characteristics, and long-term consequences of exposure to a natural disaster All participants completed a Trauma Symptom Inventory (TSI) which measured specific psychological responses to the traumatic experience. Although there were different TSI scorings associated with different types of natural disasters, the authors found no relationship between hurricanes and later TSI scores.

In summation, following a disaster one may expect immediate psychological and somatic reactions that in the vast majority of cases will decrease within days. It thus

follows that the provision of basic coping tools, such as emotional first aid within the family and community, is likely to provide sufficient help to most people. On the systemic level, advance preparation of training programs in the media can provide an immediate response to these reactions. From a psychiatric perspective, it is advisable to identify at-risk populations in advance and to provide them and their families with the tools to cope with potential worsening of their situations.

Family resilience as a component of community resilience

Natural disasters affect families on various levels, Most of the natural disaters affecting a specific area and thus injure or kill members of the same families leving the rest of them grieving and in many cases homeless . The way in which families cope with the aftermath of disasters is thus of major importance . Families that are devastated by the tragedy may manifest malfunctioning of the following nature: Parents that are totally immersed in their grief neglecting all parental functioning, grief that destroys the family structure making children assuming parental roles, children not functioning nor attending school, unresolved tensions within the family resulting in violence , aggression and collapse of the family system (Ayalon, Shacham, Niv 2001) However here too most families will do their utmost to rebuild their lives. Psycho-social variables that affect the ability to recover. Families that are isolated, poor, older, dependent on others or members of a group that does not speak the local language, homeless families or illiterate families are all likely to suffer more. Families in which a relative has died or become handicapped also tend to recover slowly (Rosenfeld, 2005).

When we look at the family from the preparedness perspective , it has a significant role to play . Resilience programs in the US focus on work with the family and the education system. A small number of investigators have defined and investigated family resilience, and as is apparent from the following, the overlap between community and family resilience is no coincidence. McCubbin and McCubbin (1993) define family resilience as characteristics, dimensions and components within families that help them to be resistant in the face of disruptions resulting from change and to demonstrate the ability to adapt when faced with crisis situations. Based on a survey of the research, Patterson (Patterson, 2002) indicates a number of factors that can provide emotional protection to families in times of stress: A. Unity. A strong sense of family unity helps to protect the family from the consequences of significant stress. B. Adaptability and the ability to sustain its identity in the face of danger. C. Communication. Extreme stress can affect the communication within a family, especially with respect to the expression of feelings or refraining from expressing negative feelings because they may contribute to the family pressures. Such "reservations" in communication decrease the family's ability to adapt and to remain united. D. Attribution of meaning. Families forge and attribute meaning to disasters thus influencing their familial worldview. The meaning attributed to the disaster will affect the manner in which the family will cope. Resilient families believe that they have the ability to cope, adapt and overcome obstacles and view the difficulties as a family challenge. An example of a worldview that can help a family to cope is religious belief that gives meaning to the suffering.

Natural disasters cannot be prevented, but preventive measures can be taken to lessen their effects. Skitka (1999) studied whether individual ideologies—liberal versus conservative—affect people’s reactions to the need for assistance after a natural disaster. Based on three scenarios of three different communities devastated by the 1993 floods in the mid west part of United States. The towns, which were given hypothetical names,

varied in the degree to which inhabitants of the town took preventive measures to protect themselves from the floods. The 1015 participants in the study were asked to give their reactions to the three different communities.
More than 73% of the respondents strongly believed that it was the responsibility of individual communities to build their own flood walls and levees, and to buy flood insurance. About 50% felt that the government should help with these plans, and that the government should help people find low-cost flood insurance.
In contrast in her study Shacham (2000) asked local citizens of a town under shelling (man made disaster) 84% of the residents – male and female - believe that the Municipality is the main resource to help residents prepare for an emergency situation. 65.7% of the men believe that residents have to be in charge of the preparations, while only 51% of the women feel that, and they prefer the government to help. Men grade the following support sources: municipality, themselves, army, government. Women grade the following support sources: municipality, army, government, themselves.

In summation, the family is an important mediating variable with respect to its members' ability to cope, as well as an important unit to relate to for the implementation of primary prevention, which includes the preparation of basic equipment and food in the event of emergency, an evacuation plan and a plan for maintaining open lines of communication in the event of a disaster.

A community encounters disaster

The concept of community is defined in a number of ways in the literature, for it is used in various different contexts. There are territorial definitions as well as those that relate to groups of people who share a specific interest, belief, language or culture (Galbraith, 1990; Magrab, 1999). Community provides a sense of identity and a foundation from which to relate to a shared history and tradition. Community has defined boundaries that indicate who belongs and who does not and how one can become a member (Gordon, 1997). During emergency or disaster situations communities may be a source of support for those who are injured as they provide necessary resources such as emotional support, shelter, food and money. Communities may also be a source of additional stress, when they categorize certain sources of assistance as "good" and others as "bad", thus preventing their members from receiving assistance from some sources.

According to Gordon (Gordon, 1997) during a disaster a high-powered community process called fusion occurs. During large-scale disasters this social phenomenon will encompass the entire community whereas in the case of a localized disaster the process will occur only in the area of the disaster. Individuals quickly create "legacies" about the disaster and survival that include symbols, memories and ceremonies. They function with minimal conflicts and a sense of shared destiny and focus on helping each other while temporarily ignoring the fact that have been "victims of bad luck".

Community needs take precedence over individual needs. Sometimes the residents must pay the price of loss of privacy and the pressure to make a demanding, long-term personal commitment to the community that takes precedence over family obligations.

The closeness and sense of unity that ensue prevent the inclusion of those "who weren't there", regardless of whether s/he is a stranger or a local. At times this social phenomenon may lead to a rejection of external assistance, to an incorrect assessment of the strengths of the community and above all to a disregard of the needs that actually necessitate seeking outside help. Since such a situation of social fusion cannot meet the long-term rehabilitation needs, three forces work against it:

A. The transition from survival mode to a rehabilitative mode that necessitates a different structure
B. The community structure that was in place before the disaster, comprising organizations and systems, but also those residents who were affected to a lesser extent, seeks to return to its pre-disaster state. The great challenge is to tailor the services and systems to the new situation, while preserving the organizational structure to facilitate the achievement of objectives. In addition, the residents' feelings of togetherness and sense that as a united front they can overcome all obstacles during the fusion period may cause them to see the organized rehabilitation efforts as dry, insensitive bureaucracy. This is intensified by the juxtaposition with their sense of unity and group cohesion that prevailed during the time of crisis.
C. Community members' emotional response. As time passes old conflicts arise and new ones emerge, such as when community members become aware that different individuals were affected to varying degrees and that people have different needs.

The rehabilitation of a community always involves more than simply a return to the way things were before disaster struck. According to Gordon (Gordon, 1997) the necessary strategy is to develop a new vision for the future. The new vision should relate to the event as a historical fact, should encompass the developments since the time of the event, and should, as much as possible, synthesize and rebuild whatever was damaged/destroyed via new initiatives in an attempt to create a shared program for all community members (Gordon, 1997).

The importance of providing psychosocial support after earthquakes is increasingly recognized .The IFRC (2004b:9–1 0)notes that after the Bam earthquake:' The psychological impact of the earthquake on survivors was enormous .According to the MOH [Ministry of Health]and UNICEF some 25,000 people were in need of psychological support. Apart from concerns that they could not perform their traditional mourning ceremonies because of the summary burial of victims, people were traumatized, afraid of the many aftershocks which occurred and frightened by the dark.'

The World Bank (2005) found that providing survivors with income-earning opportunities tied to physical work often seems to help as much as grief counseling Participation in post-disaster shelter reconstruction can play a vital role in the person al and collective psychosocial recovery process if there is an active role for disaster survivors.

Past experience shows that response will be improved if national and international NGOs can work in tandem

Risk factors for psycho-social morbidity in the community

Disaster research indicates that risk factors for the community are similar to those for the individual. The literature mentions a number of these, such as: A. Ongoing exposure to traumatic events is liable to cause significant damage to infrastructures, which impedes rehabilitation. It can lead to uprooting, resettlement or long-term unemployment as well as massive destruction of property. A disaster can damage the identity and even the structure of a community. B. Repetitive incidents. Communities can rehabilitate themselves when there is a belief that they will return to normalcy and their regular routines, but this is not the situation when the community is located in an area that is prone to natural disasters, or when the community is experiencing prolonged civil war or terrorism (Williams et al., 1999).
C. Events that embody the intention to cause disaster. In communities that live with the sense that disaster is deliberately directed at them there is greater risk of intensive mourning and acute traumatic responses (Gurwitch et al., 2002). D. Disasters that cause physical and psychological damage are more likely to affect communities as a whole than are those that only cause damage to property. E. Events that destroy or damage supportive community infrastructures: Events that cause extensive damage, like the Chernobyl disaster, earthquakes that cause widespread damage and death and civil wars cause such serious damage to service infrastructures that citizens tend to lose their faith in the system's ability to protect them. F. Lack of coordination and competition between different community bodies. This situation derives from the expectations of community organizations that they will receive praise and prestige for their efforts following a disaster (Granot and Brander, 1987). When dealing with the impact of natural disasters Rosenfeld (2005) suggested the following factors, mentioned by researchers, as explanations for the apparent discrimination shown by natural disasters .(affecting the poor)Inadequate housing quality, a population's pre-existing poor health and nutritional status make it vulnerable, marginalized populations in countries with a great disparity between rich and poor may live in vulnerable areas without basic amenities. Increasing urbanization and unplanned development, especially in geographically vulnerable areas, combined with poor housing construction, can contribute greatly to the human cost of disaster. Political instability may interfere with distribution of aid and relief efforts after a disaster. An inadequate social welfare infrastructure means inadequate resources to provide basic human services and health care, increasing the likelihood of the outbreak of disease . Kaplan (1973) describes the "overwhelming desire to help" phenomenon that occurs when helpers rush to meet certain needs while other vital – but less dramatic – needs are completely neglected.

In her book, *When Disaster Strikes: A Handbook for the Caring Professions*, Beverley Raphael (1986) writes that the most influential variables in determining how a community responds to a natural disaster are its degree of poverty, deprivation, underdevelopment, and socioeconomic vulnerability. She also argues that a community's willingness or preparedness to cope with a natural disaster depends on its sense of vulnerability to the threat of natural disasters, the trust of its citizens in public authorities, its communication system, and the costs of preparedness and response.
Weinstein, Lyon, Rothman, and Cuite (2000 "The largest tornado effect we observed was the decrease in optimism on questions that directly asked people to compare their personal risk to the average risk, with optimism being practically eliminated after the tornadoes struck" (p. 389).
World Disasters Report 2004 (IFRC,2004b)notes the role of traditional neighborhood networks such as the 'notables' or 'white be abrasive o r six men of influence based around the local mosque who organized the response of the local community after the

Bam earthquake December 26 2003.
Women's groups have al so been effective in facilitating community response .For example the Self Employed Women's Association was involved in a number of activities after the 2001 Gujarat earthquake, including identifying high -need households, and d erecting aid to them, and involving women as monitors of housing reconstruction.
The role of external agencies then becomes one of supporting indigenous capacity and working with communities to .support their efforts and build their capacities. At the very least, interventions should not undermine local capacity.
The best approach for external agencies may be to ensure that local distribution mechanisms at least cover the most vulnerable –the elderly, poor women children and disabled people. Disability is a significant issue following earthquakes, due to the number of injuries received.

Community resilience

Community resilience is defined as a community's ability to "stand firm" in the face of potential loss of life or when recovering from loss of life/damage (Ben Nesher, Lahad, and Shacham, (2002). Community resilience is also the sum of a community's efforts to take focused action that combines both the personal and collective ability of its residents and institutions, and responds efficiently to changes in the security, social or economic situation in order to influence the future course of the community.(Peled, 2004). Resilience is also a facet of a community's ability to absorb a tragic blow and return to a normal routine, even if it is a new routine (Rosenfeld 2005; Raphael, 1986). Ben Nesher, Lahad and Shacham (2002) distinguish between hygienic community resilience factors and motivational resilience factors. Hygienic resilience is defined as resilience of measures, such as security or social measures that are provided to the resident by the authorities. Motivational resilience is defined as those same activities and services that increase the residents' ability to help themselves. Motivational resilience factors are inter-communal and derive from the individual and community functioning in a given situation. Six potential motivational components have been defined:

- Awareness of threat and/or a situation of distress – attribution of significance
- Need/drive to function despite the prevailing situation – transforming of crisis into challenge
- Internal locus of control – self efficacy and a sense of forging the future
- Belief in the ability to cope – sense of capability
- Community cohesion, unity and identity – a sense of belonging to the community
- Commitment, steadfastness and persistence – drive to achieve objectives and demonstration of endurance

In summary, despite the fact that following a disaster the vast majority of the population functions well with respect to coping with loss, bereavement, disaster and destruction, most of the professional literature continues to focus on a clinical picture concerned with individuals as opposed to the community. Klingman (2003) comments, "Researchers who focus on the individual approach stress the psychological trauma and its long-term influence. However, researchers who relate to disasters from a community perspective reach a different conclusion. In their opinion

the psychological effects of disaster generally prevail for only a short time, and then pass (page 145).

Indices and characteristics of community resilience

Granot (2003) proposes three categories of indices that influence community resilience during disaster:
A. Criteria related to the community's background: the average number of people living at home; the level of unemployment in the community relative to the national level; the budget for emergencies. B. Criteria related to the critical incident itself: the length of time between the warning and the occurrence of the event; the immediacy of the danger, timing (time of day); the intensity of the danger and the management skills of those in relevant positions. C. Influencing factors: the immediate, identifiable influences of the disaster on the community and its members.

Granot proposes accumulating two categories of data to determine the level of community resilience: quantitative and subjective. Quantitative data include: 1. Political criteria – local, in terms of the deficit in the local budget; the efficiency level of the local government, etc. 2. Professional level – for example, the level of education of the teachers; and the number of social workers relative to the number of dentists, where the former indicates the weakness and the latter the strength of the community. 3. Informal relationships within the community – for example, the balance of emigration and the rate of population exchanges per year; the level of non-independents among the population; and the level of preparedness for emergency in terms of the extent of allocated budgetary and other resources. Granot lists the following under subjective data: 1. Social network and mutual support – for example, the number of families that a given individual visits; satisfaction with the place; the level of emergency preparedness of educational, community and local authority services.

To provide information for community systems, Lahad (1999) created an observational questionnaire to formulate a comprehensive picture of the community resiliency measures. This questionnaire is based on the integrative resilience model originally developed for individuals and families (Lahad, 1997). This model, known as the BASIC PH model (Ayalon and Lahad, 2000, Lahad, 1993)

The model provides a summary, from a meta-perspective, of the resilience theories and research over the past three decades and distills it into an integrative model that describes the components of resilience and coping in individuals and systems. The clusters that were identified by Lahad are organized in six groupings, as follows:

1. Belief – beliefs and values, self-image, hopefulness, meaning and mysticism
2. Affect – personal and interpersonal emotional resources, verbal and non-verbal resources
3. Social – components of assuming a task, sense of belonging, the desire to be part of a group and to function within it and for its benefit, drawing strength from belonging to a system and organization
4. Imagination – characterized by use of fantasy, distraction, creativity, improvisation and humor
5. Cognition – logical, realistic, characterized by a need for knowledge, gathering and processing of information, thoughts about alternatives and

priorities, learning from others' experience, rational thinking and ability to plan independently

6. Physiology – "doing", activity, somatization, rest, relaxation and more

The dimensions examined in the questionnaire to evaluate community resilience include: The Value and Belief System. For example: Is the community identified with a specific ideology? In recent years has it been actively involved in political/ideological issues? Is there an archive where the history of the community is housed? What is the degree of respect accorded to different cultures and traditions within the community? The Level of Interpersonal Emotional Relationships in the Community and General Concern about Emotional Wellbeing. For example: Do the residents trust each other? What is the nature of the atmosphere in the community – anger, panic, hostility, trust in strangers? Do community members celebrate together? Grieve together? Organize commemorative events together and support each other in times of crisis? The Attitude to the Social Organizational Component. For example: Is the elected leadership accepted? Does an alternative/historical leadership exist? Is the community socially and culturally homogeneous? Is it homogeneous with respect to age groups? What is the level of involvement in helping others on a daily basis? How high a priority is it? How many elderly, children and other groups requiring special attention are there? The Creative/Aesthetic Sphere. For example: How much does the community invest in public places and to what extent are they aesthetically pleasing? How many initiatives (private or public) for such community projects have been undertaken recently; in previous years? Is there investment in the artistic and decorative aspects of community events? The Thought, Planning and Organizational Spheres and Learning from Experience and Applying Lessons Learned. For example: How structured is the organization of the community? Are there written procedures for various topics (such as a code of regulations, etc.)? Do community services exist (such as a cultural center, health funds, preschools, schools, local grocery stores)? What is the maintenance level of the private homes in the community; the public buildings? Is there a model/code for procedures in the event of an emergency? Are there drills of these procedures and if so are they evaluated so that conclusions can be drawn and procedures can be changed accordingly? Physical and Recreation Activities. Are sports events held (such as marches, competitions)? Is there sports equipment in the community (such as a swimming pool, gym or playing fields)? Are they used?

The resilience profile of a community is based on an analysis of those areas in which there are activities and involvement. Those areas with significantly high levels of activity are identified as the resilient modes of the community/organization. As such, the preliminary intervention in an affected community should both focus on and be based on these modes, whereas the rehabilitative interventions, whose goal is to develop areas where resilience is weaker or undeveloped, should be undertaken at a later stage.

Israeli models for community coping with crisis and catastrophe and strengthening community resilience

There are various Israeli models for community assistance and support that are designed to minimize damage, provide assistance to communities and restore their ability to function in the event of a catastrophe or an emergency situation. This

section surveys a number of models that evolved from the original model of the Community Stress Prevention Center's work in building the Emergency Preparedness town model in the 80s. (Shacham, Lahad, Sela and Shacham, 2003)
A model for local authorities specifically for isolated settlements or for regional councils under threat, called Community Emergency Teams (CETs), (Cohen & Gilad, 1997) (also presented below). The cascade model using the concept island of resiliency, the "Diamond Resilience Model" for developing systemic, organizational and family resilience (Ben Nesher, 1985) as well as an additional model for community resilience centers. All the models listed share the same basic assumptions:

- Citizens have resources. It is important to identify them in advance, to direct them and to activate them so that they will facilitate functioning in the event of an emergency, or, as the Home Front Command puts it "to help them to help themselves" (Ben Nesher, Gidron and Sha'anan, 2003, page 13).

- The local authority is charged with the responsibility to provide residents with assistance in all areas. In general this refers to psycho-social assistance.

- The local authority should be responsible for the professional spheres which it is better suited to handle than are outside systems such as the army or central government. The local authority should have responsibility for providing for the ongoing needs of the population for logistic and psycho-social support and should set up information centers.

- Following the initial shock reaction, most people respond logically, recoup their strength and act to save themselves and those close to them. "Basic, direct, accessible assistance and the encouragement of natural support systems (extended family, friends, community) can create significant, positive change in coping with the difficult reactions inherent in such events." (Ya'acov 1997, page 8)

Despite the fact that Israel did not face a major natural disaster the Diamond model and the cascade model have been successfully applied both in Turkey following the 1999 earthquake (Ayalon 2005) and the 2004 Tsunami in Sri Lanka (Lahad & Horwitz 2005) Still none of the models surveyed here provide a response to a scenario where there is a chemical or biological disaster. In addition, there are no models for implementing the transfer of responsibility and treatment to the citizens themselves following an expectation of difficulties on the part of central or local government to provide a "personal" response to the problems of the individual.

A new trend that has just recently been operational in the field is the model of a community resilience center that was proposed by the Ministry of Welfare (2003) and will be presented at the conclusion of the following survey.

Community Emergency Team Model (CET). This model is based on the assumption that there may be disaster scenarios in which it may take some time before the regional authority will be able to send assistance. This time lapse may be critical, certainly from logistic, defense and health perspectives, and in different scenarios, such as loss or siege, even from educational and psycho-social perspectives. The

teams are comprised of volunteers from the settlement/neighborhood, both professionals and non-professionals, who organize to manage the settlement in the event of an emergency. Their tasks include assuming responsibility for crisis intervention and control, identifying affected individuals, operating internal support systems and implementing community rehabilitation programs. In order to carry out these functions the Community Emergency Teams comprise: a team leader; an individual responsible for security who works with designated security volunteers; an education center with accompanying educators and volunteers; a nurse or doctor from among the residents (if under routine conditions the staff at the local clinic are not residents of the area); a logistics team to deal with immediate problems pertaining to water, electricity and infrastructures; community and welfare volunteers (usually social workers who are residents of the neighborhood but aren't necessarily employed by the local authority); information centers and spokespeople. Each team defines its tasks and responsibilities and implements them under the guidance of a coordinator from the local authority. The team is built of small groups or links that are spread out over the neighborhood.

During an emergency a headquarters team convenes to activate the volunteers in the neighborhood in coordination with the headquarters of the regional authority and other external elements such as the home front, police, ambulances etc.

Preliminary data exist for the reactions of the CET volunteers to conditions of repeated, ongoing terrorist attacks. Brander (2001) surveyed the functioning of volunteers from 40 settlements in Judea, Samaria and Gaza after 2-4 months of the Palestinian Uprising or the Al Aksa Intifada. Findings showed that 94% of those interviewed expressed general satisfaction with the functioning of the system, but 53% showed signs of burnout and fatigue, where most of the symptoms were manifested in a decrease in the ability to function as part of the emergency team, emotional and physical fatigue, an increase in the amount of time required to get organized, difficulty in fulfilling all the required tasks, physical and emotional stress, and reduced attendance at group meetings and activities. The reasons supplied by the team members for the preceding were: a team member who had moved away from the neighborhood, absence of a clear work structure for a situation of "ongoing emergency", ongoing stress and pressure, fatigue on the part of the rest of the team, apathy on the part of the residents and a decrease in cooperation. Brander's central conclusion was that the difficulties discovered derived from the fact that the CET teams were built according to an "isolated-event" model or a model where there is a series of emergency events, separated by significant periods of time and taking place on different settlements. In practice, with the outbreak of the Al Aksa Intifada in October 2000, the members of the CET teams dealt with ongoing, overlapping events in which members of their communities were killed, often numbering among them children and infants. This situation placed a heavy burden on the volunteers and contributed to serious burnout.

The cascade model building "Islands of resiliency"

The cascade model main concept is based on the notion that in order to reach out to the affected public we need to build a system that is based on few professional workers training semi professionals who in turn train grass root volunteers who help the affected public and refer those in need to the professionals for specialized help.

This model is based on the work of Ben Nesher (1985) Ben Nesher &Lahad (2002) Ayalon (2005) and Sela (1996) concluding that by training about to 10% of a given organization we can make a positive ripple effect spreading psycho-education knowledge and thus enhancing public capability to help themselves.

Ayalon (2005) describe in details the work that was done in project HANDS (Helpers Assisting Natural Disaster Survivors) in Turkey following the 1999 earthquake. She describe the process whereby a group of 20 professionals were trained by CSPC experts in community stress prevention an rehabilitation model. This group in turn trained 20 professionals .who took upon themselves to treat at least 14 people . Thus with a core group of 20 professionals the cascade model out reached to 5600 beneficiaries . Ayalon describe the training content as well as the dissemination process concluding that this effort proved to be long lasting as the professional group formed its own training modules and training center and continue to train helpers in Turkey 6 years after the disaster.

Community Resilience Center Model – Ministry of Welfare (October 2003). This model is proposed in response to the need to cope with ongoing stressful situations with a view "to developing and advancing community activities, to improving resilience, and to treating crisis situations from an interdisciplinary vantage point, that seeks to galvanize a community's potential and to encourage residents to act to change their situation, to take responsibility, to be active participants and to help themselves and others to develop coping resources under the direction and supervision of the welfare services in cooperation with other bodies (page 5)."The center is intended as a focal point for the amassing of resources and for coordination between official bodies and local, regional and national voluntary organizations. The center is meant to be active in two areas: 1. Treatment of the population in crisis. 2. Improvement of community resilience and unity by recruiting and activating designated target groups and volunteers. The community resilience center will house an interdisciplinary assistance center and the following task forces: a security committee, community development teams to provide physical/psychological support, an emergency/trauma treatment team to treat special needs groups, absorption, community information and communication, an economic/social team, a fundraising team, an education team, a culture and leisure team and a training committee.

As stated, this model attempts to respond to the need to both preserve and develop ongoing resilience, as opposed to only relating to resilience in the context of the aftermath of a disaster. The model leads to empowerment by bringing together and coordinating between the social and educational community resources and combining them with the additional layers of the economic systems and the voluntary bodies.

Beyond Improvisation

A survey of the scientific literature presented above indicates the need for preparedness to advance the resilience of communities under attack. However, in the absence of empirical research on the effectiveness of the preparations we can only use the experience accumulated to date to ascertain the minimum requirements for an effective preparedness program, the principles for their differential application, the research needs in the area and which indices are relevant in order to develop the subject. The models developed in Israel are mainly directed toward two scenarios: A local emergency scenario (a contained act of terrorism, a local industrial disaster or a

traffic accident) or a war scenario, in which the entire country is recruited for a war waged on a distant front. Four years of ongoing terrorism in Israel and the disaster that occurred in New York in September 2001 have altered the distinction between the home front and the "traditional" front and made it clear that there is a need to relate to a third, complex scenario in which one event or a series of events are engendered with the purpose of sowing death and undermining the psychological wellbeing of the citizens of a country.

When confronted by such a complex and vague scenario, one has no choice but to integrate the existing models into a meta-model comprised of independent and semi-independent units ranging from the level of the family unit to the level of the apartment building or neighborhood (similar to the CET model), via an interim structure comprised of local units capable of managing and providing assistance on the level of a number of neighborhoods (similar to a local administration), a cluster of settlements (community emergency team in regional councils) and above these, units on the level of geographical districts or bureaucratic districts that can manage themselves with minimal assistance from the central government. On this level it is necessary to coordinate between local and higher levels with respect to food, fuel, water, transportation, health, education, and even internal security. The starting point for all levels of preparedness must be unity, as all these models rest on local resources. It is important to remember that individuals have good coping abilities and this message must be conveyed in advance.

In our opinion, it is important to stress, starting from the level of disaster preparedness, that one of its important goals is the creation of an infrastructure for dialogue and familiarity between the different partners that provide interventions and are involved in the aftermath of a disaster. It is also important to emphasize that despite meticulous planning and preparedness there will be times when reality will dictate changes to the contingency plan. Therefore, the population should be assured in advance that this in no way indicates failure, but rather an acknowledgement of the limitations of the ability to predict all the possible repercussions of a disaster. Our experience shows that the more possible scenarios developed, the better the integrated preparedness of the emergency headquarters. Another widely-held conclusion is that the free flow of information and real time updates to the members of the affected community are vital to ensure the cooperation of the residents and their ability to follow instructions.

Consequently, a community emergency plan must include preparation of the media for scenarios in which they will function as a main source of guidance for citizens. Beyond logistics, it is important to focus on preparedness with respect to recouping lost resources, especially resources of social and psychological support. Since all the models emphasize confidence in the coping ability of the individual and the community (which is far more important than the quality of the coping) it is essential to prepare the leadership to provide empowering and reassuring activities with the help of the media. It is important to ensure that the citizens of the affected community believe that they are capable of helping themselves and their families and that additional assistance from the authorities is available to them, should it be needed.

Conclusions and Recommendations

Most of the disaster research concludes that the vast majority of residents of communities affected by disaster recover quickly and only a minority is affected over time, to the extent that it is unable to function normally. We are of the opinion that the risk factors for ongoing psychological disorder are usually known and at least partially identifiable prior to the disaster (at-risk populations), and subsequent to it (based on the extent of the damage). One neglected area of research that in our opinion is also very important to develop is the study of community or national resilience. An example of a subject of future research in this area is the study of the relationship between resilience within the family unit as a basic social unit and the resilience in the community as a whole. It is difficult to plan a study during a period of emergency. Consequently, it is important to develop readily-available research tools that can be activated within a reasonable period following the occurrence of a disaster. Development of tools to evaluate community resilience will facilitate controlled assessment of the effectiveness of the models. Since disasters are rare occurrences, simulations may be used as research models to assess the quality of preparedness.

Of course one could easily imagine differences of opinion with regard to the role of the media during emergency situations (raising morale vs. critical, reliable reporting) but one must consider the opportunities for the media to have a constructive influence on the functioning of the community during a crisis and on a community's perception of its own resilience. This subject is in its infancy and planned and focused cooperation between community welfare agencies and the media during times of emergency cannot be taken for granted. However, Lahad (1997), Ross (2003) and Ben Nesher (2001) have developed a model that focuses on the development of the ability of community information and communication teams to effectively utilize the resources of the mass media to transfer information, and guide and instruct the public during disasters or emergency situations.

Of course, to implement such a model one must first identify the common interests of the media and of those who provide assistance to the public during an emergency.

The main limitation of this chapter is the absence of any reference to disasters that we have not yet encountered. We have no experience with chemical, biological or nuclear disasters. Disasters such as these are liable to damage extensive infrastructures (for example, through ecological pollution), to cause widespread outbreaks of disease and mass fatalities, and to cause long-term disruption of the central government's ability to function. Such a scenario could significantly challenge all the existing knowledge in the field of community coping and resilience. To plan for such eventualities the bulk of the responsibility should be transferred to the general population. In the framework of this kind of preparedness sources of local assistance and knowledge should be identified and organized in advance, basic survival skills training for the general population in complex circumstances should be provided, and the use of readily available, home-based measures for preliminary defense should be encouraged. To this end a program should be developed in the spirit of Churchill, who promised the British people during World War II that their response to the enemy would be comprised of "blood, sweat and tears". The population should be prepared for scenarios in which the citizen is master of his/her own fate.

An interesting attempt that demonstrates a possible direction for assistance in a disaster of apocalyptic dimensions is described by Ayalon et all (2004) . She describes

optimum usage of a small group of experts in Turkey following the 1999 earthquake. A small team of experts from CSPC used the "Cascade Model" . The initial group of local professionals was 90 out of which 20 expressed their wish to become trainers and supervisors in the rehabilitation period. The contract was that these 20 will train 12 each and these 12 will treat at least 20 people thus with 20 trainers we outreached to over 4500 affected people. This same model is employed in Sri Lanka following the Tsunami of 2004. However in Sri Lanka the local trainers comprise of more then just education or psychology this time the trainers are: Medical doctors, psychiatrists, nurses midwives, health officers, social workers, teachers, principals, community workers, monks. The concept is that the trainers themselves will make an interdisciplinary group and develop an integrated community approach.

Programs for community preparedness in the event of disaster must take into account the conflict over who is responsible for which tasks, which will face numerous volunteers and helpers. In the event of an apocalyptic disaster such a situation could completely disrupt both the preparedness plans for emergencies and the ability to cope (Lahad and Ben Nesher, 2000).

The Board on Natural Disasters, (Board on Natural Disasters, 1999), pointed out reliance on response and recovery strategies—instead of mitigation—means incurring the continuously escalating costs that go along with the escalating damage associated with natural disasters. Response and recovery are necessary for humanitarian, economic, and political purposes; however, they must be accompanied by effective mitigation programs aimed at reducing losses.

The maintenance of voluntary emergency systems, over time, in the absence of an actual state of emergency is a process that leads to attrition of enthusiasm and preparedness and is likely to minimize the effectiveness of the system in the event of an actual emergency. The challenge facing us in the age of global terrorism is to create speedy models for the strengthening of community resilience and the upgrading of the ability to cope after an attack. We propose an integrated model for the development of systemic, self-initiating community resilience which we call the Integrative Resiliency Model (Ben Nesher and Lahad, 1997). This is a synthesis of the Diamond Model (Ben Nesher 1990) and the Integrative Resiliency Model (BASIC PH) (Lahad, 1993). The Diamond Model identifies four primary resources for the building of operational resilience: internal locus of control, self-efficacy, commitment and cohesion.

The unique contribution of the Diamond Model is in its insight that within an organization (which is comprised of people) there exists on the one hand a complex dynamic of processes that contribute to operational resilience, and on the other hand exposure to pressure and threat from the surrounding environment that weakens resilience.

Thus to develop organizational, operational resilience (community resilience) requires that assistance be provided to the organization coping with the difficulties and challenges that emerge that are caused either by external factors or are the result of processes within the organization itself. The creation of operational resilience is a continuous and dynamic process that is constantly updating itself in relation to the status in the community of each of the four preliminary categories (internal locus of control, self-efficacy, commitment and cohesion). The combination with the integrative BASIC Ph Model (Lahad, 1992) facilitates early identification, also

referred to as prevention, or immediate identification, also referred to as mitigation, via the individual coping profile of individuals in the community. This helps to direct the intervention by focusing on the identified coping abilities. The building of a coping resource profile for the individuals in an affected community can help to identify various resources even if they are of differing strengths. The person providing the intervention can choose different channels for interventions based on an assessment of the available resources and thus can encourage a renewed galvanizing of coping abilities. The integrated model facilitates identification of the appropriate "codes" for the community and the individuals within it. The synthesis between the two models enables the matching of interventions to each community unit (from the individual to the organization) by adopting the approaches and tactics that increase its chances of successfully coping with difficult situations. A schematic description of the model is provided in diagram No.1 below. A necessary condition for utilizing the integrated model is the creation of the awareness of threat (a partial neutralizing of the denial) with which the community must contend. The advantage of the Diamond Model is apparent in the fact that each of the four preliminary categories of the sources of operational resilience is expressed in an operational form that facilitates identification of overt behavior and the expressed values of the individual or organization. On the one hand the individual providing the intervention is offered criteria for identifying the principal codes for the sources of the coping resources that can be applied and brought into action (BASIC PH). We believe that the Diamond Model can be applied quickly by an intervention team assisting a population under attack both during an event and subsequent to it. The proposed model also facilitates application in the process of building future coping abilities.

Diagram No. 1. The Integrated Model – Sources of Resilience

Synthesis of the BASIC PH and Diamond Model (to be added)

Experience of Others "If he can do it, so can I!"

Verbal persuasion (internal) "I can do it!" (external) "You can do it!"

This model has been used in different circumstances, mainly in the wake of disasters and crises such as: terrorist bus bombings in Jerusalem (No. 18 bus) and in Tel Aviv (No. 5 bus), terrorist explosive devices in Tel Aviv (Café Apropos) and in Jerusalem, a helicopter disaster in Sha'ar Yeshuv, the settlements on the front line in the north after Operation "Accountability" (1993) and "Grapes of Wrath" (1996). The model was also applied in situations of tension resulting from threat and uncertainty such as: in the settlements in the Golan Heights following the declarations that the Heights

would be returned to the Syrians, in the recent evacuation of Israeli settlements from Gaza strip and in post natural disasters outside Israel such as the earthquake in Turkey 1999, and the tsunami in Sri Lanka in 2005.

The main result of the application of the intervention model was apparent in the ability of people and organizations to function despite the pressures and hardships through effective multi-dimensional coping with the crisis to the extent of creating a new situation that allowed the participants to achieve their objectives despite the losses and difficult experiences that they encountered. As stated, there is a gaping need for evaluative research to expose the proposed intervention concept to objective scrutiny.

To summarize, we would like to focus on a number of recommendations for operational principles for community teams during the stages of preparedness and intervention for disasters and emergencies. Our experience shows that the following are important:

- To instill a social-community approach in all models of intervention following disaster
- To assist in the creation of a professional social-community team in the framework of a decision-making headquarters
- To assist in the defining and mapping of target populations, to identify their various needs, to develop responses and approaches for effective coping with the new situation and its implications
- To assist in the identification of coping resources and to apply them, while creating opportunities for recovery, rehabilitation and renewal on the levels of the individual, the family and the group
- To strengthen the administrations, the reciprocal relationships and the cooperation between the social-community systems and the defense and economic systems
- To facilitate the smooth functioning of, and circumstances-permitting, to assist in the preservation of the family, social community and organizational frameworks throughout all stages of the rehabilitation process
- To ensure good communication with local communities is crucial from perspectives of both ethics and efficiency. One lesson from the response to the 1998 Afghani Stan earthquakes is that agencies could set up short-wave radio to broadcast relief objectives to survivors, where local capacity to do this exists (IFRC,2000).
- To recruit the mass media to help to strengthen the coping efforts and to assist them in temporarily refraining from their tendency to negative reporting and criticism, to repressing the self-efficacy and to the search for "guilty parties"

To facilitate the above the groundwork must be laid to develop the following:

- A regional/district behavioral system for intervention, support and rehabilitation that will be able to function even in the absence of or in the event of a delay in response from the central government

- Post-disaster shelter should be linked to livelihood promotion, concerning factors such as proximity to services and the workplace, as well as use of housing as a workplace. Shelter and livelihoods are often closely linked in rural settings in South Asia. For example, women ay use their homesteads as a place for growing vegetables and raising livestock, for either home consumption or sale.

- Affected people may prefer to stay close to their homes, living in makeshift accommodation or moving in with other family members or neighbors, in order to protect surviving household members, possessions, and to ensure continued control of land. Relocation should be considered as an option only where communities are seeking this, or where it is not safe for communities to remain**.**

- A local system of volunteers

- A guide for the creation of immediate-response networks of community activists with a defined purpose

- Flexibility in providing solutions to problems

- Doctrine on the subject of the role of the local and national mass media during and following a disaster

- Indices according to which community and national resilience may be measured

- Protocols for assessing the efficacy of the interventions

- A standard intervention kit based on an evaluation of which basic services are required to ensure the survival of the citizens

- Focused programs to further the concept of individual capability and community resilience for the family and community

- A system that supports and relates to a positive solution to the conflict among helpers resulting from tensions about who is responsible for which services during an emergency

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