A Model for Activity Intervention in Disaster-Stricken Communities

Mark S. Rosenfeld

Environmental disasters cause deaths, injuries, and destruction of familiar surroundings. Social networks and routines that structure daily life are often left in disarray. To surmount subsequent crises, survivors must master painful feelings, solve problems, and accomplish important tasks, even while they are confused, bereaved, and displaced. Otherwise, coping failure leads to a vicious spiral of loss of self-esteem, distrust of the environment, and abandonment of social roles. Both crisis intervention and disaster literature advocate concrete and practical treatment measures. Activity intervention can prevent and reverse the destructive downward spiral by facilitating victims' most effective coping responses. This paper reviews the pertinent literature and sets forth a theoretical model for occupational therapy in post-disaster settings.

Mount St. Helens' volcanic eruptions, Buffalo Creek flood in West Virginia, and Love Canal's toxic chemicals are a few of the environmental disasters that have confronted us in the headlines in recent years. They were each caused by natural phenomena or human errors. As we read about these events, we may identify with the victims. Their suffering forces our attention. Reading and watching the news confirms that we are alive and unharmed. We are relieved at our distance from the victims' torn lives. Often a great deal of help is immediately available to the stricken area. Emergency first aid, food, shelter, crisis counseling, and economic assistance are provided. Plans are formulated to rebuild the damaged physical environment. As the headlines gradually fade, our attention shifts to more pressing concerns. But for the victims, recuperation is neither certain nor uniform. Traumatic lingering in the dreams, fears, guilt, depression, and somatic complaints of survivors. Overall role effectiveness is diminished for many. Time spent in work, play, and rest loses its familiar cohesion, and daily chores seem so hard to perform in altered surroundings. Although few are permanently defeated by the personal crises disaster precipitates, many need direct and practical assistance to understand a new reality, to feel and to work through their losses, and to find the ability to remake their world.

A detailed exploration of human responses precipitated by disaster events will yield specific foci for therapeutic intervention. This paper will review the effects of environmental disaster on survivors, and present a model for activity intervention based upon principles of occupational therapy, crisis theory, and ego psychology.

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re-enactments of the stress-event complex in the gradual process of working through (4, p 269). The time that individuals require for this process varies widely. However, extended absence of emotion leads to impoverished coping responses, since it is connected to “... inhibition of activity, docility, indecisiveness, lack of responsiveness, and automatic behavior on the part of disaster victims.” (5, p 34)

What, then, are the feelings that must be faced and mastered? In the Recoil Stage of Disaster Syndrome (beginning hours to days after the event) people are highly altruistic and glad to have survived. According to Erikson, “Wallace attributes this stage of euphoria to a discovery on the part of survivors that the general community is not really dead after all ... in a way they are celebrating their own rebirth.” (6, p 201) Garb and Eng describe Counter-Disaster Syndrome in which volunteers overwork to help the damaged community. In their enthusiasm, activity levels are high, but often their efforts are inefficient, productivity low (7). Here again are elements of defense against the guilt, sorrow, and anger that are to follow. The Post-Trauma Stage brings real awareness of loss, and disillusioned complaints about insufficient help received. With the awareness of others’ deaths, injuries, and destroyed homes, victims experience survival-priority guilt. According to Erikson, the survivor “... has gained substance from his fellow’s death, if only in the sense that he is the recipient of his fellow’s share of grace and good luck.” (6, p 170) Lifton explains, “The idea that an individual’s first and strongest impulse is directed toward his own survival becomes vividly displayed and, in this death-saturated context, totally unacceptable. Even more unacceptable is the inner joy at having survived, whatever the fate of one’s fellows.” (2, p 47) Lifton further emphasizes the guilt felt by those normally responsible for nurturing roles, for they have failed to protect their dependents, even under the impossible conditions disaster provides.

Erikson noted classic symptoms of mourning and bereavement in victims of Buffalo Creek flood. However, he stressed the loss of physical and social elements of community as the main determinants of poor adaptation on the part of many victims, and the subsequent cultural slide toward weakness (6, pp 250-251). Searles asserts that throughout life Man struggles to achieve differentiation from his human and nonhuman environment, “... while developing, in proportion as he succeeds ... an increasingly meaningful relatedness with the latter environment, as well as with his fellow human beings.” (8, p 30) This relatedness “... alleviates his fear of death ... helps to find a sense of peace, a sense of stability, of continuity, of certainty ... it counteracts feelings of worthlessness and insignificance.” (8, p 122) This description of the benefits of such relatedness also serves as a measure of the damage wrought by its loss: “Losing faith in the very idea of order is one of the classic symptoms of chronic traumatic neurosis ... a generalized form of apprehensiveness and timidity that seems to extend to the whole social and physical environment, indicating that the traumatized person now regards his entire world as an unsafe place ... it makes people distrust the workings of their own bodies ... and (lose) confidence in the workings of nature.” (6, p 177) Although the nonhuman environment may reasonably seem malevolent to disaster victims, Searles insists that the “... mature person can readily go on to changing responses as his actual situation changes.” (8, p 114)

Adjustment, however, is not easily achieved. McGee and Heffron documented an increase in the death rate due to heart disease in the year following Wilkes-Barre flood. They attributed this increase to hopelessness and despair, particularly on the part of older adults unable to make a new start (9, p 315). Hasselkus, in her study of relocation stress in older adults, identified loss of autonomy and sudden disorientation as primary contributors to the increased death rate in members of this population who change residence. This stress is successfully reduced when a therapist aids a client in preparation for a move by offering opportunities for joint problem solving, decision making, and personal control over the boundaries and decor of the new living space (16, p 631-63). Recent studies of ten disasters indicate that problems in daily living caused by environmental destruction, loss of leisure time, and relocation to unfamiliar surroundings contribute directly to the intensity and duration of psychological disturbance in survivors (5, p 36).

**Crisis Theory**

Researchers have generally agreed that multiple problems face disaster victims, such as “... loss of a loved one, total or partial loss of home and possessions, physical injury, disruption or loss of employment, sudden relocation, separation from familiar surroundings, and extreme demands on physical endurance ...” and that “... in concert, such problems could place the individual in an extreme crisis situation,” (5, p 36) In the one-to six-week state
of crisis, "... it is postulated that the habitual problem-solving activities are not adequate." (11, p 24)

The individual or family, therefore, must develop new coping mechanisms to surmount the crisis. Their resources, in part, are determined by past experiences with crisis situations. Among families studied by Hill, "... previous successful experiences with crisis were predictive of recovery in a new crisis... once having been defeated by a crisis, the family appears not to be able to marshal its forces sufficiently to face the next event; there is, in other words, a permanent defeat each time." (12, pp 47-48)

Rapoport emphasizes the importance of the meaning attributed to the stressor event by a family in crisis. "The problem can be conceived as a threat, a loss, or a challenge... a threat... is met with anxiety. Loss or deprivation is met with depression. If the problem is viewed as a challenge, it is more likely to be met with a mobilization of energy, and purposive problem-solving activities." (11, p 25)

Furthermore, the nature, source, and destructive force of a stressor event, such as an environmental disaster, profoundly affects the intensity of the human crisis it precipitates. Feelings of anger and resentment are greater, and overall recovery, slower, if people rather than nature are perceived by the victims to be responsible for the disaster (13, p 10). The extent of physical and cultural damage to a community also bears strongly on the community's course of recovery. "People find it difficult to recover from the effects of individual trauma so long as the community remains in shreds... time can work its special therapy only if it acts in concert with a nurturing communal setting." (6, p 155)

Hill's equation proposes that a crisis (X) consists of a stressor event (A), interacting with the family's crisis-meeting resources (B), interacting with the meaning the family gives to the event (C) (12, p 36). Added to Hill's crisis equation are the victims' coping responses. According to Rapoport, "... the pattern of response for an individual or family necessary for healthy crisis resolution may be described as follows: (1) Correct cognitive perception of the situation... (2) Management of affect through awareness of feelings and appropriate verbalization leading toward tension discharge and mastery. (3) Development of patterns of seeking and using help with actual tasks and feelings by using interpersonal and institutional resources." (11, p 29)

Hamburg and Adams assert that "Behavior may be considered to serve coping functions when it increases the likelihood... that a task will be accomplished according to standards tolerable to both the individual and the group in which he lives." (5, p 280) Somehow, highly effective cognitive clarity, affective management, creative problem solving, and performance of daily living tasks must take place in the context of a "... rise in tension, general feeling of helplessness, and state of cognitive confusion." (11, p 28) if people are to surmount crisis. The "... crisis proof family must have agreement in its role structure, subordination of personal ambitions to family goals, satisfactions within the family obtained because it is successfully meeting the physical and emotional needs of its members, and goals toward which the family is moving collectively... Lacking these, the family is inadequately organized and likely to prove vulnerable to crisis-precipitating events." (12, p 42)

In this paper it is proposed that activity interventions designed to mobilize effective coping behaviors can transform negative elements of crisis-meeting processes into the seeds of a positive, recuperative milieu.

Paradigm of Disaster Response

Tierney and Baisden, in reviewing the work of several researchers, have concluded that, in spite of disaster-related stress, victims often recuperate over time. Follow-up studies show surprising variation in the effects of disaster on the mental health of individuals (5). A paradigm may be constructed to trace the factors that account for differences in the recovery of individuals and communities. Under the worst conditions, the disaster event is caused by human error or negligence, and destruction encompasses the entire community. If victims then have a history of failure to surmount crisis, and tend to define the disaster only as a threat or a loss, they will not mobilize adequate coping responses. Unable to manage their feelings, understand their situation clearly, solve problems, and complete tasks necessary to crisis resolution or activities of daily living, they will tend increasingly to see their situation as hopeless, themselves as helpless and inadequate, their environment as malevolent. At each step of this process, failure begets further failure to meet and resolve new crisis elements. Conversely, in cases of natural disaster in which some major part of the community has survived, and in which people have a history of surmounting crisis, and are able in part to define the disaster as a challenge, successful coping responses are mobilized. Affect is managed, albeit with difficulty, thinking and problem solving are clear and logi-
cal, and both crisis tasks and activities of daily living are performed. Each successful step promotes a milieu of hopeful self-esteem and a feeling of progress in rebuilding. This positive context promotes successful adaptation to each new element of the crisis, thereby facilitating recovery. Of course, no individual, family, or disaster corresponds exactly to either situation; rather, disaster responses fall at different points on a function/dysfunction continuum.

Model for Evaluation and Activity Intervention
Parad’s model for crisis intervention stresses frequent contacts over a short time period to help people accurately perceive their situation and deal logically and positively with the current problems. This model is routinely used in disaster-sticken communities (14). Tierney and Baisden reiterate Frederick’s observation: “It has been shown repeatedly that traditional psychotherapy is often quite inappropriate in the post-disaster setting... People need help in very material ways... problem-solving, information, concrete assistance with daily tasks.” (5, p 43) Furthermore, a collaborative, strength-mobilizing outreach approach to intervention follows logically from Faberow and Frederick’s assertion that disaster victims are basically a normal population who resist mental health labeling and are unlikely to use services located in offices of mental health agencies (15).

In the treatment model proposed in this paper, activity intervention aims to directly improve coping behavior; therefore both screening and evaluation of disaster victims must identify individuals and families who are inadequately coping and determine specific areas of function and dysfunction in each case. Since victims are essentially a normal population, evaluation must be performed in the spirit of collaborative problem solving. Assessment of the specific effects of the disaster on the individual or family, their crisis-meeting resources, and the meaning they give to the disaster itself are vital in each case since these three factors interact to determine the nature of the crisis. Knowledge of the history of the region, its cultural themes, and the extent of actual damage to the community provides important contextual elements in planning intervention.

Occupational therapy assessment tools and techniques garnered from institutional work may be usefully applied or adapted to disaster settings. When feasible, activities of daily living questionnaires and functional assessments may be used. Activity configurations aid in evaluating temporal functioning. Activity, vocational, educational, and social histories provide important contextual data. Projective tests help to establish the individual’s present concept of self and environment as well as his emotional state.

Criteria for treatment are based upon observation of timid, confused, helpless, and dependent be-
behavior and failure to accomplish primary crisis tasks, activities of daily living, or prescribed nurturing roles for a protracted period without improvement. Generally, those not involved in setting meaningful goals, reestablishing active engagement in daily routines, and rebuilding their physical environment, even while managing painful feelings, are failing to cope.

Activities of Daily Living
Depression, confusion, injury, and relocation may all undermine an individual's sense of competence in performing daily living tasks (i.e., household chores, food preparation, hygiene, child care, work). Although a therapeutic model permits direct assistance with these tasks in the early stages of recovery, intervention should primarily facilitate the individual's own efforts to function. White believes that people possess an innate drive toward efficacy (16, p 273). Smith suggests that, "A cluster of attitudes toward the self—as efficacious and worthy of respect—is the motivational core of competence. A complementary hopeful attitude toward the world is the other side of the coin. These attitudes and their negative counterparts tend to be self-confirming resulting in benign or vicious spirals of adaptation or maladaptation. The therapeutic task is to transform the vicious spiral of helplessness into a benign one enhancing the patient's agency." (17, p 11) Since a self-respecting hopeful attitude "... provides the basis for an active, coping orientation," while "... feelings of impotence and despair go with a passive, dependent, fatalistic orientation," then "... the idea is to provide the client with a choice of tasks, selected in terms of his capacities and interests, that do pose him a challenge, one that he can accept as long as he has the therapist's encouragement and support, and that can lead to success through his own efforts, making him the reader to rise to further challenges." (17, pp 13-14) As previously stated, depression is a common sequela to disaster losses. Beck confirms that graded task assignments help to refute the helpless expectations of depressed patients (18); also, Loeb et al. found that initial success improved further task performances by a depressed group (19).

Clinical examples from the author's experience, although not from disaster settings, illustrate the relevant treatment principles. A highly dependent 50-year-old man panicked when he learned that his mother was terminally ill. Without her at home, he feared he could neither feed himself nor perform basic chores. During two consultation sessions, he prepared a pudding dessert and did the laundry with the therapist's support and minimal assistance. Through this brief activity process, he was faced with his own ability to learn and to function. This reduced his acute panic reaction, and helped him to focus on his mother's illness, related issues, and decisions.

Intervention in the daily living activities of individuals in crisis can help them relate effectively to the nonhuman environment. Following a psychotic break, and hospitalization, a client was relegated to living alone in a single-room occupancy hotel. He felt quite hopeless initially, and the crime, filth, and insects made only more graphic his inner wasteland. Through his therapist's gift of a plant, and his creation in occupational therapy of functional decorative objects (wooden clothes rack, ash tray, collages, paintings, and frames) this client created an aura of comfort and self-respect in his room. Although not a cure for the serious pathology still present, this environmental metamorphosis, the result of his own intentions and actions, set the client on a path toward more hopeful self-expression and productivity.

Loss of employment due to environmental damage or personal injury is a powerful deprivation. As a primary source of personal income, work determines one's ability to survive, and in great measure, the quality of one's existence. The individual's identity, social position, sense of aspiration, mastery, and productive involvement with society are also closely bound with work. The Holmes-Rache Social Readjustment Scale, rating relative stress caused by life changes, includes 10 items directly related to work among the 43 items ranked. Being fired and retiring both rank among the ten most stressful life events (20). In disaster, surely, loss of work adds to the magnitude of stress and the multitude of recuperative tasks.

Injured individuals must reassess their skills and adjust vocational goals accordingly. Those out of work due to destruction of their place of business must clarify the likelihood of securing similar employment, or the need to identify and pursue new vocational options. These circumstances may require individuals to develop new attitudes and skills. Intervention in both instances demands a sensitive, carefully paced approach to evaluation, counseling, and referral. Standard methods of assessing vocational interest and ability, work samples, problem solving, and role training are familiar aspects of occupational therapy practice. Intervention can be designed so that loss of work in disaster does not cause loss of confi-
Temporal Adaptation

Kielhofner describes time as an ever-present framework upon which daily activities are built. "There is a natural temporal order to daily living organized around the life-space activities of self-maintenance, work, and play. . . . Health consists of the proper balances of the life spaces that is both satisfying to the individuals and appropriate for their roles within society. Balance refers to more than just so much work, play, and rest. Rather, balance recognizes an interdependence of these life spaces and their relationship to both internal values, interests, and goals, and external demands of the environment." (21, p 238) In disaster, the demands of the environment become primary, and often overwhelming. The loss of a sense of self-determination in the allocation of time intensifies helpless feelings. The change or absence of regular routine is disorienting. Depressed, inactive individuals may feel frozen in time. On the other hand, constant struggle without adequate leisure, recreation, and rest, leaves individuals drained, fragile, and ineffective, as in Counter-Disaster Syndrome.

Time has further significance because "Man draws upon his past experiences as an information source for future action. He projects himself into the future, planning events, and setting goals that may not be realized for days, months, or even years. Through imagination, he can test alternative courses of action and contemplate their consequences." (21, p 237)

Activity intervention can provide the opportunity to evaluate and once again to consciously determine the use of one's time. As present activities are scheduled and prioritized according to one's goals, the individual gains a sense of autonomy in creating an immediate and a distant future. Routine is reestablished, leisure reclaimed. Maslow asserts that safety, a basic human need, is determined in part by the predictability of the environment (22, p 40). Disaster undermines one's belief in a benign, predictable environment. Self-directed patterning of time, therefore, can help restore survivors' lost sense of security and, as the following incident demonstrates, self-control.

A mother and her 7-year-old daughter were locked in a frustrated struggle around the daughter's routine of washing and dressing each morning to prepare for school. The mother could not tolerate the daughter's slowness when she dressed independently, while the daughter felt pressured by constant reminders and shamed by mother's last minute help with her clothes. Through negotiating and implementing a mutually acceptable time frame and schedule of morning events, the daughter learned to wash and dress independently. With the therapist's help, mother began systematically recording and reinforcing her daughter's independent efforts. The previous difficulties quickly disappeared, and, according to the mother's report, the daughter felt surprised and delighted at mastering her own behavior.

Management of Affect

As formerly discussed, coping and recovery in disaster must include management of painful affect in addition to task accomplishment. For those whose function is overcome by feeling, an effort can be made to structure time distinctly for doing and for feeling. This some-what unnatural separation can help some individuals to regain gradual control of their behavior.

As creative/expressive media are useful in evaluating feelings toward oneself, others, and the environment, so may they play an important role in the working through process. Lifton studied the films, plays, literature, paintings, and sculpture that emerged following the bombing of Hiroshima. He determined that "Artistic re-creation of an overwhelming historical experience has much to do with the question of mastery." (2, p 397) Lifton noted, "Art is one of the most important means of coming to terms with a vast historical trauma . . . a possible source of wisdom about man's increasingly troubled relationship to the kinds of death which face him."

Through activity intervention, many people can use artistic media to express and master feelings. Those who cannot use words well may find these new-found opportunities for eloquence. Since gradual awareness, expression, and repetition of memory and feeling are central to the recovery formulations of many disaster researchers, creative/expressive media can be expected to play an important part in the therapeutic process.

A large group of patients in a therapeutic community program were faced with intense environmental changes outside their control. Several staff members were leaving, and it was announced that the entire program would move to new quarters. The staff attempted to work for several weeks with the patients' feelings of sadness, fear, and anger; however, it was through the performance of a hilarious one-act play of the patients' own creation, containing powerful representations of
irrational and neglectful behavior on the part of the staff, that a turning point was reached. This concrete expression of feeling through such a masterful and unified group process brought a new perspective of survival to the patient community.

**Summary**

As purveyors of therapeutic activity, occupational therapists can contribute greatly to disaster rehabilitation efforts. Using activities to facilitate adaptive responses will minimize and reverse the destructive interplay of cognitive/emotional dysfunction with concrete problems of daily living and rebuild victims’ sense of effective interaction with their environment, thereby improving the speed and extent of recovery. However, there is as yet no literature or research on this subject. Changes in the active lives of disaster victims must be carefully studied, and the benefit of specific activity interventions documented. Finally, training in crisis intervention for therapists must be designed and undertaken if this area of practice is to be developed.

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