

Informed Ownership, Training, and Organization for Successful Disaster Preparedness

Güler Okman Fisek, Serra Müderrisoğlu, Nur Yeniçeri, and Gökçe Özkarar

Preparing for future disasters is a many-faceted process involving the public as much as it involves local and central authorities. The focus of this paper is on the public; what people can and should do to minimize future disaster risk and how to motivate people to act.

Contributions to disaster readiness involve a number of actions, from self-preservation measures to community acts. Included are:

- Information gathering and planning, such as creating family disaster plans; learning what to do in an emergency
- Learning skills to help others, such as first aid
- Preparing for a disaster, filling an emergency bag with provisions
- Non-structural mitigation in homes
- Structural evaluation of dwellings and taking corrective action
- Taking responsibility for communities and neighborhoods.

All of the above involve knowledge, time, energy, and financial resources ranging from minimal to significant. Thus the decision to engage in disaster preparedness could mean requirements for major funding. Research indicates that decision making with respect to risk-reducing behavior is a function of a number of factors. These include personal factors, chief among them, motivation (Rohrman 2000). The decision making process is neither simple nor a totally rational cost-benefit analysis. Under the rubric of personal characteristics lie a series of perceptions and attitudes about self-reliance, personal responsibility, the ability to conquer nature, and society's expectations of government. The outcome of this complex decision making process is often no action or insufficient action. Research indicates that

tendencies to denial of risk, fatalism, and belief in the inability to control natural events, passive expectations of the government are all hindrances to effective action (Hurnen and McClure 1997; Jackson 19997; Rohrman 1999). Given the above situation, authorities and experts who want to increase public awareness of and readiness for disasters face a difficult task; namely convincing the public that risk reduction is in their best interest, feasible and effective. This is where education comes in.

What Kind of Education?

Research has shown that simply informing the public of the whys and hows of risk reduction does not lead to action (Handmer 2000; Hurnen and McClure 1997; Johnson 2002; Rohrman 1999; Sakalli 2000; Sjöberg 2000). While people tend to have realistic perceptions of disaster risk and actions necessary to reduce such risks, they do not report consistent risk reduction behavior despite positive attitudes toward risk reduction. Psychological barriers, community values, and expectations regarding self-protection from disasters need to be addressed in any educational effort.

In short, getting the public to engage in risk reduction and mitigation is a complex endeavor involving many levels of communication with an initial emphasis on creating a sense of ownership of the problem. Thus it is essential to utilize a multifaceted approach that involves a comprehensive information dissemination campaign, including straight factual information about disasters, ways to reduce risk, communication aimed at overcoming psychological barriers to risk reduction, and increasing ownership of preparedness efforts. Such a campaign should be accompanied by community-wide hands-on training in emergency preparedness. Further, such training should be coordinated with team building efforts for disaster preparedness at the community level led by neighborhood associations and nongovernmental organizations (NGOs).

Efforts have been made in Istanbul in each of these areas with respect to earthquakes; however research shows that actual risk reduction and preparedness is not extensive, nor do people feel prepared (Fisek et al 2002). This indicates that a truly comprehensive campaign cannot be piecemeal, but has to be based on a sound theoretical framework and principles of operation in order to reach the public effectively.

Principles of Education in Disaster Preparedness

Below is a list of principles that are essential for a comprehensive approach to public education, with a specific focus on earthquake preparedness (Fisek

et al 2003). These principles are important when the goal is to promote public ownership of disaster preparedness.

Trustworthiness and Credibility

Literature highlights that trust in authorities is essential for communities to engage in mitigation and preparedness (e.g. Weinstein 1989). If experts are not trusted, they cannot convince people to engage in costly mitigation measures (Sjöberg 2000). Trust is also a matter of “public trust” – where authorities also contribute to and participate in activities for the public good. Scientific controversies as well as government statements to the media after the 1999 earthquakes left a residue of mistrust in the minds of the public (Fisek et al 2003). Therefore any declaration made will be publicly evaluated for trustworthiness (Kunreuther, Slovic and McGraw 2002; Rohrman 2000; Slovic 2002). Information has to be scientifically sound, the limits of knowledge have to be acknowledged, and statements have to be concrete, to the point and understandable by the public.

Addressing Cognition, Emotion, Attitude and Expectation in Unity

Disasters such as earthquakes are not experienced only as cognitive phenomena by people (Hurnen and McClure 1997; Johnson 2002). The most frequent reaction to earthquakes is cited as “fear and panic” (Fisek et al 2003; Karanci and Rüstemli 1995). Non-logical reactions such as denial (Hurnen and McClure 1997) are especially evident when the ability to control events has been weakened (Fetherstonhaugh 1997 cited in Slovic, 2002; Weber 1997 cited in Slovic 2002). Similarly, positive attitudes towards preparedness do not necessarily translate into actual preparedness (Farley 1998; Fisek et al 2002; Weinstein 1989).

Transforming Earthquakes from Disasters to be Awaited in Helpless Fear to Natural Events that can be Coped With.

When earthquakes are seen as unavoidable disasters, a “learned helplessness” syndrome is created. This can cause public apathy towards preparation, while a coping expectation is more likely to lead to preventive action (Fisek et al 2003). Earthquakes cannot be prevented, but damage can be minimized (Hurnen and McClure 1997). A coping stance can be fostered by appropriate information on what can cause damage and what damage is preventable. The emphasis should be on how to withstand damage rather than what leads to damage. Such information can be buttressed by “success stories” (Scawthorn 2002) of buildings and people that survive events.

A Can-Do Approach

In line with the above principle, educational efforts should be geared toward information dissemination to a population that assumes responsibility for disaster mitigation. Factors involved in the decision to take preventive action include: the level of danger, the risk of damage, possible preventive action, knowledge and skills required, resources needed, and personal factors (Rohrmann 2000). The most important personal factor is a belief in one's ability to cope, an internal locus of control, which increases the probability of preventive action (Rohrmann, 2000). An important consequence of internal control is a sense of responsibility for what happens. Both factors are essential for preparation and mitigation. They can be further strengthened by a belief in the usefulness and cost effectiveness of such action (Weinstein 2000).

Helping People See Disaster Readiness as a Human Right

Disaster readiness is seen primarily as a security issue, with an emphasis on hazard reduction. However, disaster readiness should be seen as a human right (Weinstein 1989). Expectations of "a paternalistic administration protecting the public" should change to "a service-oriented administration respecting the rights of the public." This right is firstly a right to know (Rohrmann 2000). Correct, realistic information respectfully presented to the public can be effective. The development of an awareness of citizen rights can lead to an awareness of responsibilities, which is needed to take action. This combination of rights and responsibilities paves the way to the next principle.

Creating an Ethic of Mutuality Between the Public and the Administration

Disaster readiness is a process involving individuals, families, neighborhoods and cities. Thus the public, the administration, volunteer organizations, and experts have to be open to ongoing cooperation. Expecting each side to do their share without coordination will not lead to success; reciprocal information sharing and cooperation are essential. The first step should come from the administration through information dissemination of the problem and ways it can be addressed. The administration can then request public input and cooperation. Such openness should increase trust and the willingness to join in mitigation efforts (Ermolieva et al 2002).

Respect for Public Values and Judgments

Research shows that communities make relatively realistic evaluations of earthquake risk, preventive action and their own situation (Fisek et al 2002;

Karanci and Rüstemli 1995). Taking action is not easy, however. Many doubts, fears and questions have to be addressed. Information has to incorporate these normal responses to risk and then channel them into action. An approach that shows respect for the public's position and cultural characteristics will help develop "internalization" of the need to engage in preventive action (Aksit and Karanci 1999; Hurnen and McClure 1997; Pennings et al 2002; Sjöberg 2000).

It is important to consider areas where cultural characteristics come to the fore in preparing educational programs. One important characteristic is reciprocity between nuclear and extended families in Turkish culture. Protection of the extended family from hazard comes before protection of neighbors and other groups (Fisek et al 2003). This value should be respected and fully utilized. Attitudes prevailing in the social environment are also important and should be mobilized (Fisek et al 2003; Hurnen and McClure 1997; Sakalli 2000). Fatalism, another characteristic, prevents action when coping seems difficult. This needs to be addressed with understanding and evidence of the possibility of developing successful coping strategies.

Evaluating the Program and its Effectiveness

Disaster preparedness education should not be a one-time phenomenon. In order for preventive action to be developed, internalized, and sustained, education and self-reliance must be continuously fostered. Any continuous endeavor should be assessed as to its effectiveness, and modified according to need, so that it becomes an ongoing and self-renewing program. An essential requisite for such a program is evaluation (Rohrmann 2000). To do this, an evaluation strategy should be developed, including means of assessment, criteria of success and target audience.

Conclusion

The above principles highlight an important concept - that disaster preparedness is a multifaceted process. First, it involves the public in many ways. Public trust, a belief in self-reliance, internal control, and the significance of others' and community safety are all critical issues to be addressed. Secondly, it involves multiple factors on the interface between the public, government authorities and experts. Mutual trust, respect, a belief in human rights, an ethic of cooperation and a willingness to evaluate organizational performance become important in these relationships. To realize disaster mitigation, a disaster management education program for the public should use a three-pronged approach:

- A comprehensive information dissemination campaign using the visual media for widespread effect and aimed at a wide cross-section of the public should be instituted. In addition to information about disaster risks, such a program should provide information on risk reduction measures. Emphasis should be on demonstration of the feasibility, effectiveness, and usefulness of these measures. Communities should understand that risk reduction is in their best interests and meaningful guidance is available.
- With such a campaign, hands-on practical training programs in risk reduction and mitigation should be offered to various segments of the community. Volunteers who can provide training to others should be supported. Programs should also be interesting so that people are eager not only to learn, but to practice their new skills.
- These two kinds of programs are expected to lead to increased public awareness of personal responsibility, civic rights, and the ability to affect results. These are the ideal conditions for the involvement of nongovernmental organizations. There are many in Istanbul that organize communities and provide linkages with local authorities to improve disaster risk management.

The main ingredients for increasing and making effective public contributions to disaster management are informed public ownership of responsibility, training in risk mitigation and local organization for community preparedness.

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