and 75 adults from the war region. Researchers administered the Childhood Post-traumatic Reaction Index, anxiety questionnaires, projective methods, and clinical case examples. Observed reactions in the three groups of subjects (pre-school, school-age, adolescents) are as follows: (1) phobic reactions; (2) psychosomatic disturbances; and (3) affective disorders. The most frequently observed defense mechanisms found were denial, regression, splitting, altruism, and sublimation. Examples of each will be presented with clinical material.

A key issue in the psychological response to disaster is the effect of bereavement and loss. Individual reactions are determined by one's developmental stage, temperament, past experience with trauma, and resiliency. The powerful link between response to trauma and social cultural factors are elaborated.

1. The JFDP is an academic exchange program administered by the American Councils for International Education (ACTR/ACCELS), and is fully funded by the Bureau of Educational and Cultural Affairs of the United States Department of State.

**Keywords**: children; coping; defense mechanism; disasters; psychological response; traumatic events
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## Culture-Sensitive Aspects of Psychosocial Post-Disaster Care in the Netherlands after the Bijlmermeer Airplane Crash and the Enschede Fireworks Disaster

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**Introduction**: When a disaster strikes, a large group of people may be affected either mentally or physically. This group, although united by their communal ordeal, may consist of people of different ethnic or cultural origin. Ethnic or cultural minorities generally are considered to be at-risk groups when it comes to the effects of a disaster. In 2003, Impact, the Dutch knowledge center for post-disaster psychosocial care, started a project called "Lessons Learned". This project reviews the psychosocial interventions in the Netherlands regarding the affected ethnic minority groups of the Bijlmermeer airplane crash (1992) and the Enschede fireworks disaster (2000) in order to make recommendations for psychosocial interventions if disasters occur again.
**Methods**: Obstacles are identified and recommendations are formulated after analyzing >55 evaluation reports, scientific studies on psychosocial interventions after the two disasters, descriptions of treatments, and by interviewing various caretakers who were involved with the preventive, curative, and care interventions.
**Results**: Language problems emerged quickly, causing communication gaps during the aftermath of the disasters. To improve communication, a number of measures were taken from the start, and others were added after some time. Cultural differences and codes interfered with reaching the various ethnic groups, and with the success or failure of the available treatments. Some other factors were important as well. A multidisciplinary approach, cooperation between (mental) health institutions and community centers, and the sharing of knowledge and information all were essential in mitigating the psychosocial consequences of a disaster for everyone concerned. A continuous update of skills and knowledge for (mental) health personnel regarding a multicultural population remains an issue that should not be overlooked.
**Conclusion**: The Dutch experience with two major disasters makes it clear that a uniform psychosocial approach may not be sufficient to provide psychosocial care to all affected people. When it comes to preventive actions, interventions during the acute phase and psychosocial aftercare on the medium- and long-term and a more fine-tuned approach geared to the special needs and conditions of various sub-groups is essential to help alleviate the pain and stress caused by a disaster.

**Keywords**: care; communication; cooperation; cultures; language; Netherlands; post-disaster; psychosocial
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## Humor and Religion: How an Emergency Department Coped with the 2003 Severe Acute Respiratory Syndrome (SARS) Outbreak

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**Objective**: This study examined the psychological coping strategies adopted by emergency department (ED) healthcare workers who cared for Severe Acute Respiratory Syndrome (SARS) patients during the outbreak in Southeast Asia in the spring of 2003.
**Methods**: During the outbreak from 13 March to 31 May 2003, the ED in the study was Singapore's only SARS-screening center and was closed to all other patients. The use of personal protective equipment and directives for infection control were strictly enforced. Heathcare workers experienced unusual stressors, namely, the unknown nature of the disease; the fear of infection, contagion, and death; stigmatization and discrimination; disruption of normal work and lifestyle; and conflicts with the sense of duty to care for patients and sick colleagues. To help healthcare workers cope, the study hospital and ED introduced psychosocial measures including: (1) enhanced communication within the hospital and ED; (2) enhanced communication with the community and public relations management; and (3) welfare and psychological support for healthcare workers.

In November 2003, a self-administered survey of ED doctors and nurses was conducted. Data collected included demographics and responses to Coping Orientation to Problems Experienced (COPE), which groups coping responses, according to 15 scales, each with a minimum score of 4 and maximum of 16. The higher score in a scale meant more use of that coping response. The scales were then categorized into problem-focused and emotion-focused strategies, which were adaptive, or less-useful/adaptive strategies.
**Results**: Thirty-eight (92.7%) of 41 doctors and 58 (69.9%) of 83 nurses responded. The mean age of the doctors was 31.6 years old (standard deviation (SD) = 4.4) and the mean age of the nurses was 32.1 years (SD = 9.2). Respondents scored 9.9/16 (95% Confidence Interval (CI) = 9.5–10.3)

for problem-focused and 9.5/16 (95% CI = 9–10) for emotion-focused coping strategies, significantly higher ($p$ <0.001) than for less-useful coping which scored 7.5/16 (95% CI = 7.2–7.9). Behavioral disengagement, and denial were used rarely, and alcohol/drugs were almost never used, with scores of 6.3/16 (95% CI = 5.9–6.7), 5.3/16 (95% CI = 5.0–5.7) and 4.5/16 (95% CI = 4.2–4.9), respectively. Doctors chose humor as a coping response significantly more often ($p$ <0.001) than did nurses, scoring 9.6/16 (95% CI = 8.5–10.7) compared to 7.1/16 (95% CI = 6.3–7.8) for nurses. Filipino healthcare workers turned to religion as a coping response significantly more ($p$ <0.001) than non-Filipinos, scoring 14.4/16 (95% CI = 13.3–15.4) compared to 9.9/16 (95% CI = 9.0–10.9) for non-Filipinos.

**Conclusion:** With a supportive hospital environment, ED healthcare workers chose adaptive strategies to cope with the SARS outbreak. Humor was strongly preferred by doctors, while Filipino healthcare workers turned to religion as their preferred coping response. In planning psychosocial interventions and mental health services, management should be aware of these preferences.

**Keywords:** coping; disaster; doctors; humor; nurses; psychological; religion; SARS

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### Coping with Terrorism: Denial Versus Grief

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A terrorist attack is a national disaster unlike any other natural or man-made catastrophe. Its aim is to cause pain, destruction, and disruption of life in order to achieve political gain. When such an attack occurs, the global reaction is one of shock. This reaction becomes differential very quickly. Whereas the national reaction wanes rapidly as life gets back to normal, the reaction of the involved individuals becomes endless. On the national level, there is a massive response of denial, which is encouraged by the authorities that try to eliminate signs of the attack as soon as possible. This denial reaction is necessary in order to maintain life. The responses of the involved individuals are of loss and grief. National and Individual reactions are in conflict. The denial aggravates the mourning. Feelings of anger, disappointment, lack of understanding, and resentment usually characterize those in mourning. However, the denial response is natural and represents a wish for self-defense that does not mean lack of caring. Therapists should be aware of the appropriateness of the denial and be able to cope with such denial while working with the victims.

**Keywords:** denial; grief; response; terrorism

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## *Theme 2: Civil-Military Collaboration*

*Chairs: Edita Stok; Tim Hodgetts*

## *Theme 3: Education for Disaster Medicine*

*Chairs: Geert Seynaeve; Judith Fisher*

### Overview of Actions Taken by Hellenic National Centre for Emergency Care Responding to the 07 September 1999 Earthquake in Athens

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The Hellenic National Centre for Emergency Care is an emergency medical system in Greece that provides prehospital emergency medical care. It has a Special Unit for Disaster Medicine (ETIK) responsible for planning, responding, training, and exercising for disasters. This presentation describes the 1999 earthquake in Athens, pointing out the actions that must be improved and what must be done in this direction, using the Conceptual Framework model for "Disaster Medicine" as developed by the World Association for Disaster and Emergency Medicine (WADEM) and the Task Force for Quality Control of Disaster Medicine.

Athens, the capital of Greece, has a population of 4 million, and has a dense concentration of buildings. On 07 September 1999 at 14:56 hours, an earthquake (magnitude of 5.9 on the Richter scale) struck Athens. A total of 100 buildings collapsed (both residential and industrial), 5,000 buildings were damaged (among them two hospitals), 85 persons were trapped alive, 143 people were found dead, 750 people were wounded, and 80,000 people were left homeless.

The emergency medical services (EMS) response was organized promptly, but problems were identified. Problems in planning and management included: (1) there was not an adequate plan; (2) only radio communication was available; (3) difficulties in resupplying and in finding specific supplies; (4) little awareness of potential hazards, such as the chemicals from collapsed industrial buildings; (5) difficulty in data collection and on-site documentation; (6) no cooperation and coordination between emergency medical services and other on-site forces (especially at the command level); (7) difficulties coordinating with hospitals; (8) insufficient forensic facilities; (9) diversity of international assistance provided was difficult to coordinate; (10) psychological support was not centrally organized and was not coordinated; and (11) inaccurate media coverage of the event.

From the medical aspect, we did not encounter many difficulties due to experiences obtained from everyday work and previous earthquakes. Prehospital triage and treatment were provided, and 85 people were rescued—most of them within the first 12 hours, and two persons were rescued in the next 24–48 hours. Unfortunately, many victims died in the hospitals due to their injuries.