

## G-61

**The Istanbul Straits: An Opportunity for Trade or a Potential for a Major Disaster?**

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The Istanbul Strait, connecting the Black Sea to the Sea of Marmara, is a waterway of 17 miles with a width ranging from one to four miles. It resembles a river more than a maritime strait. It has sharp bends with a current from north to south attaining a velocity of five knots at the narrows. The increasing misuse of the Istanbul Strait not only is a danger for the only trade route to the international waters of the six littoral states (Bulgaria, Romania, Moldavia, the Ukraine, Russia, and Georgia), but also presents a threat for the 10-million persons who inhabit Istanbul, which accounts for 55% of Turkey's economy, and historically, ecologically, and naturally is one of the most beautiful cities of our world.

Istanbul is only meters away from a possible disaster spawned by errant navigation through the strait. If one of the ships passing through the Strait was punctured, either by crashing into another ship or by running aground, the resulting explosion could release the destructive power of a small nuclear bomb, destroying an area within a 30 kilometer radius. Such an event could cripple approximately 2-million people who daily cross the Strait with more than 1,400 boats and ferries, despite the two modern bridges. Such an event is likely to happen unless we all concentrate on the safe use of the Istanbul Strait for the sake of our rapidly polluting and disaster-prone world.

Serious warnings in much lesser critical times were given, but no lessons have been learned. In 1998, the Romanian tanker, *Independenta*, collided with a Greek freighter just at the lower end of the Istanbul Strait. The collision caused a massive explosion with terrible consequences. Forty-three sailors were burned alive, windows shattered, and the tanker sank leaving behind a burning lake of crude oil for six weeks and a formation of black smoke over Istanbul for two months. The event resulted in destruction to the fishing industry. Finally, the slick traveled down through the Canakkale Strait of the Aegean Sea and caused environmental damage to countries to the south and west of Turkey.

Another incident occurred in March, 1994, when a Greek Cypriot oil tanker carrying 19-million gallons of crude oil collided with an empty Greek Cypriot cargo ship. This collision left similar damage in its wake, and caused a total halt to navigation of the Strait for nine days.

Hazardous cargo such a petroleum, chemicals, and explosives passing through the Istanbul Strait with a rapidly increasing number of ships and tonnage makes Istanbul prone for a major disaster of our century.

**Keywords:** explosion; hazardous cargo; hazards; Istanbul; risks; ship collisions; shipping; Turkey

**Post-Traumatic Stress Syndrome**

Chair: *Hideto Hirotsune*  
Tuesday, 11 May, 13:30 hours  
*Special Lecture I*

## L1-1

**Disaster Stress Reactions**

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**Disaster Stress**

- 1) Life-threatening experience
- 2) Bereavement
- 3) Property loss
- 4) Relocation (shelter or temporary housing)

**Four Phases of Post-disaster Reaction**

- 1) Heroic phase
- 2) Honeymoon phase
- 3) Disillusionment phase
- 4) Re-stabilization phase

**Mental Disorders Associated with a Disaster**

- 1) Acute Stress Disorder
- 2) Post-Traumatic Stress Disorder
- 3) Manic episode
- 4) Depression
- 5) Brief Reactive Psychosis
- 6) Relapsed Schizophrenia
- 7) Alcoholic Abuse
- 8) Adjustment disorder

**Crisis Intervention in Disaster**

**Keywords:** crisis; disasters; interventions; mental disorders; phases; reactions; stress; stressors

## L1-2

**Psychological Responses of Disaster Workers and Intervention for Secondary Disaster Victims**

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As is often said, "Disaster workers are the secondary disaster victims." But for centuries, we Japanese were making light of psychological effects of disasters on victims, and much less on disaster workers. Although large disasters repeatedly struck and devastated this country, our "ignorance" was not broken until the Hanshin-Awaji earthquake in 1995. In other words, disaster workers were not prepared for the psychological care of disaster victims and themselves; yet they worked against the tough situation caused by this enormous, urban catastrophe that killed over 6,500 people. After the earthquake, the national and local governments established the Disaster Victim Assistance Program (DVAP) to promote mental health for the people who were hit by the earthquake. "Helping helpers" is one of its main goals.

In this presentation, I will demonstrate findings from the research by the DVAP regarding the psychological responses and mental health conditions of disaster workers after the great earthquake. Twenty-six percent of firefighters suffered from intrusion symptoms 13 months after the earthquake. According to scores of self-rating scales including IES, even at 26 months after the quake, 21% were presumed to have PTSD. Schoolteachers also were disaster workers, for evacuee shelters were setup in schools, and teachers were obliged to manage them. We estimate about 13% of the school teachers suffer from PTSD at 26 months after the earthquake. Both in firefighters and teachers, critical incident stress (CIS) and the severity of tasks strongly related to their psychopathology. These rates are much higher than are those of ordinary citizens hit by the same earthquake.

The Japanese often hesitate to express their emotions. Therefore, I also will offer some possible modification to methods of intervention or critical incident stress management (CIMS), e.g., debriefing, for Japanese disaster workers on the basis of cultural background. The researches of which results are cited in this title are partly attributed to the Research Project for Traumatic Stress Responses (Chief Scientist: Dr. Yoshiharu Kim, MD, National Institute of Mental Health, Japan) on the sponsorship of the Research Fund for Psycho-Neurological Disease, Ministry of Health and Welfare, Japan.

**Keywords:** critical incident stress management; disaster; firefighters; Hanshin-Awaji earthquake; interventions; post-traumatic stress disorder (PTSD); psychopathology; stress; teachers; workers

### L1-3

#### Critical Incident Stress Debriefing (CISD) for Emergency Personnel

Reiko Homma True, PhD

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The goal of this presentation will be: 1) to acquaint the emergency medical personnel about the potentials for experiencing stress reactions while engaged in frequent emergency or disaster-assistance activities; and 2) to provide a brief overview of the critical incident stress debriefing frequently utilized in preventing the development of post traumatic stress disorders (PTSD).

The presentation will include:

- 1) Types of critical incidents or disasters:
  - a) natural disasters, e.g., earthquakes, floods, fire
  - b) man-made disasters, e.g., chemical spill, terrorist attack, war, plane crash, car wreck, murder, accidents;
- 2) Types of stress reactions:
  - a) Physiological, e.g., increased heart beat, blood pressure, nausea, upset stomach, diarrhea, trouble breathing, headaches;
  - b) Cognitive, e.g., memory problems, disorientation, confusion;
  - c) Psychological, e.g., anxiety, fear, excessive worry, depression;
  - d) Behavioral, e.g., outbursts of anger, increased use

of alcohol and/or drugs, frequent arguments, marital problems, violence;

- 3) Critical Incident Stress Debriefing: Historical background and relationship to emergency personnel;
- 4) Phases of Critical Incident Stress Debriefing:
  - Phase 1: Introduction and explanation of rules
  - Phase 2: *Fact Phase* — What was your job? What happened?
  - Phase 3: *Thought Phase* — What were your first thoughts?
  - Phase 4: *Reaction Phase* — What was the worst thing about this for you?
  - Phase 5: *Symptoms* — What symptoms did you experience at the scene? Next few days? Left over now?
  - Phase 6: *Teaching Phase* — What to expect; coping strategies; and
  - Phase 7: *Re-entry Phase* — Transition back to work
- 5) When to refer to professional experts (both medical and psychiatric)?

**Keywords:** critical incident stress debriefing (CISD); disasters; debriefing; emergency personnel; post-traumatic stress disorder (PTSD); referrals; stress reactions

### L1-4

#### Planning and Pursuance of Disaster Mental Health Activities

Katsuro Aso, MD

Soh Mental Clinic, Japan

After the Kobe earthquake (1995), it became well-known that the disaster victims need mental health services. However, it has not been discussed how these are planned, prepared, and provided in Japan. I will address some basic guides to providing disaster mental health services.

Many disaster victims not only experience severe stress, but also lose their psychological support systems. However, they need too many things, and in many cases, they are participating in a high level of activity. Often, therefore, they do not see themselves as needing mental health services. In this setting, it is important that mental health services become integral parts of relief activities. These services differ from ordinary mental health activities. They often must be provided through practical and not psychological assistance.

The Handbook of Disaster Response and Recovery (Center for Mental Health Services, USA, 1994) notes that disaster mental health services function at three levels: 1) Population; 2) Environment; and 3) Individual. The American Red Cross categorizes disaster mental health services into five types: 1) Education; 2) Problem solving; 3) Advocacy; 4) Referral; and 5) Intervention.

These concepts will help us to prepare disaster mental health programs.

**Keywords:** assistance; earthquake; guides; mental health services; relief; stress; support systems