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UNITED STATES ARMY
HEALTH CARE STUDIES AND
CLINICAL INVESTIGATION ACTIVITY

PROCEEDINGS
SEVENTH USERS' STRESS WORKSHOP:
TRAINING FOR PSYCHIC TRAUMA

December 10 - 15, 1989

A. David Mangelsdorff, Ph.D., M.P.H.

Consultation Report #91-001

December 1990

UNITED STATES ARMY
HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234

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The proceedings document the presentations at a workshop conducted in December 1989 on the training programs designed for managing psychological trauma and stress. The interaction between local, national, and international efforts was examined.

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PREFACE

The seventh in a series of stress workshop/conferences held in San Antonio, Texas, the latest workshop was conducted from 10 to 15 December, 1989. The conference was on "Training for Psychic Trauma: Organizational, Managerial, Treatment, and Research Considerations." The intent was having presentations from organizations in the private, academic, Federal, and military sectors dealing with the development and use of training modules for managing psychological trauma and stress. A primary goal was to demonstrate the interaction between local, national, and international efforts. Selected training was directed toward service providers in San Antonio and Bexar County. The intent was to prepare local professionals for providing assistance in time of disaster in coordination with the American Red Cross of San Antonio. A follow-up conference was conducted 17 to 19 May, 1990, in conjunction with Wilford Hall Medical Center to provide additional training in disaster assistance and mental health intervention strategies.

Program Concept: Program was designed to provide up to date information and skills to health and emergency service providers on how to recognize, treat, and manage victims of psychic trauma. The program was presented in lecture, discussion, practical exercises, and role playing situations.

Attendees were from active duty and reserve military units, selected international military programs, federal research and training facilities, academic and research groups, and members of the San Antonio community involved in mental health, training, research, and crisis intervention programs. Over 100 individuals from nine nations participated.

Continuing education credits (CME/CHE) was provided to participants requesting credits. The accreditation was through the University of Texas Health Science Center at San Antonio.

Cosponsors It is with great appreciation that the following organizations are recognized for their interest and concern in supporting this training program for the San Antonio community:

American Red Cross
Bexar County Medical Society
Bexar County Psychiatric Society
Charter Real Hospital
Laurel Ridge Psychiatric Hospital
Mental Health Association
National Disaster Medical System
Society for Traumatic Stress Studies
University of Texas Health Science Center at San Antonio
U.S. Army Health Care Studies and Clinical Investigation Activity
U.S. Army Health Services Command
U.S. Air Force Wilford Hall Medical Center
Walter Reed Army Institute of Research

This proceedings documents the presentations made. The energy and competency of the participants contributed to the excellent discussion and exchanges. It is hoped that future programs will evolve from the knowledge learned from this one.

A. David Mangelsdorff, Ph.D., M.P.H.

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7TH USERS' WORKSHOP ON STRESS:
COMMUNITY/NATIONAL/INTERNATIONAL COOPERATIVE EFFORTS

TRAINING FOR PSYCHIC TRAUMA: ORGANIZATIONAL, MANAGERIAL, TREATMENT, AND RESEARCH CONSIDERATIONS

December 10-15, 1989
Holiday Inn Riverwalk, San Antonio, Texas

SUNDAY 10 December
1700 Registration

MONDAY 11 December COMMUNITY PROGRAMS
0715 Registration
0745 Administrivia (David Mangelsdorff, Ph.D., M.P.H.)
0800 Welcome (COL David McFarling, M.D.)
0815 Catastrophes and Disasters (David R. Jones, M.D., M.P.H.)
0900 Break
0915 Federally Supported Mental Health Interventions in Disaster Trauma (Chris Dunning, Ph.D.)
1000 National Disaster Medical System San Antonio (Samuel L. Burkett)
1045 Break
1100 American Red Cross San Antonio (Barbara Faller)
1145 Lunch/Red Cross training
1300 Indianapolis, Indiana, Civilian-Military Exercises (Connie J. Boatright, MSN, RN, CS)
1345 Crime Victims' Counseling Services, Inc. (Shelley Neiderbach, Ph.D.)
1430 Break
1445 Crisis Management Task Force San Antonio (Morley Shaw, Ph.D.)
1530 Walter Reed Army Institute of Research (CPT Paul Bartone, Ph.D.)
1615 Break
1630 Office Foreign Disaster Assistance/Agency Intl Devel (Dr. Ellery Gray)

TUESDAY 12 December INTERVENTION AND TREATMENT PROGRAMS
0745 Registration
0800 Administrivia (David Mangelsdorff)
0815 Intervention Strategies (LTC Dennis M. Kowal, Ph.D.)
0900 Intervention Strategies (Calvin J. Frederick, Ph.D.)
0945 Break
1000 Uniformed Services University/Bushmaster (CAPT Brian G. McCaughey, DO)
1130 Lunch
1300 U.S. Navy Special Psychiatric Rapid Intervention Team SPRINT (CDR John M. Mateczun, M.D., M.P.H., J.D.)
1345 U.S. Air Force Reserve Chaplains (Robert Parlotz, D.Min., Ed.D., NCC, RC)
1430 Break
1445 Intervention Strategies (Chris Hatcher, Ph.D. and Claude Chemtob, Ph.D.)
1530 Research (Susan B. Sorenson, Ph.D.)
1615 Break
1630 U.S. Army Chaplains Training (CHs. James Robnolt, Ken Ruppar, Larry Walker)
1715 High Risk/High Stress Training (COL James W. Stokes, M.D.)

WEDNESDAY 13 December INTERVENTION AND RESEARCH PROGRAMS

0745 Registration
0800 Administrivia (David Mangelsdorff)
0815 Post Traumatic Treatment Center (Tom Williams, Psy.D.)
0900 Research (Bonnie L. Green, Ph.D.)
0945 Break
1000 Field Research Aberdeen Proving Grounds (Linda T. Fatkin, M.A.)
1045 Decision Making Under Stress (Gary A. Kline, Ph.D. and Marvin Thordsen)
1130 Lunch
1300 Training for Intervention with Victims (Connie Best, Ph.D., Dean Kilpatrick, Ph.D.)
1345 Hurricane Hugo: Charleston, South Carolina (Connie Best, Dean Kilpatrick)
1430 Break
1445 Critical Incident Stress Training Program Standards (Ellen C. Manson, MSN)
1530 Development of Program Standards (James C. Quick, Ph.D.)
1615 Break
1630 Georgia Public Safety Training (Eugene Schmuckler, Ph.D.)
1715 U.S. Army Reserve NBC Training (LTC Barbara J. Carter, Ph.D.)

THURSDAY 14 December INTERVENTION AND RESEARCH PROGRAMS

0745 Registration
0800 Administrivia (David Mangelsdorff)
0815 Critical Incident Stress Debriefing (Jeff Mitchell, Ph.D.)
0900 France (GEN Louis Crocq, M.D.)
0945 Break
1000 United Kingdom (John M. Rolfe, Ph.D.)
1045 The Netherlands (LTC Herman W. de Swart, Ph.D.)
1130 Lunch
1300 National Disaster Medical System (Thomas P. Reutershan, J.D.)
1345 Training/Ramste n (LTC Jerry Brown, Ph.D.)
1430 Break
1445 U.S.S.R. Train Disaster Intervention (LTC William K. Becker, M.D.)
1530 Norway (Atle Dyregrov, Ph.D.)
1615 Break
1630 Society for Traumatic Stress Studies (Yael Danieli, Ph.D.)
1715 Federal Emergency Management Agency/Veterans Administration (LTC Jerry Brown, Ph.D.)

FRIDAY 15 December INTERNATIONAL PROGRAMS

0745 Registration
0800 Administrivia (David Mangelsdorff)
0815 Cooperative Efforts (Donald C.E. Ferguson, Ph.D., M.P.H.)
0900 Israeli Defence Force Research (LTC Zahava Solomon, Ph.D.)
0945 Break
1000 Israeli Intervention in Armenia (GEN Yehuda Danon, M.D.)
1130 Lunch
1300 Sweden (Tom Lundin, M.D., Ph.D.)
1345 Country Outreach Programme for Australia Vietnam Veterans (Jan Field)
1430 Break
1445 European Stress Management Team (COL Robert Sokol, M.D., COL Greg Meyer, DSW, LTC Calvin Neptune, DSW)
1530 Course Integration/Evaluation

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MENTAL HEALTH ASPECTS OF DISASTER RESPONSE

David R. Jones
San Antonio, Texas

This presentation is organized along preventive medicine principles. The five general headings are defined: community protection, individual protection, early detection of problems, rapid treatment, and rehabilitation. The first two will be mentioned only briefly; the latter three will be discussed in more detail.

I. Community protection
   A. Physical protection: fire departments, dams, etc.
   B. Disaster response plans (including their periodic exercise) and an effective warning system.

II. Individual protection
   A. Education and training for individual and family.
   B. Necessary equipment and supplies.
   C. Periodic exercise of individual preparedness.
   D. Advantage to institution that an individual whose family is likely to be safe will function more effectively.

III. Early detection of problems
   A. Understand that fear is normal and serves the same purpose for the mind that pain does for the body. Fearful behavior does not equate with mental illness.
   B. Reactions may be adaptive or maladaptive, immediate or delayed, and acute or chronic. Maladaptive behavior in otherwise uninjured victims may require some therapeutic response.
   C. Since most formal disaster response systems tend to concentrate on somatic problems, triage systems may not be prepared to deal with psychological suffering. These victims should be cared for separately from those physically injured.
      1. According to the literature on unselected populations involved in disasters, about 1/8 to 1/4 of those involved will react adaptively and usefully.
      2. About 1/2 to 3/4 will be overwhelmed and react passively. They may require community resources, but should present no particular therapeutic problem.
      3. About 1/8 to 1/4 will react maladaptively, and may require specific mental health support.
   D. Disaster victims may have brief maladaptive reactions of psychotic proportions, but these are usually transient.
   E. Reactions may include anxiety, disorientation, confusion, misunderstanding, withdrawal, irritability, increased startle reaction, difficulties with memory, concentration or sleep; also psychophysiological symptoms may be present. These may simply represent normal responses to an abnormal situation, and usually require merely supportive care.

IV. Rapid treatment
   A. Avoid creating unnecessary "patient" role for victims.
   B. Provide basic needs: shelter, protection, warmth, food, comfort and support. Allow regressing behavior to run its course. Use short-acting sedation (temazepam [Restoril], for example) only if necessary, since medication reinforces the "patient" role.
   C. Provide accurate information about the situation and about family members.
   D. Keep these victims away from somatic treatment areas.
   E. Ventilate--describing what happened helps victims get their own thoughts in order.
   F. Let victims help each other as they are able; this helps re-establish reassuring adult roles and saves volunteer effort.
   G. Brief reactive psychosis.
      1. Produced by an overwhelming stressor.
      2. Symptoms include emotional turmoil and at least one psychotic symptom: incoherence or loosened associations, grossly disorganized behavior, delusions and/or hallucinations.
      3. Again, avoid use of psychotropic medications if possible, since they reinforce the "patient" role and may mask neurologic symptoms. Use short-acting medications such as haloperidol (Haldol) if necessary.
   H. Physically injured patients should be followed in a consultation/liaison model, since they will have had the same stressors and losses.
      1. Medication may mask psychological symptoms for a while and may interfere with the normal grieving process.
      2. These patients need ventilation, too, but not excessively. They may need to be buffered from the press, dignitaries, and curious staff.
      3. Bad news about family members may arrive intermittently and should be handled carefully and thoughtfully.

V. Rehabilitation
   A. Mental health consultants may switch from crisis intervention to treatment of post-traumatic stress disorder as time passes.
   B. Although careful early follow-up may diminish the incident of PTSD, case finding efforts by the Red Cross and similar agencies may be useful in reaching victims who were not primarily involved, such as family members of actual disaster victims.
   C. All victims may have troubling symptoms for a while, but many will handle these through normal grieving processes. Symptoms may alternate between periods of psychic numbing, which protects from overwhelming emotion, and intense emotional pain, which may feel threatening, as if the victims were "losing their minds" or "going crazy."
   D. A stable environment, allowing the processing of the situation in small emotional increments and accepting the ups and downs of the recovery period, helps people in processing the disaster and the losses. Expect some inappropriate anger, often directed at helping agencies.
      1. Therapy should be aimed at re-establishing control over one's own life and dealing effectively with the postdisaster realities.
      2. Tearfulness, both expected and unexpected, is part of the healing and will probably continue for up to a year. Frequency and intensity will diminish with time.

3. Victims may through talking about their looses, relieve some of the feelings of isolation in grief. Like tears, the need to ventilate and thus seek support will diminish after a year or so.
4. Dreams about the disaster may represent one means of natural desensitization to the disaster.
5. Psychosomatic symptoms, including appetite, libido, sleep patterns, may be disturbed but should gradually return to normal. Memory and concentration may go through similar patterns. Intrusive thoughts should also gradually lessen, although all these symptoms may be exacerbated by anniversaries, sights, sounds, and other associations. Victims should be made aware of these and other patterns of reactions as normal phenomena, similar to somatic healing processes, and should be reassured that they are not signs of mental illness, weakness, or lack of moral fiber.
6. During this interval of recovery, victims should be made aware of a need to self-impose additional stresses. For example
   a. Respect waves of strong emotion. If one occurs while driving, for example, pull over and stop as soon as safety allows, and wait until it passes before resuming driving. Allow a little extra time. Travel with a friend if possible.
   b. Be especially careful if work requires alertness (e.g., around machinery).
   c. Watch out for physical health; stress can affect resistance to disease. Consult a physician for somatic symptoms. However, keep in mind that grief can also be a factor in such symptoms. Beware of overmedication.
   d. Delay making decisions which will cause added stress, if possible. If not, separate such decisions in time. (Therapists should keep the Holmes-Rahe Life Change Events tables in mind.)
   e. Share problems, concerns and cares with responsible family members, trusted friends, and/or mental health professionals.

CONCLUSIONS

A considerable literature exists on the care of rescuers and others who may have been only peripherally involved in the disaster, such as reporters, morgue attendants, and medical staff. A sensitive and professionally moderate postincident debriefing procedure may help to elicit troubling thoughts and emotions which otherwise would not be recognized for what they are. This process should not be undertaken without prior specific training and should be carried out by persons who were not involved in the primary disaster or response. See the article by Mitchell, listed in the bibliography, for further details.

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INSTITUTIONAL RESOURCES

Center for Mental Health Studies of Emergencies
National Institute of Mental Health
Parklawn Building, Room 6C-12
5600 Fisher Lane
Rockville, MD 20857 Tel. 301-443-1910

National Organization for Victim Assistance
717 D. Street, NW
Washington, DC 20004 Tel. 202-393-6682

The Society for Traumatic Stress Studies
435 North Michigan Avenue, suite 1717
Chicago, Illinois 60611 Tel. 312-644-0828

Disaster Preparedness in the Americas
Pan American Health Organization
525 23rd Street, NW
Washington, DC 20037

[Note: this bibliography and resource list was derived from a more extensive list prepared by A. David Mangelsdorff, Ph.D., M.P.H., Technical Director, Health Care Studies and Clinical Investigation Activity, Health Services Command (Attn: HSHN-T), Fort Sam Houston, TX 78234-6060; Tel. 512-221-5671/2511].

FEDERALLY SUPPORTED MENTAL HEALTH INTERVENTIONS IN DISASTER TRAUMA

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Each year the U. S. is subjected to literally hundreds of disasters. These events raise a recurring public policy issue concerning the role of the federal government in providing relief assistance and in helping to avert future disaster loss--in this case, at the level of public mental health. Not surprisingly, federal policy makers' opinions concerning the appropriate federal role in this arena have varied over time. Current disaster relief programming in regard to mental health issues and resulting policy as exemplified by action has not come about as the result of an explicit outcome of any theoretical debate concerning either the appropriate course of action or the role the federal government should take in this matter. Rather, the direction has evolved from a series of discrete decisions--often undertaken in the aftermath of individual, catastrophic disasters.

In May 1974, the Disaster Relief Act (Public Law 93-288) Section 413 provided for mental health crisis counseling services and training as part of the relief effort. The National Institute of Mental Health (NIMH) was authorized to provide such programs in Presidentially declared disasters, acting as administrator with funding provided by the Federal Emergency Management Agency (FEMA). From 1974 to 1984, NIMH administered service delivery programs for disaster victims, funded related research programs on psychosocial response to natural and technological emergencies, and supported disaster preparedness for prevention of mental health sequelae. In May 1983, NIMH's activity in regard to disaster-related mental health programs was expanded with the establishment of the Center for Mental Health Studies of Emergencies which administers the agency's crisis counseling program. The Center is the source of the Public Health Services' efforts to provide research and public education on mental health emergencies resulting from catastrophes. The center also administers service delivery and research, especially in those areas involving:

1. studies of the immediate and long-term mental health impact on individual victims, family members, emergency workers, and community members
2. studies of differential risk to population subgroups of mental health sequelae
3. evaluation of both short-term crisis intervention and long-term mental health treatment and service delivery for victims.

In addition to funding direct services and research, NIMH provides dissemination of information for predisaster planning for health and human service needs through various mechanisms. While the knowledge afforded through NIMH may be well considered and used by emergency government administrators, frequently such offerings have been ignored or overlooked by the audience for which they were intended until a catastrophe occurs--necessitating information on direction and content of postintervention. NIMH in its Center for the Study of Emergencies has directed its recent efforts to concentrating on greater activity in pre-event research, program development, and training. It has primary responsibility in the Public Health Service for

developing a basic preparedness plan for alcohol, drug abuse, and mental health problems in large-scale national emergencies.

Crisis Counseling 1974-1984, 32 grants

Flood	16	mud slide
Tornado	8	flood
Hurricane	4	
Volcano	1	
Typhoon	1	
Fire	1	
Earthquake	1	

A. Provision of mental health services at emergency and relocation centers.

B. Special attention to high-risk victims.
   1. Children
   2. Elderly
   3. Physically handicapped
   4. Chronically mentally ill
   4. Alcohol and drug abusers
   6. Disaster workers

NIMH disseminates the following types of information on a routine, updated basis to federal, state, and local agencies.

1. Training manuals and videotapes for human service workers, both professionals and volunteers, concerning the needs assessment, services, and service delivery modes.

2. Annotated bibliographies of mental health research on disasters and state of the art papers on research findings and research needs

3. Mental health training modules for various national disaster health services systems, including the Public Health Service's National Disaster Medical System

PUBLICATION LIST

Emergency Services Branch
National Institute of Mental Health

Training Manual for Human Service Workers in Major Disasters, by Norman L. Faberow, DHHS Pub. No. (ADM) 86-538.

Field Manual for Human Service Workers in Major Disasters, DHHS Pub. No. (ADM) 87-537.

Manual for Child Health Workers in Major Disasters, by Norman L. Faberow and Norma Gordon, DHHS Pub. No. (ADM) 86-1070.

The Media in a Disaster, DHEW Pub. No. (ADM) 78-540.

Aircraft Accidents: Emergency Mental Health Problems, edited by Calvin J. Frederick, DHHS Pub. No. (ADM) 81-956.

Crisis Intervention Programs for Disaster Victims in Smaller Communities, by Kathleen J. Tierney and Barbara Baisden, DHHS Pub. No. (ADM) 83-675.

Disaster Work and Mental Health: Prevention and Control of Stress Among Workers, by Don M. Hartsough and Diane G. Myers, DHHS Pub. No. (ADM)85-1422.

Prevention and Control of Stress Among Workers: A Pamphlet for Team Managers, DHHS Pub. No. (ADM) 87-1496.

Prevention and Control of Stress Among Workers: A Pamphlet for Workers, DHHS Pub. No. (ADM) 87-1497.

Human Problems in Major Disasters: A Training Curriculum for Emergency Medical Personnel, DHHS Pub. No. (ADM) 887-1505.

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Disasters and Mental Health: An Annotated Bibliography, compiled and edited by Frederick L. Ahearn and Raquel E. Cohen, DHHS Pub. No. (ADM) 84-1311.

Disasters and Mental Health: Selected Contemporary Perspectives, edited by Barbara J. Sowder, DHHS Pub. No. (ADM) 85-1421.

Role Stressors and Supports for Emergency Workers, proceedings from a workshop, DHHS Pub. No. (ADM) 85-1408.

Requests for one complimentary copy of any of the above publications should be addressed to:

Office of Scientific Information
Public Inquiries
National Institute of Mental Health, Rm. 15C-05
5600 Fishers Lane
Rockville, MD 20857

Audiovisuals

Film: Human Response to Disaster: Training Emergency Service Workers, a videotaped lecture series which addresses disaster related behaviors, children's responses to disaster, and disaster worker stress. This film is also available in Spanish.

Requests for a free copy of the English language version of the film should be addressed to:

Emergency Services Branch
Parklawn Building, Rm. 11C-25
5600 Fishers Lane
Rockville, MD 20857
Telephone: (301) 443-4257

Research Support

In addition to its training activities, the Center for Emergencies at NIMH also contributes funds to the Natural Hazards Research and Applications Information Center's "Quick Responder" program. These moneys, in conjunction with those received from the National Science Foundation, support a limited number of short-term, quick response field investigations of disasters. The program was designed to avoid the traditional funding delays that may prevent researchers from reaching a disaster scene during the immediate postimpact period, thereby allowing the loss of perishable data during a critical point in the disaster resolution. The major emphasis of this program is on social science research rather than physical science or engineering studies. It is through these funds that a large majority of theoretical knowledge that was later translated to the monograph and training materials of the Center was derived. The research afforded by the financial support of the "Quick Responder" program has contributed to our knowledge of the efficacy of debriefing techniques and in the task and characteristic analysis of types of disaster situations in order to better instruct agencies and rescue workers in psychological response to disaster trauma.

It is through this support that this author has been able to examine the extent and source of disaster related trauma in rescue workers responding to a variety of natural and technological disasters. Specifically, the research support has resulted in data collection involving air crash recovery in Milwaukee and Salt Lake City. From that research, it was determined that the extent and intensity of traumatic reactions in rescue workers might be reduced through management of the disaster scene. Recommendations regarding search and recovery techniques, deployment of manpower, time-on-task standards, and protocols for debriefing were derived. A series of articles in governmental monographs and refereed journals resulted. Specifically, many of the techniques were utilized in the Pan-Am Lockerbie crash recovery, and preliminary data would suggest that scene management for prevention, as opposed to debrief for intervention, would have a significant impact on reducing the long-term experience of traumatic reaction in rescue workers. Training in trauma, when couched in terms of mental and physical injury prevention and mitigation, in predisaster programs, when coupled with sensitive attention to manpower deployment and social support on-site, would seem to be an effective approach to the reduction in psychological injuries experienced by disaster rescue workers.

THE SAN ANTONIO NATIONAL DISASTER MEDICAL SYSTEM (NDMS)

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Audie L. Murphy Memorial Veterans Hospital
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The National Disaster Medical System (NDMS) is a cooperative effort of the Department of Health and Human Services (HHS), the Department of Defense (DoD), the Department of Veterans Affairs (VA) and the Federal Emergency Management Agency (FEMA), State and local governments and the private sector. NDMS includes Disaster Medical Assistance teams (DMATs) and Clearing-Staging Units (CSUs) at the disaster site or receiving location, a medical evacuation system, and more than 100,000 precommitted nonfederal acute care hospital beds in more than 1600 hospitals throughout the country. NDMS does not replace state and local disaster planning efforts, rather supplements and assists where state and local medical resources are overwhelmed and federal assistance is required.

In December 1981, the President established the Emergency Mobilization Preparedness Board (EMPB) and charged it to develop national policy and programs to improve emergency preparedness. Health program development was delegated to the Board's Principal Working Group on Health (PWGH). chaired by the Assistant Secretary for Health, HHS. Major members of the PWGH included DoD, the Health Care Financing Administration (HCFA), the VA, and FEMA. The PWGH developed the National Disaster Medical System in response to the President's mandate.

The NDMS is designed to fulfill three system objectives:

1. Give medical assistance to a disaster area in the form of Disaster Medical Assistance Teams (DMATs) and Clearing-Staging Units (CSUs) and medical supplies and equipment.

2. Evacuate patients who cannot be cared for locally to designated locations throughout the United States.

3. Arrange hospitalization in a national network of medical care facilities which have agreed to accept patients.

The NDMS is designed to care for as many as 100,000 victims of any incident that exceeds the medical care capability of an affected state, region, or federal health care system. It may be used in a variety of emergency events, such as an earthquake. an industrial disaster, a refugee influx, or for military casualties evacuated to the U.S. The NDMS is not designed to cope with nuclear war casualties.

San Antonio is one of 107 metropolitan areas of the nation having an NDMS organized to respond to a major catastrophic event. Audie L. Murphy Memorial Veterans Hospital is the Federal Coordinating Center (FCC) for NDMS in San Antonio. The FCC recruits and coordinates nonfederal hospital participation and links hospitals with local transportation, communication and other necessary resources. The FCC is also responsible for maintaining patient administration procedures in the geographic area for which it has

responsibility. There are currently 75 NDMS coordinating centers.

With five military bases and two DoD medical centers in San Antonio, it is easy to see why 90% of the NDMS resources are from DoD organizations. The major organizations comprising the NDMS in San Antonio are

Audie L. Murphy Memorial Veterans Hospital (FCC)
Joint Military Medical Command (JMMC) (Military Coordinator) Brooke Army Medical Center
Wilford Hall USAF Medical Center
USAF Clinics: Brooks, Randolph and Kelly
4th Aeromedical Staging Flight (ASF)
32nd Aeromedical Evacuation Group (AEG)
34th Aeromedical Evacuation Flight (AEF)
City of San Antonio Emergency Management Division
San Antonio Radio Amateur Civilian Emergency Service
NDMS Hospitals (Civilian) - 19 participating

There are 22 hospitals in the San Antonio NDMS - three federal hospitals and 19 NDMS (civilian) hospitals.

FEDERAL

Audie L. Murphy Memorial Veterans Hospital, FCC - VA
Brooke Army Medical Center, Fort Sam Houston, Texas - Army
Wilford Hall USAF Medical Center, Lackland Air Force Base - USAF

CIVILIAN

Baptist Medical Center
Humana Hospital - Metropolitan
Humana Hospital - San Antonio
Humana Women's Hospital - South Texas
Lutheran General Hospital
McKenna Memorial Hospital, New Braunfels
Medical Center Hospital
Nix Memorial Hospital
Northeast Baptist Hospital
San Antonio State Chest Hospital
San Antonio State Hospital
Santa Rosa Hospital
Southeast Baptist Hospital
Southwest General Hospital
Southwest Texas Methodist Hospital
St. Luke's Lutheran Hospital
St. Rose Catholic Hospital
Vencor South Texas Hospital
Village Oaks Regional Hospital

All civilian hospitals complete a Memorandum of Understanding (MOU) which establishes the agreements made in becoming a volunteer member of the NDMS. The MOU does not create any legal obligation to provide beds to the NDMS. NDMS hospitals agree to participate in annual training exercises. This exercise completes one of the two annual external disaster exercises required for accreditation by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). The MOU also projects the minimum and maximum numbers of beds each hospital could make available during system activation. The 19 civilian hospitals in San Antonio have projected

a. Minimum beds (within 72 hours).....595
b. Maximum beds 1071

There are many emergency management organizations that participate and contribute to the San Antonio NDMS. Without the services of these organizations and the many volunteers that provide manpower our system simply would not work. The organizations that should be recognized for their volunteer efforts are

a. American Red Cross
b. Civil Air Patrol
c. Superior Ambulance Service
d. AmCare Ambulance Service
e. Medi-Trans Ambulance Company
f. Anderson Ambulance Company
g. 507th Medical Company (Air Ambulance), Fort Sam Houston, Texas
h. Academy of Health Sciences, Fort Sam Houston, Texas
i. 41st Combat Support Hospital, Fort Sam Houston, Texas
j. Det 6, 376 Aeromedical Airlift Wing, Kelly Air Force Base, Texas
k. HQ, Fort Sam Houston, Texas
l. 12th Air Base Group - Randolph Air Force Base, Texas
m. 2851st Air Base Group - Kelly Air Force Base, Texas
n. 3700 Air Base Group - Lackland Air Force Base, Texas
o. 6570 Air Base Group - Brooks Air Force Base, Texas
p. Air Force Military Personnel Center - Randolph Air Force Base, Texas
q. HQ, Air Training Command - Randolph Air Force Base, Texas

The San Antonio National Disaster Medical System is fully operational at the advanced level. We are confident that activation of NDMS would bring patients to our city for emergency admission and treatment in highly qualified, state-of-the-art, medical centers. We stand ready to respond to a national catastrophic civilian disaster or to the needs of the Department of Defense in time of conventional national security threat.

REFERENCES

National Disaster Medical System, Parklawn Building, Rockville, MD 20867.

Audie L. Murphy Memorial Veterans Hospital, Federal Coordinating Center. San Antonio Exercise Plan. 1989.

JOINT CIVILIAN/MILITARY DISASTER RESPONSE TRAINING

Connie J. Boatright
NDMS Deputy Area Manager
VA Medical Center, Indianapolis, Indiana
(and AN, LTC - 55th Medical (Psyc)
Detachment, US Army Reserve,
Fort Benjamin Harrison, Indiana)

The United States civilian and military sectors have a tendency to be somewhat isolated from one another until times of crises. Military installations are usually situated in some remote or out of the way location, away from the civilian community. The Reserve and Guard forces work and train on weekends, when most of the populous is not at the workplace. Of course, there are valid reasons why all this separation exists, but it tends to keep the two groups, civilian and military, in two different worlds even though we're all the same, with common goals, beliefs and purposes. The fact is, we have a lot to learn and benefit from one another and it would serve us well to spend more time training together now, instead of trying to play "catch-up" and figure it all out when we're forced together in a crisis. One common mission that civilians and military should consistently train together on is disaster response. The National Disaster Medical System (NDMS) is one vehicle that justifies such joint civilian - military training.

The NDMS, established in 1983 by President Executive Order, charges the Department of Defense (DoD), Federal Emergency Management Agency (FEMA). The US Public Health Service (PHS) and The US Department of Veterans Affairs (VA) with the collaborative task of devising a plan to transport and treat US victims of disaster or casualties of military conflict or war. The mission is accomplished by 75 Federal Coordinating Centers (FCCs) throughout the Nation working with the existing disaster response agencies, plans and people. Of the 75 Coordinating Centers, about half are managed by VA, the other half by DoD. One Center is an independent, community based organization.

The mission of the NDMS is threefold and provides:

1) An aeromedical evacuation system for transporting casualties.

2) Disaster Medical Assistance Teams (DMATs) which are civilian, volunteer teams, trained and ready to act in a reception mode or to be mobilized to a disaster site and act as a clearing - staging asset.

3) Over 100,000 precommitted hospital beds nationwide, ready to receive casualties of disaster or war.

From the mission statement, one can quickly surmise that the task at hand can be accomplished only by close liaison between civilian and military organizations. Training and participation in disaster response exercises by both civilian and military groups is the only sensible way to assure a system conducted annually to "test" the readiness status. Although the exercise scenario is developed by the four federal agencies at the national level, the actual exercises are coordinated by the respective Federal Coordinating Centers and vary in complexity and magnitude from Area to Area.

One example of how the NDMS prepares for disaster medical response is an exercise that took place in April, 1989. Response '89, as it was called, was based on a scenario which focused on a San Andreas fault earthquake in the San Francisco area and was of such a magnitude that hundreds of casualties were generated. This, in turn, "activated" the NDMS and created the need for patient evacuation, Disaster Medical Assistance Teams and definitive care in locations outside of California. Again, each NDMS Area "plays" from the same script (scenario) but the actors and activities are unique to the Area and rely on available resources.

In Response '89, three NDMS Areas elected to work together and conduct a tristate exercise. The VA Federal Coordinating Centers at Indianapolis, Indiana, and Minneapolis, Minnesota, and the Naval Coordinating Center at Great Lakes, Michigan, devoted months of planning to the development of this one day activity.

In Indianapolis, the International Arrivals Building became the Medical Reception site, ready to receive casualties from the California quake. (The mock casualties were actually military and Civil Air Patrol personnel from Minneapolis/St. Paul.) The civilian medical teams from Indiana University Hospitals and Wishard Hospital triaged, tagged and treated incoming casualties who had been transported to Indianapolis via C-130 Hercules aircraft by the 109th, Minnesota Air Guard. Other casualties were generated locally by the Del-Mi District Boy Scouts. Close to 20 private and municipal ambulance services voluntarily participated and transported casualties to 10 Indianapolis hospitals. The HAM radio operators from RACES, ARES and ARRL were the on and off site communication assets. The American Red Cross performed Disaster Welfare Inquiry. The State Emergency Management Agency, State Police, Marion County Emergency Management, Marion County Sheriff's Department, Indianapolis Police Department, Indianapolis Fire Department (and surrounding Township Fire Departments), Indianapolis Airport Authority, Marion County Coroner, and the VA Medical Center Automated Data Processing were all on hand to function in the roles in which they would normally act in a real situation. The American Red Cross served food and Hardee's Restaurant provided close to $3,000 in food and beverages. All local television stations, Armed Services Network, Ft. Harrison, local radio and printed media covered the event. The 113th Medical Battalion, Indiana National Guard and 55th Medical (Psyc) Detachment, US Army Reserve, and Ft. Benjamin Harrison active duty soldiers worked hand in hand as litter bearers, moulagers, casualties and in "all other duties as assigned". Channel 13, WTHR, the Indianapolis NBC affiliate developed a documentary, "Disaster Arrives - Ready or Not" and aired it during prime time. (*The myriad of agencies and resources are listed with the intent of bringing to the reader's attention the number and types of resources needed for "just an exercise". The "real thing" would require at least these resources and more. Keep in mind, also, that similar exercise activities were simultaneously occurring at Great Lakes (Chicago) and Minneapolis/St. Paul).

One important objective of this particular exercise that bears highlighting was assessment of and intervention with stress casualties. For the most part, disaster response exercises have ignored this important component or have given it minimal attention. The planners of this exercise decided to make it a focal point. In Indianapolis, a group of mental health professionals from four community mental health agencies, along with members

of the 55th Medical (Psyc) Detachment, US Army Reserve and Chaplains from Indiana State Police and Fire Departments, Marion County Sheriff's Department and VA Medical Center were strategically located in a close but separate area, Medical Reception Area and morgue. They knew what their tasks were: to assess and intervene with stress of victims and survivors. The element for them was the nature of problems of the survivors they saw.

After the arrival of the aircraft carrying the physically injured casualties, a second aircraft carrying survivors landed. The survivors were escorted to the counseling area. Weeks before, the Minnesota NDMS Manager and Indiana NDMS Deputy Manager had written the scripts for survivors. Before departing for Indianapolis, the players were briefed on their roles. The scenarios were diversified, the acting was realistic. The intent was to challenge the skills of the workers assigned to this task. One survivor was deaf and mute, another was seeking a friend infected with HIV, two divorced parents were looking for their child, the police department was inquiring about a California citizen who had escaped from prison, two females (a wife and a girlfriend) were looking for the same man, some survivors only spoke Spanish - reflections of real like situations in the '90's. A number of survivors were matched with dead victims and had to go through the process of body identification. An observer who may stand back and watch - and listen - would have difficulty distinguishing if this activity was real or staged.

Meanwhile, mental health activity was ongoing in the Medical Reception Area. Victims were being comforted and reassured. Last rites were delivered to some. The medical teams and other responders were into realism as well. Moulaging was superbly done, lending to visual realism. Supplies were running out, casualties were "backing up", causing frustration. One of the civilian team leaders who had served as a surgeon in Vietnam was obviously intense and stated "I swear to God, for awhile I thought these were real casualties". For the frustrated responder, feeling the pressure of mounting casualties, limited supplies and staff and inability to save everyone, there were mental health workers as well. The Critical Incident Stress Debriefing (CISD) team, led by the EMS Coordinator from Community Hospitals, Inc., was there to observe and, need be, counsel and intervene with worker stress.

The Psychic Stress objective was accomplished and gave the planners (and workers) information to take back and refine. Some lessons learned here include: the need to have a visible way of identifying mental health, CISD and chaplaincy; the importance of debriefing and defusing mental health workers, all other responders, and people who play the roles of casualties (dead or alive) and survivors. Another valuable lesson for all workers is that no emergency room, mental hygiene clinic, or other usual treatment setting compares to the unexpected and chaotic nature of the aftermath of disaster; thus, realistic training and "rehearsal" is essential to acclimate people to this type of work.

Many valuable lessons were learned from the overall exercise. Planning is important. Training is crucial and must be ongoing and interagency oriented. More specific to this manuscript topic - civilian and military agencies must plan and train together.

Before Response '89, the Indiana disaster responders from civilian and military sectors had not worked together. (The Guard, Reserve and Active components had not trained together either. This is not atypical to most states around the country.) From one exercise, the civilian workers learned that the military folks are not as rigid as they expected. The military folks, in turn, learned that the civilian responders were more organized than their preconceived notions would have them believe.

One exercise - one day in April '89. The beginning of more planning, more training, a closer civilian - military relationship. The New Madrid fault won't open up and "host" one disaster for Evansville, Indiana, and a separate one for Ft. Campbell, Kentucky. A disaster has no conscience, no mind no plan. Maybe that is the biggest reason that the civilian and military sectors need to unite against this mutual enemy. Collective civilian and military planning and training will strengthen our state of readiness and accomplish the ultimate goal - to save lives, no matter what the uniform or attire.

PSYCHOLOGICAL EFFECTS OF PHYSICAL VIOLENCE AND DISASTER

Shelley Neiderbach
Crime Victims' Counseling Services, Inc.
Brooklyn Heights, New York

I'm happy to he here in San Antonio today--about half because I'm not in New York City (and I say that as a trauma worker who needs R & R) and half because I'm here to talk with some folks who might actually be interested in what I have to say about trauma: a delightful prospect! On both levels, I'm pleased to be here. I'll run my mouth for about 40 minutes or so (or maybe less if you're lucky). Feel free throughout to ask questions--immediately afterwards on the break, whenever you see me around, or in my room.

As you know, I deal mainly with the civilian population. Of course, though many of you are not professionally connected with civilians, you really are: all military personnel were once (and may again be!) civilians--as all of their families. I will be speaking about victims of crime, and how that connects with the military: it does. A lot.

As I said, I work with trauma, Allow me to indulge in a bit of autobiography: I started out as a teacher, and somehow along the way I said, "Gee, what am I going to be when I grow up?" and decided to be a therapist. I did not plan to become a trauma counselor. (In fact, we didn't--in those days--even have such a thing as a job title for psychic trauma workers); so: a little history. It's important to understand that the formal definition of Post-Traumatic Stress Disorder did not get into the DSM III (that is the Diagnostic and Statistical Manual of the American Psychiatric Association, Third edition) until 1980. That's not very long ago in the realm of things. And for someone who was mugged and nearly killed in 1975, the therapists (and there were many) to whom I went seeking mental health counseling (or, God forbid, therapy) did not have a handle on it--because "PTSD" hadn't yet been labeled. We were just beginning to understand traumatic response, both from returning Vietnam vets and through a variety of women in the Women's Movement, which was simultaneously beginning to set up (if you will) "trauma houses" called battered women shelters and rape crisis centers for women who had been raped or sexually abused. So we began to understand what psychic trauma was--It is not "the icing on the cake," as we've been alluding to issues of emotional trauma this morning--it's half the cake, at minimum. If you do not have visible wounds--that is, if you are not physically traumatized--you are considered okay. Let me say clearly: you are generally, most definitely, not okay.

We know, those of us who work in trauma, that you have invisible wounds (a phrase I stole from Morton Bard and Diane Sangrey's The Crime Victim's Book for the title of my own book on the subject). Certain things--emotional pains--are just not visible. Therefore, it's very hard to treat traumatic stress at, for instance, a community crisis site. Some people, of course, will be visibly upset, and they will be in acute distress at the time, but most folks exhibit trauma later. That applies equally to victims of interpersonal violence, whether it is experienced or is "merely" witnessed in the home or outside of it. That is, after the first 72 hours (after the shock has worn off), the (perhaps) delayed or (perhaps) chronic Post-Traumatic Stress Disorder that plagues an enormous amount of our population generally

begins. By FBI (that conservative organization) statistics, that's 35 million victims of crime each year. That's really a staggering figure to me, and, I hope, to you as well. It was said earlier that war was the greatest man-made disaster: interpersonal violence is, whether we call it war, or street crime, or domestic abuse.

What I discovered when I started doing trauma counseling, is, simply, that trauma--though invisible--hurts. I know because I'm a "muggee." When I first started to seek counseling I said to myself, "This is New York. We have everything. Where is 'Muggees Anonymous'?" I did the phone book, I called my friends, I went through the whole business "cause I'm educated, I'm middle-class, I'm white, and I have all the services available, and I couldn't find anything. Thus began my career as a trauma counselor: in wanting to start a group, I went to our local victim agency (which was only 2 years old at the time) and so naively volunteered myself. They kind of shrugged and said, "Well, that's very nice, but our funds are committed. Have a good time, dear."

So I went off on my own and essentially left academe and my quiet life as an independent therapist, and started Crime Victims' Counseling Services, Inc. I thought I would be working only with victims of crime: what really occurred was that, essentially, I found myself treating all kinds of trauma. What I didn't know then was how much and how often and how deeply people are traumatized before they are victims of crime. These are the folks we engage with every day: they're called your family, your friends, your colleagues, and most strangers. Trauma is almost routine: it's virtually normative. The Diagnostic and Statistical Manual III-R definition says, "Outside the range of usual human experience." It's interesting to note that as revision of the DSM-IV progresses, we're wondering if "outside the range" (35 million victims a year, not even counting at least two co-victims) has any accuracy at all; a new set of diagnostic criteria, "DESNOS"--"Disorders of Extreme Stress Not Otherwise Specified"--is under consideration for DSM IV.

What I discovered when victims would come into our groups with "just" the latest crime (that is, while we were dealing with the PTSD of the crime) was that I would soon learn about child sexual abuse--usually mentioned on the way out the door, as in: "Oh,-by-the-way, when-I-was-a kid-my-own-father-used-to-rape-me. Good night." That's how you get the news. I learned about enormous amounts of domestic abuse, the kids having to watch mom and dad punch each other out. I learned about the terror that children of alcoholics (and other chemical dependencies) live in. That is: most people are traumatized before the community disaster of crime occurs.

So: I'm going to tell you a little about how an individual crime affects an entire community and a little bit about treatment. What I did initially (and what many victims do) was a form of self-treatment. The major form of self-treatment is called denial--and this we see prevalent in the uniformed services, civilian and military. "I'm ok," "It's just my job," "It's all right, nothing wrong with me," "I do this every day, I'm a cop" as he or she experiences the carnage, the bodies, the bleeding.

We've seen a lot of mayhem in the films this morning, which I found quite disturbing: I'm feeling retraumatized. I wonder how many of you feel the films got to you--may I see a show of hands? Gee, we've got a lot of denial going on here! (I see a couple of heads wagging.) Wait until Friday--you'll be exhausted. Why? Because by then we'll have been dealing head-on (as it

were) with trauma for 5 days. One of the things that happen amongst trauma workers is that we do a lot of denial ourselves--and we don't do what we need to do for ourselves in terms of our own recoveries. (I find travel very, very helpful. I run away from home. What's your escape valve?)

But most of us can't run away when we're doing our jobs. Certain norms have to be met: basically called "showing up"--and showing up, as Woody Allen has reminded us, is 90% of life. You get docked for lateness, can't say you have a headache (you can, but everybody thinks--you know--you're a [shhh!] wimp, particularly if you're a male). You're not allowed to cry when you have been deeply affected by what has affected you on the job. You go home and pick up the phone and tell your friends, but after a while they don't want to listen--and they tell you not to take the job home. In the instance of a single crime, we have one victim (and, conservatively speaking, we can say there are at least two co-victims: two family members or friends, generally more, but just let's say two others who feel the effects of crime). Add to this the police, emergency teams, court workers, hospital personnel who may have come in contact with the victim: for a single crime, we can extrapolate a dozen others in the community who are probably to some degree traumatized. In New York City, we have over 600,000 reported crimes each year, so we have lots of "walking wounded" and some who are literally not walking--those, of course, who are dead, those who are paraplegics forever and ever because they've had a bullet through the spine, those who cannot return to work due to disability so severe that they can no longer work.

A single crime, then, has terrific emotional fallout: that's why it's actually a community mental health issue, and mental health is the invisible taboo/overlooked/denied/generally undiagnosed/frequently untreated health problem. The massive misperception is that if you're not physically wounded, there's nothing wrong with you. Wrong. Just--simply--wrong. I have clients who come in screaming and carrying on because the cops told them they should have fought back. What's the matter with them? Why didn't they do anything? How come they didn't lock the doors and windows? How come they didn't do x, y, and z??? How come they're such baaaad victims?

The crime problem is a problem because crime is unpredictable, the way natural disasters are unpredictable. We can react in a favorable way only if we are, at least to some degree, trained. Clearly, none of us get training in becoming crime victims: how can one set that up as a piece of instruction/education/getting-through-life? None of us plan to become crime victims. For instance, I always thought I had a theft-proof car: an '81 Honda. It's beaten up, all full of dents, rusted--who would want it?? Well, somebody wanted it. It was stolen last week--and recovered. I was very happy to get my albatross back (an albatross is a car without a parking space). The funny thing is I can afford a new car, but I don't want one: I want my old shoe of a car, comfy and parkable in New York. I was not devastated by this property crime (as opposed to personal crime), and it felt good getting The Albatross back, but I wanted this event NOT to have happened. I didn't want to be a crime victim again, but I was.

We are affected by crime of all kinds, daily--as are the families and dependents of the military, as are families and dependents of anyone in the uniformed services. We counselors and therapists tend not to "notice" that, because we don't do routine trauma intakes anywhere that I know of. Does anybody here do that? (No hands. Hmmmm.) Does anybody at a personal/family/

community disaster scene ask, "What's happened to you before this, that you consider traumatic?" so that you can to some degree gauge how traumatized the person may be? A trauma history is not a regular part of intake, even in mental health hospitals where physical trauma is not an immediate issue. Nobody does it. Why not???? How can we know who's been traumatized, and to what degree? Why does trauma appear to be intractable for some? Who's vulnerable? Who's "hardy"? (I like the phrase heartiest, as the flip side of vulnerability.) We know that people recover from trauma, and some seem not to be severely traumatized at all. What are the factors? (1) the degree of traumatization that they have suffered before this event (2) the nature of their support systems, currently in place, and (3) the quickness of the intervention and (4) how long it goes on. But what else?

We know that most folks in the mental health field have emphatically not been trained in Post-Traumatic Stress Disorder, mostly because it's been just recently defined--as I said, just a decade ago, in 1980. While we have a growing subfield called victimology, most mental health practitioners remain untrained--which is partly why we are here today. Training cannot be done in a 2-hour in-service (pun intended) crash course at your generic training department store. It takes at least 2 full days--preferably 5--but at least 2 full days, just to get the basics down, even if you have a degree in psychology. Trauma is a special field: we wouldn't dream of going to a general practice attorney who said, "I'll can go into court and do tax law for you." We wouldn't dream of taking our car to a mechanic who hasn't had some training.

Recently, I was accosted at the National Organization of Victims Assistance conference by the head of the California Victims' Compensation Board. With a mixture of disbelief and consternation, he asked, "Do you really mean that therapists should have at least 50 hours of their own therapy?!???" And I said, "Yeah!" He had heard that at the NOVA Mental Health Task Force we had developed a minimum criteria for training which included 240 hours of classwork (not, please note, 2 days, but 240 hours), an internship of at least a thousand hours, and . . . 50 hours of one's own therapy. (If you compare any of the alcoholism turnings from state to state, they're much more vigorous.) We tried to come up with some kind of minimum standards which would allow mental health practitioners to be able to both know and feel, "Yeah, I know what I'm talking about."

Well! He'd heard of the proposed 50 hours of therapy and simply went nuts. "Why do you have to have it?" he asked. "Well, it's part of the training," I replied. "That's how you get to empathize with victims, understand what's going through them." Then he scratched his head. "Do you know what it takes to become a Mercedes mechanic?" I asked. He kinda looked at me. I said, "Well, you have to fill out the application--and that tests whether you can read and write. Then you get some more hands-on tests to see how mechanically adept you are, and then they try you out for about a month. If you're any good at all, and you want to specialize in transmissions or universals or engine blocks, they will send you to Germany where you will be trained in the Mercedes factory and pass their tests. Then you come back and then you get a job. And that's just cars. Don't you think we should have some kind of comparable training for people who are dealing with people?" He looked more thoughtful then.

I want to emphasize that the sheet I handed out is a kind of mini-diatribe which the National Victim Center was kind enough to print. But I really think it's incumbent upon us, as people who work in trauma services anywhere, not to do harm. If we can't help folks, the least we can do is not harm them further. One of the major, routine, virtually unnoticed ways we harm folks occurs when we open our big mouths when we shouldn't. We open them without training and we think we know what we are talking about; we intervene at the wrong time, and we tend to blame the victims for the disasters that occurred to them, whether it's crime or any other trauma. No wonder we're exhausted; ignorance is enervating and often maiming. (And who debriefs us of our daily encounters with death/disease/suffering? Almost no one--except maybe Joe-the bartender, Polly-the-prostitute, Pete-the-pusher.)

We know, for instance, that the rate of alcoholism amongst police officers is about 40%: that is huge, much higher than the 15% estimated as a national average. We know that the degree of domestic abuse is somewhere between 35 and 45%. We know that being in the Army, Navy, Marines, and Air Force is not conducive to a good, stable family life--partially because you move from base to base to base, and it's very hard to have a family when dad is out doing his military job. That is in no way to denigrate the military: it just says that we need to look into what happens to the civilian population attached to the military. What do they do when they are home? What kind of crimes do they suffer from strangers, and from their family members? Who is helping them with their trauma? The VA hospitals are still dealing, largely, with Vietnam vets--who certainly need the attention. But what about the civilian members who are afflicted by all kinds of trauma? (Thank you for nodding so vigorously out there, whoever you are.) It's just not sufficient to ignore it. It's not "the dressing on the cake," as we've been saying--it is I'd say not, "the whole cake."

Unless we are prepared to deal with civilian trauma in its many instances, we are just not doing our job. When I say prepared, I mean emotionally prepared, formally trained, and institutionally supported. I don't care where you get trained in trauma, (others will speak about that today) as long as you know what you are doing. It is, simply, criminal to do work without knowledge, and, consequently to do harm.

How this affects those who actually do trauma work is a good question. The issue of respondents' type was referred to earlier--who gets to do this stuff? There is a unique drama in disaster, in crime--it's titillating. We really don't like to speak about this, but it's very exciting--it sends our blood pressure up, some folks get high on it. Well, that's ok--as long as you're not "doing your high" on somebody else. If that's what gets you up to do the work, ok--but then we have to begin to understand why one is turned on by that; we have to have a look at how some people try to master their own fears through being a therapist.

A bit more autobiography: I come from a home where my younger brother was a victim of child abuse: I watched it, I couldn't stop it. I come from a home where my father was a New York City cab driver who was mugged in his taxi when I was an adolescent; where every member of my family has been a victim of crime, including most recently my 17-year-old nephew who was in two "wilding" incidents this spring and survived them. But I wanted to go out and kill: this was my nephew--you don't do that to my family. I'm a trauma counselor and was retraumatized by these things, and this was just my family. No wonder

I'm a therapist! No wonder I'm "on vacation" as I talk to you in Texas.

I live in New York--not the crime capital of the U.S. (Detroit is our current leader--we're only number 11 I mean what's that??? Not even in--The Top Ten.) Nonetheless, there are community traumas to say the least. My organization was called out when an unhappy student (who thought he was not getting his financial aid) walked into the offices of New York City Technical College and shot five people, two of them mortally; we counseled the three survivors and the whole college. Two years ago, just before Christmas, the union leader of a 300 member unit of the Department of Transportation went out on his lunch hour to do his holiday shopping and was stabbed to death in a major department store: they called us to talk to all of the employees. Things like that add to the general personal and professional stress, and form the blanket of civil disaffection in which so many of us cloak ourselves.

I had a new client walk in this week. He introduced himself and said, "I survived the LaGuardia crash in September. The US Air Flight 5050 that slipped off the runway into the water." He then recited about 15 of the 19 DSM criteria for Post-traumatic Stress Disorder, starting with, "I'm having trouble concentrating and it's really bothering me because I'm a computer operator for a large corporation and I can't do my work." And what else? "Well, this year my father was dying and it was up to me to tell them to pull the plug. So I went to the hospital, and just as I was about to do it, I had a heart attack in the hospital and while I was there recovering, my father died." And I said (using my best therapeutic training and manner) "go on." He reeled out three or four other things, including a divorce, a child on drugs, and tadah, tadah, tadah. He thinks he's only traumatized by the plane crash, largely because he has prostheses in both legs: when he hit the water he thought the sheer weight of the metal in them would sink him. "I felt myself going down and thought, 'This is it. Either I get above the water or this is it.'" He got himself above the water--dragging a woman passenger who had put her arms around his neck and pleaded, "Save me." He was wondering why he couldn't concentrate.

How you first assess psychic trauma is virtually identical to the way we saw physical assessed: very carefully. Check the eyeballs, check the heart beat, check the lacerations: we do that routinely. We're good at it: we've been doing it a long time. The assessment for psychic trauma is relatively new and we don't do it very well, largely because we're not trained to do it--even when we are in a facility that is supposed to be taking care of us. I remember (in the first of two personal incidents which transformed me into a trauma counselor) that I yelled and screamed and lots of nice people came out, got me to a hospital, called my family. They were terrific strangers. When I got to the hospital, I was lying on an x-ray table for an hour and a half and nobody came in to say hello, let alone, "Can I call anyone? Do you need anything? Do you want to talk to anyone about what happened to you? Are you ok? Can we get you a cup of water?" Nothing. They were fabulous about the physical wounds: perfect, in fact, but no one seemed to be interested in that I might have been psychically traumatized by this event.

So I went home, and since I'm pretty good at anger, I got real angry. I screamed and carried on to my friends and family and colleagues, who essentially said, "Shut up, you're alive." Secondary victimization is what happens when no one wants to hear about it after awhile, whether you're a victim of crime or any other disaster. It's just too threatening to those

whom we call "victim virgins." (There aren't very many left of those who have not been affected by violence somehow, someway; we call them co-victims.) But 2 weeks is about the limit.

Further: when we actually got to the line-up, it was just like on TV--except I was so extremely "nervous" that I was shaking. The detective asked, "What's the matter? Are you scared?" "No," I said, "I want to. . .kill them." Now, this is not a nice thing for A Nice Jewish Girl to say in public, and I especially for someone who had marched for Civil Rights and Against the Death Penalty and all the Good Liberal Causes. It was extremely (as we say in the field) ego-dystonic to feel a nice, clear desire to commit homicide. Most victims will not admit to that, because Society says, "No, no, you shouldn't desire vengeance-- and if you do feel that way, shut up" and we're supposed to forgive. We're supposed to forget. We don't.

People who are victimized by any kind of psychic trauma--including falling out of airplane, surviving a war, getting through a natural catastrophe as some recently experienced via Hurricane Hugo and the Bay Area earthquake--do not forget. The affects may lessen, but you do not forget. And we in mental health must not forget that, along with anyone working in trauma or being traumatized by an event, we are also in that huge circle of secondary victims. Everybody is traumatized, to a greater or lesser degree. What we've here been calling "heartiness" has very much to do with the level of denial some can summon--and for those (perhaps) fortunate ones, maybe they do, in fact, experience a lot less trauma than other folks. But before we can begin to treat, we reallllly ought to find out what's going on with those who are traumatized--and we reallllllly ought to find out how to treat it by getting trained. I think this should without saying--but clearly it needs saying again, so: I'm saying it. In fact we don't do trauma training routinely. And we absolutely need to do so.

I would ask that in whatever capacity you find yourself, civilian or military, whether you're dealing with a single trauma called crime victimization or community disaster with several thousand people, you presume that folks are not feeling well emotionally. Note that because they are not showing it at this time doesn't mean they are not feeling it. Those first 48 to 72 hours comprise the crisis/shock stage: folks are generally numb during this phase. A woman telephoned called who said, "Can I come to your group?" and I said, "Sure. What's happened?" "Well," she said, "Ohhhhhh, I was raped." "Can you tell me more about it?" I went on. "Well, it was 20 years ago." For 20 years, she has managed to cope. But she had just seen the film, Extremities, and, seemingly "suddenly," she wanted treatment.

So you never know what's going to--pardon the expression- trigger it off. (We certainly have to be careful with our language when we're dealing with victims. "Triggering it off" is not a good phrase, nor is "Take a shot at it," or any number of other phrases we use conventionally which are decidedly not therapeutic for victims.) You never know when "later" is, and you never know really when "chronic" begins. The technical definition is 6 months later, but it can start at Day One.

So we have to be better educated, and to take care of ourselves as well. We have to know when to leave home, take a nap, read a book (or do whatever you do for fun and games) but get out of the trauma scene so that you can go back refreshed rather that burned-out. Half of us are burned-out: we don't

know it, because we can't admit to it any more than our clients can acknowledge their traumas. We have to tell our bosses, "I need a day off"--and your boss says no, and you take it anyway: You call in Well and take a Mental Health Day. We really need to do that--or we're ineffective. We don't let ourselves know how traumatized we are as workers: after all, we're Professionals. Unless we know our own ways of relaxing, we'll. . . come to grief.

I'd like to end on this sad note, called grief. We don't realize that we're in the Grief Business, and a large part of resolving trauma is the realization that people are grieving for the illusions of immortality that have been shattered by a traumatizing event--for real physical loss, whether it's anatomical disability or theft of precious objects or the death of a loved one. We're grieving because we're no longer controlling the universe--as we fancied we were. We find out how little we are in control, and none of us grownups want to find that out. We realize that life is short, perhaps difficult; but the flip side of that is: most of us learn to cherish life immensely, precisely because we realize how fragile it is, and how it can go any minute.

I had occasion to meet Morehead Kennedy, one of the Iranian hostages who survived 444 days. I said, "Listen, I know two thousand people have asked you this question, but can you indulge me, one more? What did you do to get through?" He said, "It took me about 3 days to realize that I was going through the Kubler-Ross Syndrome. At first I didn't believe that I was a hostage--no, it's a mistake, it must be a mistake. Then I got angry: how dare you hold me hostage?? Then I bargained: let me go, and I'll do. . .do. depressed, I realized that there could be Life After Hostage. Once I got through to acceptance, I could survive.

Our job, as I see it, is to help trauma victims get to acceptance, to get through the stages, to get to the other side of grief--not to deny grief with them, not to "treat" it, but move with them from phase to phase so they can recover, and you can recover with them. In this we'll all be enabled to move from survival to thrival.

Thank you for listening.

CRISIS MANAGEMENT TASK FORCE SAN ANTONIO

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In the past few years violent incidents involving groups of children have made it clear that the mental health community must be prepared to respond to the needs of these children and their parents. Because the mental health community has responded to these events and provided services to those children and their families we are now able to draw some conclusions regarding how children are affected by such events and the best ways to respond to those children.

An issue that has needed and continues to need delicate treatment is the the degree to which intervention teams are doing research and the degree to which they are providing crisis intervention (Bloom, 1986). The concern is that researchers are using traumatized children as guinea pigs. This view assumes that asking children to talk about their experience is using them as guinea pigs and ignores the benefits children receive from talking about the events. Researchers need to clearly state their purpose and methodology and to present their efforts in such a way that emphasizes the benefits to be gained by the children and their parents. The position subscribed to in this paper is that the "naturalistic" design interview typically used in working with victims of community violence is at the worst neutral in value, that is not helping or hindering the grieving process, and at best it is therapeutic.

Following is a brief review of the literature regarding community disasters and children. The paper concludes with some recommendations regarding how communities should respond to community violence involving children, with special attention given to the school setting.

CHILDREN'S REACTIONS TO COMMUNITY DISASTERS

The Chowchilla Kidnaping.

Several studies have been conducted which have focused on the Chowchilla kidnaping. Lenore Terr (1979) describes the kidnaping and its aftermath. In 1976, 26 children were kidnaped in Chowchilla, California, and held captive for 27 hours before they escaped. The children received no psychiatric help for five months after their ordeal. Terr offered assistance to the children's parents and was able to gain some insights into the effects of a single traumatic event upon children and their families. Terr was able to interview 23 of the 26 children and their families and one or two parents from each family at least once.

Terr's work with the kidnaped children lead to the conclusion that all of the 23 interviewed children experienced long-term reactions to the kidnaping. Many of the children experienced

(1) persistent kidnap-related fears (e.g., being kidnaped again)
(2) fear of the mundane and ordinary (e.g., the dark, dogs, cars, being left alone) partly as a result of belief in omens or signals of the impending kidnaping. To many of the children the kidnaping had begun when an innocent-looking van stopped their school bus.

(3) panic attacks
(4) persistent dreams, directly or indirectly related to the kidnaping
(5) personality changes (e.g., increased hostility, irritability, clinginess, and clownishness)
(6) loss of trust in adults to protect them
(7) poor school performance
(8) concentration difficulties
(9) re-enactment of behaviors, fears, attitudes orginially occurring right before or during the kidnaping
(10) continued anxiety as manifested through play activity that are directly related to the kidnaping.

Terr (1981) also believes that while there are similarities in adult and children reactions to trauma, there are several important differences between adult and children reactions to trauma (Terr, 1981). These differences include the following:

(1) Children have no period of amnesia or haziness about the event as do adults.
(2) Children do not experience denial of the traumatic event alternating with intrusive repetition of the event.
(3) Children have no true flashbacks of traumatic events.
(4) Repetitive reenactments related to the traumatic event may be more characteristic of children than adults.
(5) Major ego dysfunctions included cognitive malfunctions, misperceptions, overgeneralizations, time distortions.

On the basis of her work with these children, Terr (1979) recommended the following responses to children experiencing group violence:

(1) Mental health workers should contact families immediately, even prior to knowing the outcomes in order to begin offering support and establishing a working relationship.
(2) Mental health evaluations should be done as soon as the victims are available.
(3) Continued contact with individual children and parents is encouraged. This is recommended rather than initial group meetings because individual interviews allow the families to verbalize and to express anxiety and hostility to qualified experts rather than to reports or the community.
(4) Remember that traumatic effects in children may not be observed by the parents for six months to a year.

Terr (1983) later compared the Chowchilla children with 25 control children. She compared them along several dimensions including their futures, expectations, the likelihood of any disasters, repeated terror dreams or death creams, and their sense of dream prediction. Terr's findings suggest that the 25 control children had a higher rate of optimism for the future. The 25 Chowchilla children had a narrower focus of concern. They feared personal future disaster, murder and divorce. Interestingly, they experienced less concern over world events like th environment and war.

TREATMENT MODELS

Pynoos and Nader have developed a treatment model (Psychological First Aid and Treatment Approach to Children Exposed to Community Violence: Research Implications) for children exposed to c nity violence. Their work outlines theory and findings regarding childre sponses to community violence, early intervention and psychological i aid, and treatment approaches following a violent incident.

Pynoos and Nader conclude that post-traumatic stress symptoms result from violent life threats and that the severity of the stress is related to the extent of exposure to the life-threatening event. They also report that the use of the PTSD Reaction Index suggests several conclusions about children and traumatic events:

(1) Children can reliably identify traumatic events.
(2) Children re-experience the trauma but typically do not provide an adult-like description of the flashback. Instead, children tend to describe specific images or sound related to the violent incident. Most affected are those children who observed people being killed or heard many cries for help. Dreams are often of a traumatic nature and can be so frightening as to make it difficult for the child to go to sleep or to sleep alone. Disturbing dreams seem to reinforce the trauma.
(3) Diminished interest in outside world or activities. Feelings of detachment, not wanting to play, more distance from friends, not wishing to be aware of their feelings, increase in anxious attachment behavior.
(4) Incident specified new symptoms and behaviors. Children report increased arousal states including startle response. nervousness, and demonstrate an avoidance of reminders of the traumatic event.

Children's grief reactions after community violence are similar to those of adults. Normal grieving occurs even after one year. Many children can be frightened by their grief responses and report that they never tell anyone about their grief reactions.

These conclusions regarding how children react to community violence lead to recommendations regarding how to respond to children who experience such an event:

(1) Plan for services immediately after the violent incident.
   a. Triage and screen by degree of exposure. Identify the degree of exposure to violence (i.e. proximity, first-hand observation).
   b. By other risk factors: Individual response may seem out of proportion to the incident - indicates presence of other factors.
(2) Provide on-site psychological first aid.
   a. Liaison with leaders in the community and be prepared to deal with hesitation, lack of knowledge, politics, and trauma-related anxieties.
   b. Find a location on or near the site of the incident. Churches and schools provide better sites than do mental health centers due to those sites providing fewer psychological barriers.
   c. Whether or not the violence has occurred on a school campus the school setting can be an ideal place for screening, classroom consultation and individual treatment. Major points to consider include:

1. Restore the school community by encouraging group sharing of experiences; maintain normal school functions.
2. Provide specific help to individuals and groups. Administrators should meet with mental health professionals to review what happened, reactions, future actions.
3. Students should be provided access to the counseling and nursing offices. These visits will provide temporary relief and serve as the foundation for more thorough work. After the first week the classroom is ideal for group consultation. The classroom is the best place to address children's fears of recurrence and related cognitive distortions and help children develop coping skills.
4. Teachers need to be provided psychological support. Children often take cues from their teachers and will be especially aware of their teachers' reactions after a violent incident. Teachers will be especially helpful in screening and referring students who need help. They must be informed of common children reactions to violence. Typically, teachers most often notice unexpected aggressive behavior, but withdrawn and inhibited behavior also may result. They also must be encouraged to allow students to express their feelings and concerns.
5. School support staff need to work closely together to ensure that children and their parents receive help if they need it.
   a. The school nurse plays an important role because children often report somatic complaints after a traumatic event. Additional nursing services may be necessary as referrals to the nursing office can be expected to increase.
   b. The mental health staff may be seeing a large number of traumatized children in a short period of time. They should maintain a list of individuals referred to them, their symptoms, and risk factors. The staff should also assist other school personnel in expressing their feelings and reactions to the traumatic event and its aftermath.
6. Parents and families should be allowed to express their concerns and to learn about common post-traumatic reactions. Initial meetings might be school-wide; subsequent meetings are probably more helpful if organized by grade, classroom, or degree of exposure to the traumatic event. Parents should be encouraged to allow the their children to verbalize their concerns and feelings and to understand their children's responses to the trauma. Regressive behavior, for example, should be tolerated for a limited time rather than punished. Some parents will need individual consultation.

(3) Provide age-appropriate psychological first aid for children.
(4) Design treatment for four major symptom groupings:
   a. Post-traumatic stress disorder. Treatment foals include addressing fears of recurrence, normalizing the recovery process, helping the child understand his reactions, and restoring a sense of security.
   b. Grief. Treatment goals include dealing specifically and concretely with issues related to death and loss, providing a supportive environment for the grieving process.
   c. Worry about another. Treatment goals include legitimizing the child's concern, weaning them from any continued worry.
   d. Exacerbation or renewal of symptoms related to previous life experiences.

THE GANDER SURVIVOR ASSISTANCE OFFICER STUDY: TREATMENT AND PREVENTION IMPLICATIONS

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Following the Army's tragic air crash at Gander, Newfoundland (December 1985), researchers at the Walter Reed Army Institute of Research conducted a long-term study of the Army officers designated to help grieving family members (Bartone et al., 1989). These officers are known as Survivor Assistance Officers, or SAOs. Analysis of two-year follow-up data confirmed that SAO duty was highly stressful and was often related to psychiatric symptoms or distress (Bartone, 1989). SAOs who remained healthy over the period of the study, as opposed to those reporting symptoms, possessed two distinguishing characteristics: social support at work and personality hardiness. The present report suggests some implications of these findings for treating and preventing stress disorders following catastrophic loss.

Social Support at Work and Personality Hardiness: Two Important Stress-Resistance Resources

A variety of statistical analyses examining both cross-sectional and longitudinal data showed that social support, especially from one's boss, was an important factor related to good health under stress. These analyses also showed that SAOs who take a characteristic approach to life known as "hardiness" (Kobasa, 1979) stayed healthy despite high stress levels. Gander SAOs with the "stress-resistance resources" did experience some stress-related symptoms, but significantly fewer than others. Also they recovered from the stressful experience more rapidly than their unprotected counterparts.

Implications

It is an unfortunate fact that in the course of essential training of military forces fatal accidents occur. Sometimes only one or two die, and sometimes many more. Regardless of the numbers, survivors can be severely affected, and some are psychologically impaired. Individual and unit performance can suffer and even stop altogether. Military behavioral scientists have perhaps an even greater responsibility than their civilian counterparts to understand the causes, treatment, and prevention of traumatic stress-related disorders. In order to achieve this knowledge, it is necessary but not sufficient, to identify the factors that are related to healthy coping under stress. We must go beyond simple "laundry lists" of distinguishing characteristics to try to decipher the underlying mechanisms involved. Then we can apply this knowledge to a variety of contexts, persons, and organizations.

a. Social Support from Bosses

SAOs who reported their bosses or commanders were supportive, understanding, and helpful regarding their SAO responsibilities showed fewer stress symptoms over the long term than did others. Although support from friends and family was also helpful, "boss support" far outweighed the value of support from other sources. What might account for this? In a study of personal and group responses to four community disasters, Killian (1952),

provides an insightful analysis that may explain why support at work is so important during times of crisis. People in society have multiple group memberships and loyalties which under ordinary circumstances do not conflict with each other. We are loyal to our families, work groups, and larger communities and share our time and resources among them. But in a disaster, these different loyalties can clash directly, as with the fireman who deserts his post to safeguard his family when a tornado lands in town. Killian recounts a series of such incidents in which individuals experience acute conflict among competing roles that ordinarily coexist peacefully.

This is similar to the conflict many Gander SAOs felt between their sense of duty to the bereaved family, continuing obligations at their work unit, and responsibility toward their own families. Perhaps social support at work is so important because it reduces the conflict associated with competing group loyalties and demands during crisis periods. Such conflicts, unrecognized or ignored under ordinary conditions, can be severe and damaging following disaster or catastrophe. Leaders, supervisors, and co-workers should thus be sensitive and supportive regarding competing group loyalties following catastrophic loss. Especially with dedicated, hard-working people, it may be extremely disruptive to appeal to a sense of duty to the group (e.g., organization, unit) as a means of convincing the soldier/officer to disregard other loyalties and obligations (e.g., to his dead buddies, his family). Supportive relationships at work are not likely to emerge following disaster if the framework is not built beforehand. Leaders who emphasize trust, respect, and communication as well as performance and dedication are indirectly preparing their soldiers to cope more effectively with traumatic loss if it strikes their unit.

b. Personality Hardiness

Gander SAOs who were high in the dimension of hardiness also showed fewer stress-related symptoms and recovered more quickly over time. Personality hardiness is a cognitive style that appears to influence how stressful circumstances are processed and integrated into a person's life experience. Persons high in hardiness have a strong sense of commitment to life, believe they can control events around them, and are interested in and challenged by new things and obstacles. Whether or not hardiness is a fixed trait that develops early in life and never changes or is amenable to change over the life course remains an open question. Without attempting to answer this question, we can still find valuable treatment and prevention lessons in the research findings on hardiness and stress.

For military organizations, the hardiness construct provides a useful model for structuring units that are high performing and resilient under stress. These can be considered as preventive measures for reducing the negative effects of catastrophic stress when it occurs. Like the hardy individual organism, the hardy unit organism is one that has a strong commitment to the work of the unit (our mission), has a sense of control over its own destiny, and enjoys challenges. Commitment in this sense requires meaningful activity and a conviction that the unit has an important purpose for existing. To a very great extent, soldiers learn this commitment by observing it in their leaders. It can't be faked or taught by rote. Leaders who truly believe in the importance of unit goals communicate this belief to their juniors, primarily by example. For control, we can substitute "power-down." Soldiers in the hardy unit share a sense of ownership over the unit and its business. Of course, the next higher level shares responsibility for empowering subordinate units and allowing them

to exercise some real control and influence over their activities. Challenge speaks to training. Military organizations have ample opportunities to cultivate the sense of challenge since there are so many new tasks and skills to master. But training should be creative and fun as well as rigorous; boredom is the enemy of challenge. Units that routinely foster commitment, control, and challenge through leadership, structure, and activities are likely to be more resilient and healthy under severe stress.

What clues for treatment following disaster can be taken from these findings? Several researchers have suggested that trauma is most psychologically damaging when the exposed person, for whatever reasons, has difficulty facing his thoughts and feelings regarding the trauma. He then fails to process and interpret the experiences surrounding the trauma into the rest of his life experience or cognitive schemata (e.g., Ursano and Fullerton, in press; Pennebaker & Beall, 1986; Horowitz, 1976). From the theoretical perspective of hardiness, this failure would be highly disruptive to the sense of commitment and overall purpose and meaning in life. Effective therapies would thus provide a supportive context in which the traumatized person could begin the cognitive (and perhaps emotional) processing of experiences surrounding the trauma. Recovery corresponds to the integration of the trauma into one's general mental catalog of experiences. Such treatment is likely to be more effective as it emphasizes positive aspects of the traumatic experience. Those Survivor Assistance Officers who displayed the most healthy recovery course were also those who reported positive features to their stressful duty. The therapeutic value of retrospective attributions of positive meaning has also been found in U.S. Air Force POWs (Ursano, Boydstun, & Wheatley, 1981) and in Jewish survivors of Nazi concentration camps (Antonovsky, 1979).

Two related treatment methods that emphasize cognitive processing of traumatic experiences deserve mention. Both involve the recounting of thoughts and feelings following exposure to trauma or disaster and have proven effective in reducing distress and symptoms in stressed individuals.

Arik Shalev has adapted the group debriefing method of S. L. A. Marshall (1953) to the treatment of traumatized patients. In one recent study (Shalev et al., 1989), this method was applied successfully to a group of Israelis whose bus was attacked by a terrorist. The focus is on orally recounting events and reactions rather than feelings.

A somewhat different approach involves written rather than oral descriptions of stressful encounters. In a series of studies, Pennebaker and colleagues have shown that writing about traumatic experiences reduces related symptoms for several months following treatment (e.g.,Pennebaker, Colder, & Sharp, 1990). He postulates a physiological mechanism wherein writing about traumatic experiences helps individuals to organize them mentally and releases previously operating inhibitory processes. In the surveys they completed many of the Gander SAOs commented spontaneously on the beneficial effects of having written about their experiences. The lesson here is that it is often therapeutic for traumatized persons to have an opportunity to put their experiences into words. Whether oral or written, this activity apparently facilitates self-understanding and the integration of the trauma into a broader life perspective.

There is still much to learn about preventing and reducing psychological distress related to traumatic loss, but recent studies are providing some promising answers. Military leaders and health service providers now have some

useful tools they can start to apply. The best way to provide for the needs of those exposed to death and catastrophic loss is to prepare them in advance to be more resilient. This is accomplished by building resilient, "hardy" units that foster resilience in unit members. Treatment strategies that minimize conflicting group loyalties and facilitate positive cognitive integration will further speed the coping process for traumatized military members.

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DISASTER WORKERS INTERVENTION STRATEGIES FOR VICTIMS OF TRAUMATIC STRESS

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Crises come suddenly and unexpectedly and leave in their wake victims who have responded with a set of behaviors and emotions that are a product of the event as well as of the personality structure of the individual and its social context. What we as crisis workers should be able to provide at this time is a rapid assessment of the victim's present status, a prognosis, and a treatment plan to facilitate the process of recovery. It is important to recognize that the first contact with a victim is the most critical element of the treatment process. In this paper, I would like to focus on understanding the roles of (1) the victim's personality structure, (2) the event itself, (3) the victim's prior experiences with such stressors and (4) the support systems available as part of the process of developing a rapid recovery plan.

The crisis workers must initially expect to devote considerable energy to assessing these factors and developing an emotional bond with the victim in order to integrate the available information rapidly and develop a treatment intervention strategy. It should be clear that our purpose is not diagnosis per se since the victim's response may not be pathological but a normal response to a traumatic event. We must also recognize that our responsibility is to provide a strategy for rapid reintegration of the victim's emotional and cognitive capabilities as close in time to the event as possible. The goal is (1) to provide a basis for further treatment and (2) to allow the victim to maintain an active role in the resolution of the stress reaction.

Initial Contact

The initial contact should include an assessment of the following standard aspects of personality integration: appearance, extent of physical injury, overt behavior, thought content, reality contact, affect, and emotional readiness.

However, the real crux of this assessment process is the ability of the crisis worker to develop rapport and credibility with the victim; if this is not achieved the subsequent steps become inconsequential. The process depends on the therapist's own personality, integrity, experience with crisis, and ability to model the expected behavior for the victims. Fortunately, victims of such crises are already in an altered state, similar to that found during hypnosis, and the mind set is one of uncritical acceptance or heightened suggestibility. Anything or anyone that provides structure or order to the chaotic surroundings is grasped and bonded with. It is important that the first people reaching the scene remember this fact--crisis workers must be careful with their off-hand remarks or other verbalization of their own defensive structure because of this highly susceptible and literal nature of victims. The initial contact with victims must model a series of desired outcomes and expectations. These can be summarized as follows: (1) confidence, (2) rapport, (3) expectation, (4) directive, (5) use of imagery, (6) believable, (7) defined outcome, and (8) empathy.

The bonding process is a normal part of the therapeutic intervention and often provides an emotional grounding of the victim's anxiety so that the crisis worker can conduct the basic system review. This review of significant aspects of the victim's premorbid adjustment is essential not only for delineating the crisis event's impact on the victim's behavior but for providing a basis for the selection of the most effective intervention considering the victim's emotional resources.

With this systems assessment in hand, the disaster worker can develop a strategy for personality reintegration using the following procedures:

a. Accepting the anxiety as a real experience and not as a sign or symptom of insanity.
b. Letting the victim experience the anxiety and, in a detached manner, using ratings as a means of dissociation from its manifestations.
c. Eventually bringing breathing and anxiety under control.
d. Expecting it will reoccur; it is a part of the life cycle of experiencing traumatic events. Be aware of its signs and be prepared to handle it when it reoccurs.
e. Making interventions realistic, time limited, and concrete so the individual can chart progress and re-establish his sense of control.

This conceptual framework for predicting crisis responses provides a way of assessing how an individual may react to a crisis and why some people have a higher tolerance for crisis than others. In other words, the probability of a crisis situation occurring is a function of not only the event, the victim's personality and prior experience but also the support system available to him at the time. These factors determine the capability of the victim to manage the crisis experience and regain control. The following course of events usually follows a crisis and is quite similar to that evoked by loss or grief: (1) the individual is numbed by the event and is in an altered state of consciousness or disbelief; (2) as the full impact of the crisis is felt, there is a deterioration in the victim's cognitive functioning. After this brief period of disorganization or confusion; (3) the victim may try to recover from the crisis through the use of his defensive resources and available support (if these fail, the victim may fall into a deeper depression); (4) reintegration and return of cognitive functioning and; (5) minimal residual effect except in times of future crisis.

In summary, the crisis worker who deals with victims of traumatic stress must recognize his basic responsibility for rapid assessment of the event, the victim, the support available, and the prior experience of the individual with the event. Intervention is based on these essentials, and intervention strategies must be specific to the considerations. However, there is no substitute for the effective initial contact intervention nor the power that this contact exerts on the ultimate reintegration of the victim's personality and subsequent recovery.

POST TRAUMATIC STRESS DISORDER: DIAGNOSIS AND TREATMENT

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The diagnosis and treatment of psychic trauma is a specialized area which necessitates particular training and experience. Customary crisis intervention procedures do not suffice for the acquisition of appropriate expertise. Although recognized for at least three quarters of a century, the impact and effects of psychic trauma are only now becoming more fully understood. In his lecture series at the University of Vienna in 1915-1917, Freud (1943) spoke of The Fixation Upon Traumas: The Unconscious. He became impressed by the fact that the disabling reactions of trauma were so striking that they seemed to leave these victims "marooned in their illness," so to speak. Although the reactions are closely related to the phenomenon called traumatic neurosis, which became so common during both World Wars, he observed that these unsettling responses can occur as a result of other events such as railway accidents or any terrifying experience involving danger to life. We now know, of course, that the trauma need not be personally life threatening but it must be related to an event outside the range of ordinary day-to-day living and of such a nature that it would create significant stress in almost anyone. Freud noted that some portion of the traumatic event appears regularly in distressing dreams.

Freud held that traumatic neuroses are not fundamentally the same as those occurring spontaneously, as in the actual neuroses, for example. The latter he viewed as physical processes (e.g., headaches or irritable organs without "any complicated mental mechanisms"). On the other hand, Freud affirmed that the psychoneuroses represent the mental consequences of libido dysfunction while the actual neuroses express the direct somatic components of its disturbance. By definition, the traumatic neuroses occur from a traumatic event. A "fixation" to the trauma lies at the root of their development. Freud recognized that "sexuality is not always the cause of a neurosis," since one person can become disordered due to a sexual problem, while another may become ill due to financial loss or an organic illness. Abreaction notwithstanding, he concluded that psychoanalysis, per se, might not be useful for the traumatic neuroses.

A stressful experience becomes traumatic when an increase in a stimulus can no longer be assimilated by normal means. In essence, the psyche is flooded. Curiously this is now viewed as one suitable form of treatment. The essence of victimization occurs in situations wherein one's options and viable positive responses are seen as being absent or drastically narrowed so that only harmful, negative reactions are available. Victims feel they are powerless to alter the situation. This disabling state of affairs becomes insufferably dehumanizing and depressing. Specific reactions to any stimulus, of course, lie in the eye of the beholder. Following the period of impact from a given stressor the individual may believe that he/she might have been able to perform some monumental act of salvation in order to prevent or abort the traumatic event. Self-blame often occurs for failure to undertake a heroic act to ameliorate the situation, irrational though it may be. Emotions are not rational; they are primitive responses inherent in the autonomic nervous system. The data upon which this treatise is based encompass more than 2,000 cases covering a wide spectrum of stressors.

Diagnostic Issues

This treatise would be less than complete without underscoring the importance of perceptive and accurate diagnostic acumen. The delineation of a procrustean label is less warranted than the inclusion of those phenomena which the trauma encompasses. Effective treatment and problem resolution depend upon the principle that every diagnosis constitutes a prognosis. Accurate diagnosis and assessment of the implications of a sore throat will serve, analogously, to illustrate the point in the physiological realm. An inflamed throat may indicate a streptoccal infection which can lead to a cardiac disorder; or poliomyelitis as a precursor to muscle dystrophy and paralysis; or an incipient virus cold which might develop into pneumonia in the presence of a vulnerable host; or an ordinary cold which runs its course with no untoward effects. Gargling at home with warm salt water may suffice with a virus cold. However, when other conditions such as those noted appear, grave sequelae can develop in the absence of appropriate, skilled intervention. It is often putatively assumed that criteria for psychological diagnoses are more caliginous than physiological ones. While there may be an element of truth in that position, it is by no means immutable. The plain fact is that psychology and neurophysiology are closely entwined. Symptoms of one usually interdigitate with the other to an appreciable degree. The principle from internal medicine set forth above applies to our topic of psychic trauma since a strong stressor can evoke psychological reactions with marked emotional consequences.

Many, but not all, victims of severe stressors suffer from Post Traumatic Stress Disorder (PTSD). These subjects are often misdiagnosed and placed in other nosological categories such as depressive reactions, personality disorders, anxiety states and borderline conditions. Since symptoms resembling a depression may appear (diminished interest, detachment, early morning awakening, loss of libido and the like), the naive observer will view the subject as experiencing solely a depressive reaction. When conduct disturbances are manifest (substance abuse, family disputes and traffic violations), character problems often surface to cloud the clinical picture. Muscle tension, dry mouth, pacing and heightened motor activity occur in generalized anxiety, but irrational thinking, irritability and unpredictability characterize borderline states. The acute quality of severe distress may resemble borderline psychotic states while the phobic aspects of avoidances can mimic paranoid reactions. After the acute phase, anger, resentment and impulsive urges are suggestive of a personality disorder. In point of fact, none of these symptom clusters conveys the full meaning of the primary and secondary features inherent in the victim's psychodynamics. Dual psychopathology, of course, may exist, particularly with Axis II diagnoses. All such symptoms appear in acute PTSD. Differential diagnosis can be established more readily with the aid of skillfully focused psychological tests which measure neuropsychological, mental and emotional functioning. Differential diagnosis with respect to an organic brain syndrome of the amnestic type is crucial when physical trauma is also likely.

Generalized Anxiety Disorder and Somatoform Disorders can be ruled out if a medical history discloses the appearance of symptoms only after the event. Discriminative stimuli are avoided, thereby heightening their effect when they symbolize the stressor. Modlin (1986) cautioned that details of the event should be elicited early on, since such data are usually lacking in emergency room accounts, hospital charts and physicians' records. Symptoms which may resemble unconsciousness can indicate a period of dazed confusion while the person was escaping from a stress laden scene (e.g., a collapsing building, fire, auto accident or physical abuse). In the absence of any head trauma in the history,

PTSD must be considered as a real possibility. However, some postconcussion phenomena may be found even in PTSD when the observer is aware of a blow to the head, nervousness, a short period of unconsciousness, headache, and impaired concentration and memory. When nightmares, startle reactions and jumpiness appear, concussion is improbable. Retrograde amnesia about the event occurs with concussion, while nightmares and intrusive thoughts stem from unsettling memories that were visualized during consciousness. Such important clues must be obtained and refined with great sensitivity.

Treatment Issues

In essence, therapeutic approaches to the treatment of psychic trauma fall into two categories: (a) those which advocate repression with support and (b) those which encourage catharsis and deconditioning. Variations of the latter have been used and studied much more extensively that the former in advocating repression. Lavie (1989) studied sleep patterns of 23 holocaust victims along with those of a number of persons who had hidden out from the Nazis during the holocaust. Control subjects (Ss) of similar ages had no such experiences. No difference was found in REM sleep patterns, but control Ss recalled their dreams 80% of the time. "Less well adjusted" survivors slept less and took much longer to fall asleep. "Well adjusted" survivors recalled disturbing dreams only 30% of the time compared with some 51% of the time for the "less well adjusted" survivor group. "Less well adjusted" Ss reported significantly more aggression and anxiety in their dreams than their adjusted counterparts.

The notion is that well adjusted Ss can successfully repress distressing dreams while those who are less well adjusted are unable to do so. Lavie suggests that therapists might be well advised to assist their trauma patients in forgetting and repressing disturbing thoughts rather than reexperiencing them. Clinicians employing uncovering and reworking procedures have engaged in such techniques as implosion, general and specific desensitization, hypnosis, narcosynthesis and biofeedback. Originally set forth by Stampfl and Levis (1967) and Wolpe (1969), derivations of behaviorally-oriented procedures continue to make their mark. Focused behavioral deconditioning with related psychodynamic therapy seems to be the most efficacious procedure. Physiological and psychological factors are closely entwined and must be addressed in an incident-specific or trauma-specific treatment regimen. Measures of pulse rate and blood pressure are crucial aspects of the treatment protocol. Relaxation and flooding-like techniques are needed to bring relief from debilitating sleep problems and invasive daily thoughts. Variations on these themes have been [illegible] by such authors as Keane and Kaloupek (1982); Daly (1983); Van der Ko[illegible]87); Ochberg (1988); and Frederick (1983, 1987, 1989 in press).

Persons with depressive symptoms may show some initial improvement while the underlying condition remains untouched. More naive, inexperienced clinicians will treat these symptoms with antidepressants and mistakenly conclude that the individual has been treated effectively. Various symptoms may abate temporarily with the core problem still intact. Pharmacological intervention can serve a useful palliative purpose in helping the individual to get needed rest and as an aid to the clinician in assisting the person to become more amenable to therapy of a psychological and behavioral type. Anxiety and phobic reactions may be helped by **benzodiazepines** while **phenothiazines** can modify marked irrational, psychotic thinking and behavior. Depressive symptoms may be lessened, in part, by **tricyclics**, particularly **imipramine**.

The use of pharmacologic agents must be carefully assessed so as to avoid masking important thoughts and feelings which need resolution. Such resolution is required in order to rework conflicts through psychotherapy and behavior therapy, thereby ameliorating the debilitating aspects of the trauma.

Treatment consists of the following:

1. **Initial supportive psychotherapy:** supplies reassurance, setting the foundation for undoing loss of trust
2. **Relaxation techniques:** provide tension reduction; prepare subject for other procedures
3. **Incident-specific recounting:** promotes tolerance of provocative stimuli and unsettling scenes during relaxation
4. **Slow motion focusing:** elements of distress reworked in segments and decreased in strength
5. **Correlating:** anxiety-provoking stimuli are paired with other significant facets of person's life
6. **Deconditioning:** troublesome autonomic nervous system arousal responses reduced via biofeedback procedures
7. **In vitro and in vivo techniques:** traumatic events treated at the outset in the laboratory, then in life or simulated life scenes
8. **Psychological Reactions Indices:** objectively assess presence and severity of a response during and after treatment

In the author's experience, it is unlikely that persons suffering from the deleterious effects of major traumatic events will maintain emotional equilibrium and function effectively in their daily lives without treatment encompassing the dimensions set forth above. **Incident-specific therapy is a sine qua non for trauma mastery.**

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BATTLE FATIGUE IDENTIFICATION AND MANAGEMENT TRAINING FOR MILITARY MEDICAL STUDENTS

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Background

During war, the most important psychological problem for servicemen who are in or near a combat zone is battle fatigue. There are three principal reasons why this is so. It affects large numbers of servicemen. Historical accounts of various battles throughout history document the high incidence of battle fatigue--over 30% of all wounded in action in some battles. For line commanders it means that a considerable loss of manpower, for medical reasons, will be due to battle fatigue. For the individual serviceman it means at least a temporary disability and possibly a permanent one. For the medical support units, it can mean that a large percentage of their time will be devoted to managing battle fatigue cases.

Battle Fatigue Management

Fortunately, there are management principles that have been developed to help servicemen who have battle fatigue. These principles have been used successfully in several wars, such as World War II, the Korean War, the Vietnam War and wars involving Israel. Today these management principles are expressed in different ways, but one of these is the acronym PIE: proximity, immediacy and expectancy. These principles mean that: (a) the management site for battle fatigue should be near the front or the serviceman's unit (proximity), (b) management should start as soon after it is identified (within hours) as possible (immediacy), and (c) the serviceman should be told that he has a temporary disability that will improve, and that he will be able to return to duty (expectancy). Additional management principles are brevity and simplicity; the time away from the serviceman's unit is brief, usually less than 72 hours, and the management techniques are simple, such as encouraging ventilation of feelings, rest, nutrition, hydration, hygiene, etc.

Uniformed Services University of the Health Sciences

Faculty in the Department of Military Medicine at the Uniformed Services University of the Health Sciences are concerned about the issue of battle fatigue management and how to teach it to military medical students. One response has been to design a battle fatigue identification and management (BFIM) training module. The BFIM training module is part of a course (Military Contingency Medicine) that includes other topics related to the field of military medicine and a 5 day field medical exercise (Bushmaster).

Description of Training Module

The BFIM training module has seven parts and includes the following: (a) handout, (b) lecture, (c) videotape presentation, (d) discussion and case study group, (e) test, (f) field medical exercise, and (g) program review. The following is a description of the BFIM training module:

Handout - This includes lecture notes, grading criteria, examples of battle fatigue cases, references and reprints pertaining to battle fatigue, combat psychiatry and related topics. Handouts are given to the students and faculty.

Lecture - The history and development of battle fatigue identification and management principles, the current management techniques and how they are used, guidelines for prevention, and sample cases, are presented in a one hour lecture.

Videotape - Typical battle fatigue cases are portrayed in a 50-minute videotape.

Discussion and case study groups - Faculty for these groups consists of active duty and retired military psychiatrists. Immediately prior to meeting with the students, the faculty meets to discuss recent changes to the training module and to review the handouts and other teaching material. Each group has five to six students and one psychiatrist. The discussion and case study groups last 75 minutes. During this time the students play the role of a battle fatigue casualty or a general medical officer. This enables them to practice interviewing skills and teaching techniques, while the faculty member observes. After the interview the faculty member comments on the quality of the interview and makes suggestions for improvement.

Test - A written test assesses the students' basic knowledge about BFIM. The students are also tested using the following format. Two students play one of the following roles: general medical officer or battle fatigue case. The battle fatigue case presents his problems to the general medical officer for a brief period of time. Following this, the students switch their roles; the student who was previously a battle fatigue casualty becomes the GMO. Following the two interviews the faculty member comments on the strengths and weaknesses, offers suggestions about improvements and completes a grading sheet.

Field Medical Exercise - After completing the classroom work described above, the students participate in a 5 day field medical exercise. During this time they practice managing medical, surgical and psychiatric casualties as well as working in leadership roles.

The BFIM center is located in a tent near the medical company and is manned by two students. During the 2 hour training cycle at the center, each student evaluates three battle fatigue cases, with a faculty member observing. The battle fatigue cases are usually enlisted servicemen who have been trained by the psychiatric faculty. Following each interview, the case is discussed; the good aspects of the interview as well as those needing improvement are emphasized. Another point that is emphasized strongly is the need to view the battle fatigue casualty as a part of the larger problem of dealing with a variety of war related medical and surgical problems.

The following is a typical battle fatigue case that could be presented to the students:

> A Navy corpsman, accompanying a Marine patrol, has just returned from enemy territory. He was ambushed 3 days ago by the enemy who attacked with small arms and mortar fire. He was almost killed in the attack and his best friend is missing. Some of the Marines were injured, and, even though he provided the best medical care that was available, he wonders if he did his job well enough. He appears tired and moves with a slow shuffle. Although his memory is intact for remote events, details of the attack are poor. He seems indecisive, and startles at any sudden movement or noise.

The main areas for evaluating students' performance are (a) orienting the serviceman to the interview, (b) identifying the reason why the serviceman came seeking help, (c-d) past history--mental status examination (adapted for a battle fatigue interview), (e) formulation of the problem, (f) other diagnostic considerations, (g) management plans, (h) follow-up plans after the immediate intervention, (i) ability to elicit information, encourage ventilation and be empathetic, and (j) general knowledge about battle fatigue.

Program Review - The program is reviewed periodically by faculty involved in the teaching program. Feedback is solicited from the students and faculty.

LESSONS LEARNED AND TRAINING IMPLICATIONS OF RECENT SPRINT INTERVENTIONS

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I would like to make just a few brief comments about the origins of the SPRINT team which I think in many ways has set the stage for the evolution of the teams and interventions which we are hearing about at this conference. In 1977 the psychiatric staff at the Portsmouth Naval Hospital wished to respond to disasters such as the collisions of the USS BELKNAP and the USS KENNEDY, which occurred in late 1975, and a disaster involving liberty launches in Barcelona harbor in 1977. These resulted in that hospital seeing many psychological and emotional sequelae in sailors and marines onboard those ships.

They hypothesized that early intervention techniques similar to those developed in World Wars I and II to treat combat related trauma could be utilized for these personnel. Accordingly, they formed the Special Psychiatric Rapid Intervention Team (SPRINT). This team was first used in October of 1978 with the USCGC CUYAHOGA. By February of 1983, SPRINT was institutionalized as one of the Navy's Mobile Medical Augmentation Readiness Teams (MMART). These teams are located at the naval hospitals in Portsmouth and San Diego and are available in case of disaster. Most often they have been requested when there have been catastrophes involving deaths. The goals of the interventions have been to lessen the adverse psychological and emotional sequelae of a catastrophe and any attendant morbidity as well as to aid in the recovery of the affected ship or unit itself.

I would like to present some of the current lessons learned from interventions that have taken place during the last 2 years. These lessons learned have resulted in some modifications in organizational structure and intervention format and methodology.

It has become obvious that before any team can be functional, the team should have training and the opportunity to have interacted with each other in realistic ways. Anyone responsible for such teams must look for such opportunities when and where they arise. Time is always difficult to obtain. In private practice time is equated with money so that training requires an "investment." In our current training, we are attempting to orient the team members to many factors. One crucial factor is the community in which the intervention must take place. This requires that team members become oriented to shipboard life with its attendant risks and the special social and cultural factors of such life. Also, since catastrophes may not have ended by the time a ship arrives, the team must be trained in realistic techniques to assure team member safety as well. This would include training such as control and fire fighting schools. It is also useful to "reach out" when there are the "small" disasters that happen in any sort of industrial community. Deaths related to any cause whatsoever, including suicide which may have taken place out of the workplace, can be used both for training in intervention and an actual intervention. Team leaders must seek out such opportunities and form liaisons with those community groups which may be able to approve such interventions. The debriefing of returning teams who have been doing an intervention also provides a training opportunity for those who have not taken part in an intervention.

A second key concept is flexibility. Flexibility must be conceived in terms of organizational structure as well as intervention methodology. In organizational structure, flexibility has become more evident in the use of "designer teams" which are modified SPRINT teams. Usually a SPRINT team would include two psychiatrists, a clinical psychologist, two psychiatric nurses, a psychiatric social worker, a hospital chaplain and up to 4 hospital corpsmen. Such a team may be extremely useful in the aftermath of a large disaster but can not be utilized within the confines of a ship returning from a disaster at sea when space is extremely limited and the ability to get people aboard is not as good as it might be in port. Either the chairman of the department where SPRINT is maintained or the officer in charge of the SPRINT team must make an assessment as to which members may be most useful or even be able to go to a specific disaster site. Planning factors are obviously inclusive of whether or not there is sufficient space for the team members, how large the disaster is, whether the team will be dealing primarily with crew members or with families.

In applying the principles of TRIAGE, a necessary lesson is that the idea that a team is going to "take care of everyone" is utopian and, in the end, unrealistic. Limited resources must be utilized in a utilitarian way which will provide the greatest good for the greatest number. Some ways of addressing this question include basic factors, like how large was a crew aboard ship, how many primary casualties were there, how many potential secondary casualties (i.e., those who are particularly at risk), and how many resources are available at the site. Obviously intervention methodology and flexibility of response through organizational structure are related topics. Currently, our goal is to begin an intervention with a casualty group within 24 to 72 hours after a disaster. A "designer" team containing the maximum number of resources possible must go to the site of the disaster, be it aboard ship or at another military unit. Those that go aboard the ship must initially take the "consultant's stance" and brief the Commanding Officer and Executive Officer who are in charge of everything aboard the ship as to the purpose and goals of the team. It is crucial to distance the team from any investigation that may be ongoing. It is optimal if the team can be integrated into the medical department. This allows use of an existent community network and makes the team readily identifiable as well as identifying the team's goal as medical. This also brings up a concept of role definition which consultants must consider the usual question being "Who is the consultant or team working for?" It is useful to explain to commanding officers that the team is there as a consultant and that you work for them through their medical department.

While explaining methodology and goals, the team will also begin to hear about the disaster. This will allow them to begin to target specific groups which are at risk. In a shipboard culture it is always useful to meet with the entire wardroom if possible. A wardroom consists of all of those commissioned officers aboard ship who are responsible for all of the functional divisions aboard that ship. It is also useful to meet with the Chief Petty Officers Mess. This is the senior enlisted equivalent of the wardroom and consists of those enlisted technical and leadership personnel who are considered by the Navy to be the backbone of any ship. It is also useful to gather information from the medical/dental department. These three key groups will have been involved intimately with any disasters.

Conceptually, interventions themselves consist of "debriefings" which have come to mean a group which meets for a varying period of 2 to 4 hours during which time group members cognitively reconstruct their experience and then are allowed to experience the emotional concomitants of that experience. This is in the context of a supportive and educational environment wherein the emotional experience is defined as normative and the usual sequelae to loss and disasters are described. The number of people in a group we now think should be limited to around 25 if that is possible. Larger groups tend to be unwieldy and do not allow an optimal experience. Other educational issues that are dealt with relate to what the person can expect in the next several hours today as well as eventually what they may expect to undergo with other family members.

During this period of time, group members often work 18 to 20 hours a day and usually undergo a bonding with the ship or unit. Team members must meet regularly during this period of time with each other to deal with their own reactions. There is nothing about being a mental health professional that makes a team member immune to human reactions in the face of severe trauma.

"Debriefing" sessions are most usefully held with those groups thought to be most at risk. The number one priority is those individuals or divisions most closely related to the dead or injured and those who were most in fear of death or severe injury themselves during the initial trauma. Those people who subsequently are in danger of death such as fire fighting or damage control teams must be considered at risk as well. Those people who see or handle dead bodies or body parts or who assist people with significant injuries are also at risk for sequelae. This most certainly includes the medical department aboard any ship.

The question of when the team should leave is one where there must be some flexibility. Teams which stay aboard between 3 and 5 days would currently seem to be optimal. If a ship is returning to port and there is a subsequent memorial service, then there can be a disengagement during that period of time. Teams have invariably been asked to attend memorial services with the crews. Usually a ship will also have returned to port and an "at sea" SPRINT component may interact with an "ashore" SPRINT component which has been taking care of family members. If a ship is staying at sea, a good indicator of when it is getting time to leave will be when people start talking about problems that they had before the disaster. This is generally within about 3 days of the beginning of an intervention.

One interesting question that arises is when a crew or military unit should "return to duty." Mental health professionals may be expected to have specific expertise in this area and may also be interviewed by newspaper reporters. There are a few things that are helpful to recall in general in this context. One is that recovery and healing for most people include work. The longer people are away from their usual environment, the more difficult it may be to return to work. Another is the power of bonding that individuals have in their identification with a unit. It may in fact be deleterious for a crew or unit not to return to work, and this is a factor which must be considered. There will always be individuals who will not want to go back to their place of duty. In our experience, we have found that the vast majority of individuals who try to get off of a ship in the immediate post-disaster phase are generally those who also wanted to get off the ship before.

In working ashore with family members after a disaster, team members must integrate themselves into local delivery systems as much as possible. Generally, the scope of disasters is such that work will primarily be in a consultant role and in taking care of the most extreme cases. In situations where there have been many deaths, what people realistically desire in the immediate aftermath is information. Information related to casualty lists can cause emotion to escalate rapidly. Medically unstable situations should be expected as many can be under great stress, and this will exacerbate underlying medical conditions as well as enhance the possibility of accidents. Women who are pregnant or people with histories of seizure disorders who hyperventilate, for instance, may be at risk. Acute emotional reactions are not usually something with which those other than clinicians necessarily have any familiarity in management. Anger, it must be remembered, is one of the primary emotions known to accompany loss and can be expected. Anger may be directed at authority figures. Interventional sessions for families and friends of disaster victims are frequently thought of in planning interventions. Families of survivors must also be considered, as they have great concerns themselves and have usually had terrific anxiety in waiting for notification. Education about what to expect from their returning loved ones in terms of behavior as well as sequelae to be observant for is always helpful.

There are a few unusual things to consider in planning. Often the President or Vice-President or other very important people may be in attendance at a memorial ceremony. If the President comes, it may be that crisis centers or other coordinators will be contacted by the Secret Service to see if they are aware of any people who might pose any difficulty during a Presidential visit. Also executive agencies may ask for support from team members to deal with any crisis which might arise during a memorial service. In our experience, team members have become aware of no one who might pose any difficulties nor have there been any acute reactions requiring intervention during the memorial services.

Media interest is extremely high in disasters, and team members may find themselves briefing members of the press who are often interested in "human interest" reactions. That is, they most often want to hear about how people are responding emotionally if not, in fact, interview and take pictures of them. If crisis interventions are in a public place, interviews with victims or their families can be expected. Nevertheless, even though media demands may be time consuming and have potential for negative outcome with individuals, they do provide a great opportunity for public education about disaster response and can thus be used for public education on a wide basis. It is probable that the use of media in disasters is something that team leaders should be conversant with. As all team leaders come to understand, they should be aware that sensitive questions relating to policy or responsibility may be raised with them by the media.

If I had to relate any one factor which will aid a response team in being able to get its job done and meet its goal, I would say that it is the use of a pro-active versus reactive stance. Education about disaster planning, integration into community plans, and public education about the usefulness of such a response are necessary. Additionally, it may be necessary for team leaders to sometimes "market" their services. One way of doing this is through service commitments. And their are many who are willing to volunteer their time. As noted above, time is considered money by many, and a crucial question for interventions or service delivery is always "who pays?" This is an issue in

government organizations as well as in private organizations. Another issue is research and a caveat or lesson learned here is that if you haven't planned for the research prior to an intervention you are not going to get it done during the intervention. Once again this requires some commitment on the part of individuals as well as organizations.

I would like to publicly thank all of those who have been involved in the past in the genesis of the SPRINT teams and in what I perceive are its relatives which have now become integrated into civilian disasters as well. I think it is useful to remember that such responses have in large part grown out of a pragmatic approach developed during combat and that we owe some thanks to our predecessors who originally developed these techniques through their hard won knowledge.

TRAUMA PASTORAL CARE:
A USAF CHAPLAIN INTERVENTION MODEL FOR RESPONDING TO TRAUMA ENVIRONMENTS

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Trauma Pastoral Care is an intervention model of pastoral care and counseling practiced by clergy in the midst of combat and/or disaster environments, particularly where multiple or mass casualties are generated. It is an activity defined by its context, its practice, and its authority in terms of the role and function of military chaplains as well as clergy persons in nonmilitary environments. Within its military context, trauma pastoral care is "a development within the art and science of pastoral care and ministry which is designed to carry out a specialized, essential, and highly significant mission under the adverse conditions of disaster" (Parlotz, 1985, p.1). It is a special form of ministry of presence and a specialized form of pastoral counseling in times of catastrophe, war, or disaster where individuals are confronted with and likely overwhelmed by these events, including personal injury, threat to life, and to physical, emotional, and spiritual integrity, and to property. As a spiritual intervention, it has both religious and mental health implications. This is part of an affective-cognitive-spiritual adaptation model of traumatic or psychic stress.

Development of the Model.

Trauma pastoral care as an intervention model was initially articulated by this author in the early 1970's while serving as an intern and resident in Clinical Pastoral Education at Parkland Memorial Hospital, Dallas, Texas. The term "Trauma Pastoral Care" was employed to highlight the unique role and function of ministry in the traumatic situation. A military model of trauma pastoral care was introduced by the author in 1983 when the Command Chaplain of the Military Airlift Command was concerned that chaplains were not prepared to respond to the special needs of trauma and, specifically, to be effective in ministry response to casualties and care givers within the casualty care system of the Air Force. From 1917 to the mid-1980s, Army-Air Force and Air Force chaplains were trained in this area only in times of hostilities: World War I, World War II, the Korean War, and the Vietnam War (Jorgensen, 1961a, 1961b; Scharlemann, 1974; Groh, 1986; Rhyne, 1986). A comprehensive training program was developed to prepare USAF Chaplain Service personnel to work within the military medical environment (Parlotz, 1985). The training design was field tested in exercises in 1985 through 1987. A video tape was produced for use at the Wing-Base level in early 1988, following field testing of the tape, its guides, and posttesting activities (Parlotz & Frissell, 1988a, 1988b). The video tape supplements 8 video tapes developed by the Department of Defense and the Veterans Administration (Casualty Care, 1984-1985).

Trauma pastoral care has been practiced by the clergy for centuries and specifically by military chaplains throughout this century during combat and disasters. The attempt to cope with traumatic victimization and to assist others in these experiences is not new. The biblical story of Job, probably written in the patriarchal era, 2100-1700 B.C. (Schultz, 1980), illustrates an experience of disaster and terrorism and of PTSD. The ancient story struggled with the effectiveness of an emotional support system during experiences of traumatic stress and illustrates a primitive awareness of an affective-

cognitive-spiritual adaptation model to event-specific traumatic stress. In A.D. 590, Pope Gregory the Great emphasized variable responses to human needs, ministry of presence and supportive intervention, empathic listening, the need to distinguish between behavior which is dysfunctional and that which is appropriate, a reality-orientation, and relating to a person as a fellow human sojourner in the midst of life's experiences (Gregory, 1950). Illustrations of the ministry of pastoral care and counseling are seen in the oral history of military chaplains (O'Callahan, 1956; Jorgensen, 1961a; Knox, 1985; Berry, 1987; Murphy, 1987; & Boyles, 1985). These military chaplains' trauma ministries highlight the role and function of ministry of presence and casualty ministry.

Combat stress reactions affect the airmen and their families (Ursano, Holloway, Jones, Rodriguez, & Belenky, 1989; Phillips, 1988). The significance of pastoral counseling has been identified recently in literature focused on the treatment of veterans experiencing post traumatic stress disorder. Intervention by chaplains in PTSD therapy has been observed (Racek, 1985, p. 282; Glover, 1984; Shatan, 1973, 1974; Haley, 1985). Pastoral counseling intervention enables the bridging of the inner conflict over guilt and sorrow (Racek, 1985).

Other than the author's clinical and military papers and two dissertations (Parlotz, 1973, 1988, 1990), the literature of pastoral care and counseling reports very few published materials on this subject (Fairbank, Langley, Jarve, & Keane, 1981; Stubbe, 1985; Polhemus, 1983; Jacob, 1983, 1987; Chinnici, 1985; Reed, 1977; Jordon, 1976; DeDonato, 1987). One pastoral intervention model with Vietnam PTSD veterans focuses on pastoral visitation, group process, pastoral counseling, worship and prayer activity, and interdisciplinary treatment plan development (Jacob, 1987, p. 67). Another emphasizes early intervention with the immediate survivors of a disaster (Irion, 1986) and combines a grief-work counseling model (Lindemann, 1944) and a crisis pastoral counseling model (Switzer, 1986). The significance of ministry to the critical care givers working in a military hospital is identified in one study (DeDonato, 1987).

The Practice of Trauma Pastoral Care.

Chaplains serve at the discretion of religious faith groups which endorse clergy persons for military ministry, are noncombatants, and have privileged communication status within the military. Chapel managers are enlisted personnel whose role is to support chaplains and chapel programs and who are combatants. The chaplain and chapel manager work as a team. The USAF unit commander is responsible for providing the spiritual needs of personnel. Chaplains carry out this responsibility as staff officers without a line of command. Chaplains are deployed to where the people work, sleep, eat, and engage in recreation. This availability for immediate response to traumatic environments is an essential reason for this deployment. The chaplain is not organizationally part of mental health care; however, functionally the chaplain's ministry is a resource available to victims of psychic stress. In combat and during disasters, the chaplain's role is to nurture the living, minister to casualties, and honor the dead (Parlotz, 1988a). Chaplains have professional responsibilities with each of the various disaster victims (Taylor & Frazer, 1981; Raphael, 1986; Jones, 1985). This includes medical professionals, who tend to resort to a stoic sense of self sufficiency which engages in self-diagnosis, followed by toughing it out and hoping that their depression will pass (Boettger, 1976, p. 67; Glasser, 1980, pp. 283-284.).

Trauma pastoral care response establishes a caring partnership with victims in order to enable them to become survivors of these events. The therapeutic, spiritual partnership is based upon the chaplain's 1) understanding of the nature of trauma, 2) sensitivity to the effects of traumatic events upon human experience, 3) ability to intervene therapeutically and pastorally with the various victims of trauma (including the ability to evoke cognitive and affective responses), 4) ability to emphasize without being overwhelmed by the expression of intense feelings, 5) flexibility, 6) pluralistic awareness, 7) quickness of insight, 8) leadership abilities, and 9) openness to deal effectively with the chaplain's own victim status and need for support and therapeutic care (Parlotz, 1985).

USAF Chaplain Service personnel responding to disaster or combat situations are controlled by means of a Chapel Control Center with 24-hour operations directing pastoral ministry teams. Field training of these personnel focuses on decisions associated with assessments of need and of availability of Chaplain Service resources. To respond to casualty situations, trauma pastoral care triage is necessary to determine priority of casualty pastoral care and counseling needs in terms of condition and prognosis, immediate disposition and medical care, and location. Trauma pastoral care triage is a new and often frustrating concept to chaplains.

Ministry of presence is the primary and initial activity, following pastoral triage. It contributes to the morale of the military unit (Philips, 1982) and generates unit support for its own members and for their families by exhibiting a "we care" attitude. The style of pastoral care may vary among chaplains (Prewitt, 1976). Ministry of presence in multiple and/or mass casualty situations will occur with the injured, families, rescue workers, transportation workers, medical personnel, support personnel, security personnel, commanders, casualty services and mortuary affairs personnel, and others involved. It occurs at the disaster and/or trauma site, during transportation activities, at medical treatment sites, at the body identification site, at air staging facilities, at the command center(s), where "buddies" and families are gathered, and at memorial activities. Trauma pastoral care provides support through presence with the various types of victims and by means of empathic and active listening. The role and function of the chaplain is to be visible, available, and open to all personnel. From this position of influence, the chaplain may employ spiritual and therapeutic interventions in a generic approach to a crisis situation. The specific intervention used by a chaplain will be influenced by characteristics of the situation. Intervention is aimed at enabling adaptive and coping behavior. Religious rites, prayer, and Scripture may be used with some individuals and not with others. The chaplain represents the symbolic presence of God with people in the midst of chaos. The specific definition of this symbolism is mutually defined by chaplain and recipient of this ministry and emerges in the pluralistic manner of a chaplain's professional intervention.

The chaplain seeks to encourage adaptive coping at the time of the acute crisis. Trauma pastoral care should occur no later than 24 hours after the precipitating events (Mitchell, 1982). Contact (Irion, 1986, pp. 91-97) and support (Robins, Fischbach, Smith, Cottler, Solomon, & Goldring, 1986, pp. 42-43; Ingraham & Manning, 1986, pp. 54-57) produce the fundamental platform for trauma pastoral counseling operations. Supportive techniques in the acute crisis (Irion, 1986, p. 94; Smith, 1983, pp. 144-145) enable catharsis so that the victim may express feelings, such as, anxiety, bitterness, anger, and "if

only" guilt. "While it is too early for survivor's guilt, people regret some aspects of their relationship with the deceased" (Irion, 1986, pp. 95-96; Ingraham & Manning, 1986, p. 47). Trauma pastoral care is offered in the proximity of the precipitating traumatic event (Jones, 1986), following the treatment protocol of combat psychiatry (Salmon, 1917). It has a "reality-oriented" approach where the primary focus is on the external, objective reality of the present event(s) as perceived by the victim and as it may be perceived by others, and on the internal, subjective reality as defined by the victim's cognitive and affective response to the event(s) (Rosebaum & Beebe, 1975). Initially this counseling focuses on the immediate past event(s) and the immediate future, namely, return to duty or casualty care, rather than "the distant past, relations within one's family, and distant future goals" (Ingraham & Manning, 1986, p. 47). The object is to enable the victim "to verbalize the horror and terror" of the recently experienced event(s) and "come to grips with such normal powerful emotions as grief, guilt, remorse, and fear" (Ingraham & Manning, 1986, p. 57).

Trauma pastoral care seeks to bring together individuals who are significant to the victim and who facilitate mutual support through the technique of networking (Irion, 1986, pp. 97-98). This is a restorative intervention. The chaplain helps the victims become reconnected within their social support system (Germain, 1983; Caplan, 1974; Mitchell, 1983). A military organizational unit functions because of mutual care and relationships among its members. Trauma threatens this attachment and bonding. The networking intervention seeks to facilitate the nutritive elements of the individual's social support system that "release genetic potential, support optimal development, and promote adaptive functioning" (Germain, 1983, p. 113). During the acute phase of trauma pastoral care, networking brings people together, supports interaction, and facilitates shared responsibilities (Irion, 1986). Victims are not left alone and isolated unless they wish to be.

Having accomplished the supportive and interventive goals of trauma pastoral counseling, the chaplain must terminate the interview and move on to another individual. Termination is a clinical pastoral decision based upon various factors, such as, initial goals of counseling, triage decisions, prognosis, the possibility of follow-up, and the collective needs of people in the ministry environment.

Conclusion.

Trauma pastoral care is practiced through ministry of presence during and following events of psychic stress and through the practice of pastoral counseling with the various victims of these events. Trauma pastoral care has a here-and-now, reality-oriented focus. It is a ministry with the casualty and with the care givers, in particular, those involved in rescue work, emergency services, and acute medical care. The chaplain engaged in trauma pastoral care in the emergency medical care environment needs to understand this environment and the unique needs of and stresses experienced by its personnel. In the thanatological setting, trauma pastoral care is expressed as grief work focused on interpersonal and intrapersonal dynamics of grief through spiritual-religious practices, rites, and customs, and encourages healing adaptation to the loss. It is part of an affective-cognitive-spiritual adaptation model of traumatic or psychic stress.

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RESEARCH ON PSYCHOLOGICAL DEBRIEFINGS

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While a long-established technique in the military, debriefing has only recently begun to be used widely in civilian populations. Surrounding the use of debriefing is a controversy in which the nuances of approaches are emphasized and commonalties minimized. This presentation endeavors to step back from the controversies of who/what is best/right and to examine the basics which are the foundation for research on debriefing. In that spirit, I will use the generic term "debriefing" rather than others which indicate a more specific model.

Debriefing, with its focus on critical incidents, and persons' responses to them, is clearly related to the field of traumatic stress. As an intervention, debriefing is firmly rooted in crisis intervention and crisis theory. While some may continue to argue whether debriefing constitutes a form of psychotherapy, I assert that while there are educational and other components to debriefing, the primary purpose is a therapeutic one. The therapeutic aspects are both intervention (that is, to restore functioning to a previous or higher level as soon as possible) and prevention (to reduce long-term negative effects following a major, stressful, negative life event). Both of these goals are goals of crisis intervention. If we are willing to accept this premise, then we can call on the field of crisis intervention and its attendant literature to provide a conceptual basis for our research. For those to whom this may be a novel concept, I recommend a 1989 article by Dyergrov on the elements of crisis intervention in debriefing.

Research into the effectiveness of debriefing can be thought of as a form of evaluation research. Research on the efficacy of psychotherapy and the field of program evaluation is relevant here. One of the first things we can learn from psychotherapy research is the need to examine efficacy. Psychotherapy efficacy research began with the 1952 Eysenck paper and with the basic question of "Does it work?" It is important to remember that Eysenck's academic inquiry preceded any calls for accountability in psychotherapy by insurance carriers, the creation of DRGs, etc. A second thing we can learn from experiences with psychotherapy research is that we need to take a relatively sophisticated approach. The initial question of "Does it work?" has evolved into specific questions which are more likely to yield informative data. Namely, the broad question of "Does it work?" is likely to provide mixed results depending upon the presenting problems, interventions used, etc.; whereas, the question "Under what circumstances and for which people is what type of intervention helpful?" is really what we need to ask of debriefing. If we learn from the history of psychotherapy research, we can go directly to a question which is more likely to hit pay dirt. However, as a caution, relatively few evaluations of group psychotherapy have been published, and a group is the typical forum for debriefing efforts. Given that debriefings typically occur within the context of an organizational structure, program evaluation research is likely to be another fruitful source of information for those interested in research on debriefing.

The debriefing model has received limited research attention. Research to date has been published in specialized journals, most often journals which are not peer-reviewed. As examples, I would like to introduce two recent studies. Working in Australia, Robinson (1989) developed a self-report questionnaire to evaluate the debriefing process. Eighty-one of 141 workers completed the survey; one-half reported stress symptoms, and nearly one-half reported lessened symptoms which they attributed to the effects of the debriefing. Kennedy-Ewing (1989) modified Robinson's questionnaire and surveyed 280 emergency service workers. On the scene of the incident, most respondents recognized one or two symptoms; after the incident, they recognized five to six; following debriefing. the number of symptoms reported decreased. Nearly all (99%) reported appreciating being able to participate in the debriefing process. Each of these studies provides a testament to the perceived efficacy of debriefings. However, we must note that no standardized instruments were used, no objective measures of outcome were made, and no control group was employed in either study.

So what are appropriate research methodologies? We are unlikely to be able to randomly assign subjects to participation in traumatic events. For a variety of reasons, we also are unlikely to be able to randomly assign persons to participation in debriefings. Without random assignment, experimental methods are eliminated as an option. We are unlikely to have pretests on subjects, so there goes a portion of quasi-experimental methods. This leaves us with the methods which are allocated less status in our field. If psychologists research debriefing, the inherent biases against nonexperimental methods must be recognized and the validity of other (sometimes preferable) methods must be acknowledged.

Given that we agree that research on the efficacy of debriefing is important, where should we begin? While debriefings can be used with survivors, with those bereaved, or with helpers, it is the helper who should be the focus of our initial investigations. Helpers are in the position of not being able to recognize their reactions at the time of the event. As noted in previous presentations today, this is functional--awareness of their reactions at the time would likely impair job performance and possibly endanger others. Thus, by definition, emergency services personnel must use the denial and shock inherent in life-threatening situations as a necessary means of coping in order to perform their jobs. If these mechanisms are effective, workers can be assured they will not freeze in a threatening situation and that they can look back upon their performance during the event with some degree of pride. The other side of such coping is that if it continues beyond the point where it is adaptive (such as the case when a worker is unable to express the horror of witnessing grotesque death), negative psychological sequelae could be anticipated.

Emergency service personnel should be the focus of initial investigations for another, more practical, reason. Workers are part of an organizational group that existed before the incident and will exist after the event. By contrast, victims and survivors often comprise a group primarily by chance; that is, unfortunate circumstances define their communality. The example of an air crash will be used to illustrate. The communality for this group is that they each happened to book tickets on the same ill-fated airplane. Their identity as a group did not exist before the crash; and, while individuals are likely to identify themselves as part of the survivors or the bereaved of the crash, this identification does not have a functional group component.

Another aspect of the work organizational structure is that inherent responsibilities and struggles exist. Namely, management has some responsibility to the workers, and the union has an interest in worker well-being. Such structure is lacking in dealing with solely victim/survivor groups in disasters unless there is a post-hoc formation of an organization (such as an advocacy group or a class-action lawsuit). Thus, existing work groups are easier than victim/survivor groups to identify and to follow.

Now I will move from issues of sampling to issues of measurement. Psychotherapy research began with self-report measures of efficacy and satisfaction. This is where debriefing research has begun as well. Psychotherapy research went on to take a three-pronged focus, namely, self-report by the client, assessment by a professional (such as a therapist), and reports of others within the person's sphere of functioning, such as family members. Having more than one source of data is likely to be of benefit in research on debriefing. Objective measures, in addition to subjective measures, of well-being should be implemented in debriefing research. Work records which indicate time lost from work due to illness or tardiness are basic measures which could be included in the assessment of functioning. Comparison groups and standardized instruments should be used in debriefing research to strengthen the validity of one's findings and also to be able to compare findings across studies.

Longitudinal follow-up is also important in debriefing. The researcher must be sensitive not to overdo repeated assessments, however. As Sloan (1988) candidly noted, he lost many of the subjects in his study following an air crash due to their frustration with having to continue to complete the measures. Also, we need to be sensitive to the fact that the researcher and the research instruments may serve as a reminder of the event itself.

The issue of measurement is tied to a conceptual issue; namely, the researcher should acknowledge a difference between post-traumatic <u>reactions</u> and post-traumatic <u>disorder</u> (PTSD). We know that persons who have experienced a traumatic incident often have a number of symptoms and problems immediately following the event. Typically, these issues resolve themselves within a relatively short period of time, namely, weeks or a few months. Reactions such as these should be kept conceptually separate from PTSD and the pathological level of response that is seen in some persons.

We need to delineate the stressor by job function, not the event. In other words, in order to tie together such diverse events as earthquakes, floods, and air crashes, we should examine that to which the person was exposed. Were they exposed to witnessing mutilated bodies? Were they exposed to children who had died? Were they exposed to life threat themselves? Only by finding these conceptual commonalties will we be able to make sense out of the research in diverse areas and events.

A point which may be overlooked is that one should assess what occurs in the debriefing itself. We often focus on the psychological sequelae of the events for the individuals without really looking to see what happened in the debriefings. Although there may be commonalties in training, persons who conduct debriefings will develop their own individual style; thus, it may be helpful to survey the debriefers themselves in addition to the participants in the debriefings.

On a point that is likely to be controversial, I believe that persons who provide debriefing services cannot adequately assess/research them. We know from laboratory research that there are experimenter demand characteristics. Potential biases would only be multiplied when the researcher is also the one who provides the intervention. A cleaner approach would be for persons who conduct the debriefings to collaborate with a skilled researcher. The integrity and credibility of debriefing efficacy research is more likely to remain intact under such a structure.

If a practitioner is looking for a researcher with whom to affiliate, I will offer a few points which might be helpful. First, data-collection-for-the-sake-of-data-collection should be avoided. Without guiding hypotheses, theories, and concepts, one is likely to end up with a drawer full of unusable data. Second, be wary of researchers who want to mandate attendance at the debriefings unless mandatory attendance is a typical part of your organization. Researchers may request this, but they also should be sensitive to the effects mandated attendance at such meetings would have on your organizational environment. Third, researchers should look for survivorship and coping, not just malfunctioning, in your group. And fourth, professionalism regarding confidentiality should be expected of all researchers. Given the unique nature of many of these critical incidents, identification of individuals is rather easy. The confidentiality of participants in debriefings should be respected and protected in both clinical and research contexts.

In conclusion, we know that research on debriefing is needed. I also acknowledge that any study on debriefing will be met with controversy. Sol Garfield (1983) described a psychotherapy efficacy study by Sloane and colleagues (1975). Garfield described the reception of the research: the study won awards and was heralded as the best psychotherapy efficacy research to date, and it also was lambasted by several other researchers on a variety of grounds. Thus, anyone who is doing research in this area must also acknowledge that his studies are likely to have a very mixed reception.

In sum, I will reiterate some of the primary points of my presentation. I believe it is important that researchers in debriefing recognize the roots of debriefing and to learn from the history of closely-related fields. The use of comparison groups and standardized instruments, as well as including other than self-report measures will be very important. Research in this area should begin with helpers themselves, and stressors should be delineated by exposure, not by the event itself. Research with helping groups must recognize the unique organizational factors which may influence outcome, and survivorship and coping should be emphasized, not just malfunctioning and disorder.

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U.S. ARMY CHAPLAINCY BATTLE FATIGUE MINISTRY

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I am very pleased to be with you today. I believe that the subject that I am going to address is critical and deserves careful consideration from the international community. Of course, I am going to talk about chaplaincy involvement in addressing stress, particularly combat stress and the types of training which the Army chaplaincy does in these areas. Additionally, I will want to address the battle fatigue (BF) phenomenon in its outgrowth from combat stress. Within the precision of current Army definitions, I will only be discussing battle fatigue in its most transient and least symptomological construct.

In October 1984, I was the primary briefer of chaplaincy issues during what the Army calls a Functional Area Assessment. The presentation was to the Vice Chief of Staff of the Army, General Maxwell R. Thurman. I had completed most of my brief which had depicted the responsibilities of chaplains, their missions, and the functions of the chaplain assistant, the enlisted member of the Unit Ministry Team. General Thurman, in his inimitable manner, addressed the gathering of Army Generals around this table, and said something like:

> "Do you all remember the briefing we got from Dr. Belenky from Walter Reed concerning the experience of the Israeli Defense Forces and combat fatigue? As I have looked at the force structure, I see that we have the potential for real problems at the battalions with combat stress. All our medical folks have been moved back: yet we have the chaplain and chaplain assistant still located forward in the battalions. Is it possible that we can train up the chaplain assistant to perform duties in dealing with combat stress? The chaplain assistant is a ready professional resource with the chaplain. They ought to get involved in battle stress."

Our answer to the Vice Chief of Staff was that we could, in fact, train a chaplain assistant in battle fatigue skills and add to the chaplains' already extensive expertise in the field. It may be a truism, but the skills needed to deal with the stress and frustration of combat are the skills which are needed to address routine day-to-day living issues.

Chaplains have historically dealt with people in crises by pointing them to the transcendent reality in their lives. They have fostered a sense of transcendence and calm even when things seem to be falling apart in combat. This "other worldly" view is translated into very practical programs of assistance and healing. In a recent final report by a special study group on TRADOC high risk/high stress training, high marks were given to US Army Chaplains. Most TRADOC posts' chaplains are on the cutting edge of, and play the most active role in stress management, suicide prevention education, counseling, and intervention." (Report to Combined Arms Training Activity. Ft. Leavenworth, KS, 1 April 1989).

Chaplains are involved in the preventive processes, deeply involved in family support plans, counseling centers, and family enrichment programs. These programs provide immeasurable support for soldiers faced with the stress of battle. Studies have demonstrated that soldiers with personal and family problems are at high risk for panic, poor judgment, despair, and apathy in combat. By intercepting problems in the garrison and becoming agents for emotional and spiritual healing in soldier families, chaplains have been proactive and increased the readiness of the force. (LTC Larry H. Ingraham. "Caring is not enough: An Uninvited Talk to Army Leaders," Military Review. Dec 1987, p. 47-48).

THE BATTLE FATIGUE MISSION

The chaplaincy operational mission is to provide and perform comprehensive religious support to soldiers and soldier families Army wide in war and peace. Chaplains and chaplain assistants form Unit Ministry Teams (UMT) for the delivery of the religious support mission to soldiers and soldier families.

In the chaplaincy's Capstone manual, FM 16-1, Religious Support: The Chaplain and Chaplain Assistant, the following doctrinal statement clearly defines the BF mission: "In the area of battle fatigue, the UMT is a powerful asset to the commander. The UMT possesses extensive skills. a soldier outlook. a clear concern for the well-being of the individual, and a unique spiritual focus." (pp. 5-31)

Battle fatigue reactions to the carnage of the modern battlefield are seen by the UMT as normal responses of some men to an uncontrollable. devastating situation. The revulsion to killing and being killed is normal, not sociopathic or deviant. S.L.A. Marshall in his great book, Men Against Fire, refers to studies by medical corps psychiatrists studying battle fatigue cases in the European Theater. He states, "They found that fear of killing. rather than fear of being killed, was the most common cause of battle failure in the individual" (p. 78). The great handicap of the American soldier in battle is that his home, religion, schooling, and the moral code and ideals of society have taught him the worth and value of human persons. Thank God for his handicap!

His emotional response is that taking life is prohibited and unacceptable. Marshall's findings confirmed this as he astounded military planners, announcing that on any given day of considerable combat action in the average infantry company only 15% of the total strength ever fired their weapons (Marshall, 56).

Into this arena of the often incongruent demands of mission and conscience the soldier is thrust. The chaplain brings some sense and order to the soldiers he loves- in the midst of confusion and insanity of war, he points to a transcendent order- higher and more powerful than instruments of war: he calls for reconciliation and preaches forgiveness. As the priest he stands as the symbolic touch with some meaning in the midst of the craziness. His is a message of hope.

IMPLICATIONS OF FORWARD THRUST

The Army's doctrine of AirLand Battle articulates a fluid, lethal battlefield with support elements forward on the battlefield. Forward Thrust is Army doctrine for religious support. It calls for positioning the UMT as far forward as possible to perform or provide for comprehensive religious support (FM 16-1).

The UMT is in a particularly advantageous position for the BF mission. Through habitual association with the unit of assignment, the UMT knows and is known by soldiers to the lowest level. It is in this context that the chaplain has opportunity to show love and concern. It is this mission of the US Army Chaplain that cannot be reproduced in a hospital or counseling office - to be with the soldiers where they are, to share with them the danger they experience on the battlefield and to be accessible to their needs 24 hours of the day.

Identifying with soldiers in their pain and joy in their unit of assignment presents an enhanced opportunity for stress reduction ministry through their identity with the combat units. By virtue of wearing the "patch," Ch Barnabas Daniels, talking to 1st Cavalry soldiers; lame in one leg from shrapnel taken in Vietnam, limping with a cane, he pointed to the higher purpose, "Isn't it great that God has brought us this far!" Such inspiration goes beyond artificially generated hype.

CPT Frederick Garland and MAJ Michael Robichand captured this same dimension in their discussion of combat medics and battle fatigue. They state "The medic, by virtue of his position as a peer and resident medical authority in the unit, has a unique credibility among combat soldiers. It is likely that he, not commanders or behavioral science specialists, will educate fellow soldiers on the nature of BF." (Knowledge of Battle Fatigue among Division Combat Medics and Effectiveness of Training," Military Medicine, 152, 12:608, 1987).

Soldiers have a strong ethic of taking care of problems within the unit. The motto of the Army relief effort is, "The Army takes care of its own." Leaders encourage this as a way of maintaining esprit de corps. Studies of WW II demonstrate that unit cohesion and morale are primary defenses against a high number of psychiatric casualties in combat units. Audie Murphy, the most decorated soldier on the American side in WW II, single-handedly took on a German Infantry Company and killed them all. His answer as to how or why was, "They were killing my friends." (Gabriel, Richard A., The painful field; NY, Greenwood press, 1988, p. 162). The most direct morale generator is at the company, platoon, and squad levels.

Battalion and Division Commanders are rarely seen and contribute less to unit cohesion than first-line leaders. Because chaplains are visible and accessible at these lowest levels, their influence and guidance are magnified in combat.

This very aspect is highlighted by LTC Robert K. Gifford and others, in their paper "Grief Leadership and Unit Recovery Following Fatal Training Accidents." They state "Chaplains were more prominent in the units' grief resolution processes than were mental health professionals. One reason for this was that Army battalions have chaplains and do not have mental health professionals" (paper presented to Fifth Annual Meeting of the Society for Traumatic Stress Studies, 27-30 October 1989, San Francisco, California).

To be commissioned into the Army, all chaplains must have 90 hours of postgraduate study in theology or related subjects. Most chaplains have extensive training in counseling and human interaction and pastoral experience in crisis intervention.

During 1984 the Vice-Chief of Staff of the Army (VCSA) directed the US Army Chief of Chaplains (CCH) to directly involve chaplain assistants in the care of and ministry to battle fatigued soldiers to the maximum extent possible. The VCSA indicated that the chaplain assistant was a ready source, stationed far forward at the battalion level, and the Army should make maximum use of the chaplain assistant's human relation skills.

As a result of this mandate, the Chaplain School published Field Circular 16-51, Battle Fatigue Ministry (now incorporated into FM 16-1). New tasks were identified and first published in the April 1988 Soldier's Manual. The Basic Noncommissioned Officers Course (BNCOC) for MOS 71M (chaplain assistant) began training senior chaplain assistants in leadership, human relations and battle fatigue identification.

TRAINING FOR BATTLE FATIGUE MINISTRY

Training in care for Battle Fatigue casualties at the US Army Chaplain Center and School is considerable (see attached sheet). Both officers and enlisted personnel receive training in basic human interaction skills as well as BF identification and preliminary care techniques. Testing of the skills has been included in the chaplain assistant Military Occupation Skills (MOS) qualification tests.

In addition, the Health Services Command (HSC) presents the UMT with specialized programs and courses to assist the UMT in preparation for ministry on the battlefield (see attached sheet). Hospital settings provide the UMT with opportunities for desensitization to pain and suffering which may be the closest to that of the mode on the battlefield. Hence, they are of critical importance to the chaplaincy.

Conclusion

The modern battlefield will tax all resources available in the helping professions. Estimates indicate that 30-50% of all non-fatal battle casualties in the next war will be psychiatric casualties. The soul and spirit of our soldiers is critical. In fact that aspect of morale may be the most critical factor of all. I leave you with a quotation by General George C. Marshall which was true then and is true now.

> I look upon the spiritual life of the soldier as even more important than his physical equipment... The Soldier's heart. the soldier's spirit, the soldier's soul are everything. Unless the soldier's soul sustains him, he cannot be relied upon and will fail himself and his country in the end.

US ARMY CHAPLAIN CENTER AND SCHOOL (USACHCS)
RELIGIOUS SUPPORT TO BATTLE FATIGUE CASUALTIES
TRAINING

I. ENLISTED TRAINING

A. Advanced Individual Training (AIT)

1. The recruit comes to USACHCS after completing nine weeks of Basic Training.

2. Minimal instruction is presented on Battle Fatigue (BF) Religious Support (2 hours).

B. Basic Noncommissioned Officers Course (BNCOC)

1. The BNCOC course comes at approximately the sergeant level of career advancement (4-6 years).

2. Since a greater maturity level is required to deal with BF casualties, sergeants are assigned as part of Unit Ministry Teams of maneuver battalions. Six hours of training occur at this level.

C. Advanced Noncommissioned Officers Course (ANCOC)

1. Advanced training at USACHCS occurs during the 10-12th years of career advancement and includes seven hours of BF Religious Support Training.

2. Their training focuses on the supervisory role of the chaplain assistant in training others in this support.

II. Officer Training

A. Officer Basic Course (CHOBC)

1. CHOBC is an 11-week course for chaplains newly commissioned into the Army. To be commissioned, all chaplains must have 90 hours of postgraduate study in Theology or related subjects.

2. CHOBC contains 5 hours of training in Religious Support to BF casualties.

B. Officer Advanced Course (CHOAC)

1. Chaplains attend CHOAC between the 4th and 7th years of active duty.

2. Eight hours are devoted to BF Casualty Ministry

U.S. ARMY HEALTH SERVICES COMMAND
TRAUMA TRAINING FOR CHAPLAINS

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The Army's mandate for training is simple. In order to be ready for a combat mission, soldiers and units require training in those skills and competencies required. Quality training must be a way of life in the Army.

The same is true for the Unit Ministry Team (UMT). Quality training is a must. As Chaplain (MG) Norris Einertson expressed shortly after becoming Chief of Chaplains in 1986:

> Taking the role of the Army seriously means first of all, planning and being prepared to minister during wartime. When we scrape everything else aside, our primary mission is to be ready to provide word, sacrament, and counsel on the battlefield. (July 1986 speech to Command chaplains).

The limited combat experience within the chaplaincy and the Army as a whole reinforces the need for finding realistic training. The hospitals provide the best place for trauma training on a daily basis. This is particularly true of the Medical Centers.

The underlying training philosophy includes concepts such as the following:

train as you minister-- realistic, experiential
battle/trauma focus-- identify skills needed and train for them
mission oriented-- training should enhance ability of UMT to achieve its combat mission
performance oriented-- knowledge and practical skill development

Religious support in the hospital and on the battlefield has similar requirements:

crisis with traumatic injury or illness
death and dying on a daily basis
religious support to mass casualty victims
religious support to the varied spiritual and emotional needs of patients, family and staff

CURRENT TRAINING

Four training experiences highlight the current Health Services Command sponsored events for chaplains and chaplain assistants.

Introduction to Hospital Ministry

This is a two-week course taught twice a year at Brooke Army Medical Center (San Antonio, Texas). Fitzsimons Army Medical Center (Denver, Colorado), and Walter Reed Army Medical Center (Washington, D.C.).

The training has three basic objectives:

- to inform participants of patient pastoral care issues, the health care team, and hospital environment
- to assist participants conceptualize and articulate more clearly their pastoral identity and functions as health care providers
- to provide participants first-hand supervised pastoral care experiences with patients, family members and staff in a hospital setting.

The primary participants in this course are chaplains, although some chaplain assistants come. Ideally, it can be done as a full UMT.

Clinical Pastoral Education (CPE)

CPE is a year long program of supervised professional education for religious support which provides the opportunity to integrate more fully faith and practice in the art of pastoral care.

CPE trains chaplains for religious support in stress-producing and traumatic environments. Training focuses on religious support in crisis situations.

The program is conducted on a hospital model at Brooke Army Medical Center and Walter Reed Army Medical Center. A community model is conducted at Fort Benning, Georgia. The program is accredited by the Association of Clinical Pastoral Education. We train approximately 15 chaplains per year.

Chaplain Candidate Program

The Chaplain Candidate Program is a six-week program conducted at Brooke and Fitzsimons Army Medical Centers. It is an introduction to the Army as well as hospital focused. Chaplain candidates are seminarians or clergypersons interested in Reserve Component or Active Component chaplaincy and who have not yet completed transfer to the Chaplain Corps.

Chaplain Assistant - Introduction to Hospital MinistrY

This is a class for chaplain assistants designed to improve their ability to run a hospital chaplain's office and share the hospital ministry.

EMERGING TRAINING

Based on Gander Research

The Gander reports identified some training issues for chaplains and chaplain assistants to review and train. Much of our current interest in mass casualties stems from this event. We track more closely now items published by WRAIR and others regarding emotional and religious support to trauma victims.

Mass Casualty Training Resources

Resources are prepared by Health Services Command for MEDCEN and MEDDAC chaplains. They will be disseminated more widely by the Chaplaincy Support Services Agency. The material consists of training modules and materials for use with 1-2 hours of instruction or even a week or two. The material looks at mass casualty and trauma, skills involved, and issues for supervisors in caring for the caregivers.

Trauma Training Course

Based on these resources, HSC is looking at conducting a pilot class in the fall of 1990 at Brooke Army Medical Center.

Chaplain Response Teams

HSC is developing and coordinating efforts to plan response teams to two locations. The first would act as support to the installation experiencing a mass casualty. The second would be detailed to the disaster mortuaries, chiefly the one at Dover.

Combat Medical Ethics Conference

Scheduled 14-18 May 1990. This conference is co-sponsored by the Chief of Chaplains and the Office of The Surgeon General.

Each of these training events and others yet to be developed will increase the ability of chaplains and chaplain assistants to provide and perform religious support under the worst possible circumstances. They will also increase the ability of medical and chaplain personnel to work together as a team.

SAFEGUARDING HIGH-RISK/HIGH-STRESS TRAINING

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In order to prepare individuals and teams to perform combat skills reliably under the hardships and fear of combat, it is necessary that their training involve significant levels of risk and stress-- both physical and psychological. High risk/high stress training can serve a number of functions, although not necessarily all in the same course or context.

- It can be used to screen out those who lack the physical, mental or motivational essentials to perform specific combat duties.

- It may provide the setting for "state-dependent learning," so that soldiers can perform in combat when sleep deprived, hungry and/or in a high state of physiological arousal and anxiety.

- It can toughen and desensitize soldiers to the uncomfortable, unfamiliar and perhaps extreme stimuli of combat.

- It can expose soldiers to their own fear responses in a setting where they can master them; they can also learn to recognize signs of excessive stress in themselves that could lead to failure unless managed.

- It can teach skills, including instantaneous reactions, which could be essential to survival in combat. Especially, it may teach interactive leadership and team skills which will work in the stressed state.

- High risk/high stress training ideally builds confidence in self, comrades, leaders and equipment. This will be especially true when units train together as units and develop direct, personal cohesion.

- But even when individuals go through a standard course at different times, it can serve as a "rite of passage" that builds esprit de corps and a sense of shared identity with other alumni. This can greatly hasten the formation of new cohesive bonds when soldiers are thrown together on the battlefield.

However, even when done prudently, high risk/high stress training is likely to cost more in dollars and materiel than does less risky training. It should not be used for screening and skills-training when less dangerous, less expensive methods would serve as well or better.

High risk/high stress training also can cause unnecessary attrition. It may screen out candidates who could have been successful had the stress been applied more sequentially and progressively. Finally, it may cause wasteful injury and death.

Each high risk/high stress (HR/HS) training course or program, therefore, needs to be subjected to a cost/benefits analysis. This should determine, first, whether all the risks and stressors have been identified and are necessary to the specific training objectives. Second, is there an acceptable

ratio of the positive benefits from the course and the remaining residual and unavoidable risks? If there is an acceptable ratio, that risk is justified and defensible. Then, when tragic accidents ("Acts of God") occur, the course faculty should not be held personally accountable, provided they have followed approved procedure and used common sense.

The Army's High Risk/High Stress Training Study Group was convened in Summer 1988, at the tasking of Training and Doctrine Command (TRADOC), in response to questions asked by Congress of all the services. The study group was directed by the Combined Arms Training Activity at Fort Leavenworth, KS. The group included expertise in training methodology, safety engineering and the behavioral sciences.

The Behavioral Sciences team consisted of a research-oriented psychiatrist with graduate training in psychology (COL Stokes), a research psychologist (MAJ Sam Rock), and a research-oriented occupational therapist (MAJ Denise Rotert).

The mission of the Study Group was to review the Army's HR/HS courses, to ensure that they were being conducted as realistically as possible <u>without</u> exposing students to unnecessary risk or imposing undue pressure on the average student. There was no presumption that anything was currently wrong or "broken." It was understood that stress and risk are natural elements of training for combat. However, it was expected that ways could be found to "tighten up the system," and improve safety and quality of training in some cases without creating a new bureaucracy.

The first task of the Study Group was to determine what constituted "high risk/high stress training and to identify all such Army courses.

"High risk" was defined as "inherently dangerous activities that can cause injury or death to a student," such as risk of falling, crashing at high speed, drowning, using live ammunition or explosives, fire, climatic extremes, excessive physical work, and exposure to toxic substances or disease.

"High stress" included exposure to potentially debilitating (but not inherently harmful) physiologic stressors like sleep loss, hunger, discomfort. It also included mental stressors like perceived danger, importance of the course to career goals, likely peer pressure, and "homefront hardship" associated with the course.

The list was further examined for the likely interactions among risks and stressors, and the potential for misjudgment or excess by the instructors. Factors examined included whether the course allowed much discretionary authority to the instructors, whether it served as a "rite of passage" or "socializer," or involved first time exposure of trainees to the risky skills and stressors, or placed heavy "organizational stress" on the instructors (in terms of working conditions or career impact).

Only courses that involved high risk were evaluated by the Study Group. However, some Study Group recommendations may also apply to courses which involve high stress without high risk.

Over several months, the Study Group surveyed and site-visited a number of TRADOC and TRADOC-supervised HR/HS courses at Army posts. Courses visited

included the Airborne and Ranger Schools, several Air Assault Schools, helicopter flight training (including the Apache attack helicopter), the Special Forces' Survival, Evasion, Resistance, Escape (SERE) course, the Jungle and Northern Warfare Training Centers, the Chemical Decontamination Training Facility, the Combat Engineer School, and several Initial Entry Training (IET) centers. In IET, attention focused on physical fitness training and on the live fire and grenade ranges.

The Behavioral Sciences Team designed and used a survey questionnaire. This was administered to a non-random sample of the trainees, instructors and supervisors at each post that was visited. Because of the limitations of sample size and selection, the results were not subjected to statistical analysis, but provided the framework for structured interviews and a cross-check with other subjects who could not be interviewed.

The survey teams operated under significant time and resource constraints, which limited the amount of data that could be acquired and processed. For that reason, the Study Group saw its findings as a series of snapshots rather than as a total picture. If no problems were detected on the snapshots, we could not say with confidence that no problems existed. When problems were detected, we could not say reliably how representative they were, but could clearly cite them as examples deserving of corrective action.

The findings and recommendations of the Study Group which are of most relevance to behavioral scientists are summarized as follows:

No glaring cases of negligence or mismanagement were found. We were positively impressed (but not surprised) by the dedication, experience and ingenuity of the course faculties which we visited.

In general, course standards were clearly and fairly established, and risks were well-related to the course objectives. Appropriate safety measures were in place. The instructors were knowledgeable of both the risks and safety standards, and enforced the standards. The chain of command recognized and emphasized the need for safe conduct of training.

However, not all courses had conducted a formal risk assessment. When this was not done, it was unclear whether all appropriate safety measures were in use or whether unneeded safety rules might be detracting from training realism. The Study Group recommended that formal risk assessments be required.

In those cases where course cadre did perceive excessive risk, it usually occurred only intermittently, at times when instructor-to-trainee ratios became too high. This could happen when instructors departed before replacements arrived, from other unplanned attrition, or with surges in the number of trainees. In practice, the remaining cadre would work extra long, hard and carefully, so no more accidents occurred. However, the risk was increased, and also the danger of other stress problems among the cadre. Instructors might also be pressed into service without completing a formal Instructor Training Course. (ITC).

Study Group recommendations were to reduce class size when instructor:student ratios become too high; to give HR/HS courses higher priority for filling instructor slots; to relieve instructors from other non-

essential "additional duties;" and to make ITC an unwaiverable requirement for all HR/HS instructors. ITC should include specific safety training on the risks likely in the course.

As with risk, so with stress. The course faculties were generally well aware of the physical and physiological stressors present in the course, both the intentional stressors and the unavoidable ones. There were usually control measures in place to assure that these stressors did not combine to create excessive risk or disrupt training; for example, adequate sleep was assured before especially high risk events. However, this knowledge was often unsystematic, and passed on by word of mouth or mentoring. Purely psychological and organizational stressors were usually less well recognized. In only a few cases was deliberate harassment (not abuse) of trainees seen by the cadre as necessary to "mold" or "screen out" trainees when, in fact, this appeared to interfere with course objectives.

The Study Group recommended that the mandatory periodic reviews of each course include a formal assessment of the stressors (both physical and mental), based on regular feedback from trainees and instructors. The product of the review would be a "stress profile" covering all phases of the course over time. The ITC would include instruction on these stressors and on techniques to mediate them, both in trainees and instructors. The course's stress profile would also be used to plan interventions and support services.

Student selection and preparation was rarely a problem. Medical screening was conducted when required, including identification of limiting factors such as phobias. Only a few courses required formal psychological screening (usually of service records for discipline, drug or other problems). While few courses provided specific training to trainees in recognizing and managing course stressors and stress, most trainees knew well what they were getting into, and were prepared. However, this could be improved in some cases, especially when trainees came as involuntary members of entire units, rather than as individual students.

All courses had Drop on Request (DOR) or Training Time Out (TTO) policies which trainees could invoke if they became over stressed. However, there is no standard policy, especially when entire units come to the course as units. The Study Group recommended that there be clear procedures for expeditious withdrawal. These must be briefed to all trainees, as well as to the cadre, without too many negative connotations for DOR. There should be formal "decompression interviews" for each student who DORs, to assure the trainee is not in need of mental health or other assistance to deal with the consequences of "failure."

Selection of instructors and prescreening for mental stability and stress tolerance is an area where more can be done in some courses. The use of psychological tests in screening and selection was discussed and recommended "to committee for further consideration."

Managing organizational and personal stress among the instructors is often <u>not</u> well done by the Chain of Command. Instructors and junior supervisors need training in how to support each other, and should be empowered by higher command to do so. Higher command must be more proactive in reducing organizational demands that create excessive, nonessential stress.

Instructors usually do not have a COR option for themselves without realistic concern for the career impact. Supervisors therefore must be sensitive to the possible need to reassign a good but over-stressed instructor before a bad accident, case of trainee abuse or serious stress disorder (such as suicide) ruins more than one career.

Course cadre are typically reluctant to seek help from post mental health and other support services because of lack of availability and accessibility (time and distance) or the perceived impact on their careers from the stigma of needing professional help A heavy burden falls on the unit chaplains (who are most accessible, with least stigma). Community Mental Health Services are often too understaffed to provide command consultation at the training sites (which is called for in AR 40-216). They should be reinforced. In the meantime, communication needs to be improved among CMHS, the chaplains, and the chain of command.

The adequacy of the professional "back-up" system varied widely across HR/HS courses. A few courses were at isolated locations, but for most, there are usually many support services available at HR/HS training posts. These include MEDDAC Psychology, Social Work, and Psychiatry Services, Alcohol and Drug Prevention and Control Programs, Exceptional Family Member Programs, Spouse/Child Abuse Treatment, Army Community Services (financial planning) and recreation facilities. However, considerable gains should be possible with improved integration of these resources.

Immediately following publication of the HR/HST Study Groups' report, its recommendations were applied to preparing the Initial Entry Training programs for the anticipated Summer Surge in basic trainees. Two information papers (handouts) provided a case study for support of HR/HS training. The first reviewed the stressors and stress on the cadre. The second gave Command advice regarding specific actions to take. These recommendations were accepted for immediate implementation by TRADOC.

"Tough, realistic training" is essential to prepare soldiers to function adequately in the intense stress of combat. Indeed, it is necessary for any high risk occupation or avocation. Such training must involve much actual stress, and some unavoidable risk. The U.S. Army is developing the safety methodology and the training policies and controls to assure that we get the most benefit at lowest cost.

REFERENCE

TRADOC High Risk/High Stress Training Special Study, Final Report. 1 Apr 89 (Combined Arms Training Activity, Fort Leavenworth, KS 66027-7000)

DEBRIEFING FROM COMBAT OPERATION "JUST CAUSE"

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When the troop returned from "Operation Just Cause" in Panama, the 82nd Airborne brigade surgeon requested the Post Trauma Treatment Center design training and program procedures for the debriefing of the returning troops. Our four-member team worked at Ft. Bragg, N.C., for a week. We trained care-givers, conducted debriefing sessions and outlined for all commanders the "debriefings" which were offered to all "Just Cause" units as well as their families. The rationale for providing debriefings was:

1. Stress inoculation
2. Improved soldier performance
3. Increased soldier reliability
4. Improved unit cohesiveness
5. Demonstrated concern for the individual soldier

It is important to understand that Post-traumatic Stress Disorder (PTSD) is the only diagnosis in the Diagnostic and Statistical Manual of Mental Disorders, Third Edition-Revised the origin of which we know; it has an identifiable beginning. PTSD begins with an event outside the normal range of human experience which causes specific symptoms of stress for the survivor. This soon after "Just Cause," some troops can be more accurately said to be experiencing Combat Stress Reaction (CSR), not PTSD. See Figure 1.

If all emotional and physical response to trauma is represented by the outer circle, part of what happens may be a combat stress reaction which may later develop into PTSD. Soldiers bring with them individual differences; not only the individual response to trauma but also the physiological and the medical status the person. The trauma-specific portion has to be dealt with additionally. Being shot at is different than being in the medical evaluation chain. The more homogeneous the group being debriefed the better. For example, you shouldn't mix officers and enlisted personnel. Grief reaction occurs if there is a loss or death. It's not pathological, but simply a normal response. See Figure 2.

There are three main phases of emotional response with which you are probably familiar. They are similar to psychological stages associated with death and dying as described by Dr. Kubler-Ross, and they,re similar to the reaction stages to separation and divorce. Essentially we all go through the same kinds of responses though they might have different names. First, there is an impact phase within which is immobilization and denial. Due to hormones, neurotransmitters and other chemicals that are dumped into our system during a crisis situation, there are some perceptual changes that may have a lasting effect. if they're not addressed. One of these we may call tunnel vision. There is physiological and psychological tunnel vision for someone under extreme stress. They focus on the trauma and how to survive. The down side of that is that they can't remember much of anything else that happened. They don,t remember other factors which influenced their decisions and actions. They sometimes cannot even recall that there were other people nearby. This is similar to the soldier in combat seeing someone next to him

killed and saying, "Oh my God; I should have been able to keep that from happening." They forget to attribute simple cause and effect to the enemy action. For instance, the enemy is often the last one blamed by combat veterans.

Part of the goal of the debriefing, then, is to expand that tunnel vision. Another important thing is to have all or most participants involved, so that you can add up all these "tunnel visions" to get the whole picture -- the realistic picture of what happened -- so that it can be thoroughly dealt with.

Another perceptual alteration has to do with time; when time distortion occurs it is most often experienced as time expansion. Like a high-speed camera, the mind is taking freeze frames every millisecond in order to make decisions on survival -- fight, fee or freeze. Later, many survivors re-experience the incident in slow motion in their nightmares or flashbacks. So, if you experienced some immobilization, you may remember it in slow motion, which gives you the erroneous impression that you stood frozen throughout, doing nothing. This phenomenon can create self-doubt and survivor guilt that we see later on in the impact stage.

The third perceptual alteration is similar to an out of body experience and can become one. Trauma survivors see themselves operating effectively in a crisis situation but feel like they are watching themselves. They report a feeling of unreality. This, carried out to the extreme, can be an out of body experience; a dissociative state. This is that part at which multiple personalities and borderline personalities develop, especially if this traumatization occurs early in childhood. The denial part of that is "this isn't really happening is it?" If the people are well trained in what they are doing, they can continue to operate "on task." Training for military combat, police work or other rescue work should be as realistic as possible. Soldiers and emergency response personnel must learn how to operate within this high state of stress so that when it really happenings they have a better chance of operating effectively.. You need to provide as much realism and pressure in training as practical.

The impact part is obviously where it hits you -- anxiety, rage, fear, high states of emotional and physiological arousal. Again, a lot is chemical and some of that is psychological as well. "Mini-flashbacks" and nightmares may start in this phase. The self-doubt part, "what if's', "if only" and "maybe." is natural, but persons may fixate here. If they don't leave the trauma situation saying, "I did the best I could with what I was facing, with the situation, the terrain, with the training, knowledge and experience, they get stuck and vacillate between that high state of anxiety and the next step depression. So you see some misdiagnoses later on, as bipolar or cyclothymic personality disorder such survivors have become stuck in this rather nasty cycle between anxiety and depression. When death is involved survivor guilt can result. The question is, "How come I'm alive and other aren't/" We call this "existential" survivor guilt because they are questioning their existence. When you deal with death you deal with somebody,s values and beliefs regarding life and death. At that juncture it,s terribly important to be able to address someone's religious values. You should have a chaplin that you can refer to if you can find one who is non-judgmental. The other form of survivor guilt can be dealt with on the peer group level. They may feel guilty about something they did or did not do in a crisis situation. We call

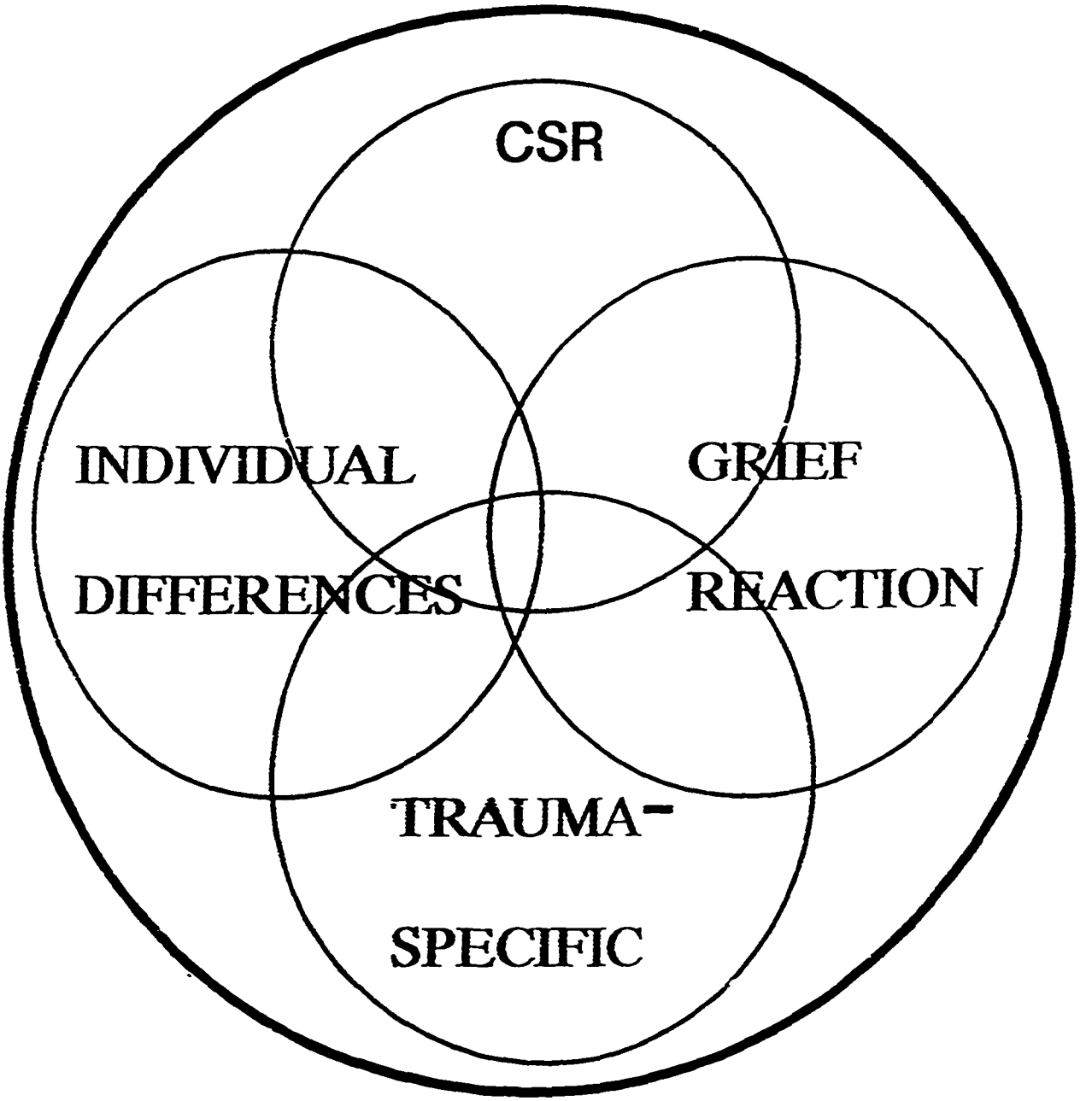
it "content" survivor guilt. Don't overlook what they feel they neglected to do; you have to listen very carefully to those stories.

Within the resolution phase lies "testing." Testing is an attempt to return to a normal way of life, although it may be a different normal than pre-trauma.

"Acceptance" is realizing that the trauma has changed your life. The normal life that you started with might be a different normal life than what you have after the trauma. Accepting this differences and accommodating these changes into your life in a realistic way is not only appropriate, but necessary. See Figure 3.

Chronic PTSD has these three main phases. Many survivors stay in the symptom-free mode until a new stressor or heavy build up of current stressors occurs. Anniversary reactions or strong. reminders of the initial trauma may also start this cycle. This forces them into the intrusion mode. The event intrudes on the consciousness in the form of unbidden images. That is accompanied with anxiety, symptoms such as exaggerated startle response and disturbance. The denial phase includes depression and the avoidance phenomenon. Avoiding dealing with the traumatic event and avoiding things that remind you of it. If alcohol abuse problems develop (and alcohol is certainly one of our most used anti-anxiety agents) the survivor tends to remain symptomatic. Not dealing with the survivor guilt keeps them symptomatic as well. Secondary diagnoses or other co-diagnoses also keeps them at this point of being unable to deal effectively with the results of being traumatized.

After one day of training, some care-givers co-led debriefings with the trainers. Officer-enlisted teams were organized and began unit debriefings at the unit commanders' requests. Some services continued until "Operation Desert Shield."


CSR
INDIVIDUAL
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SPECIFIC

Figure 1

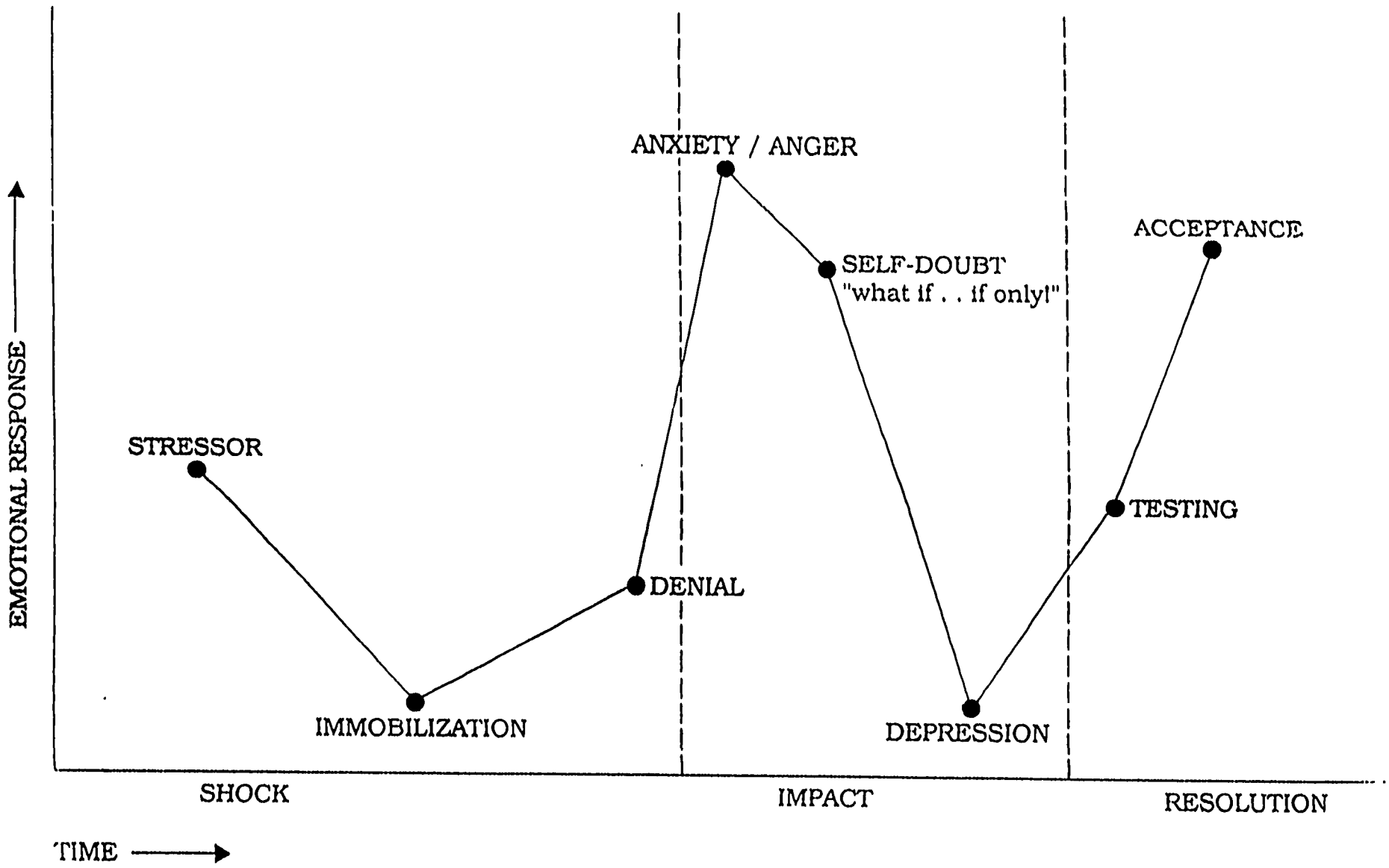

Figure 2

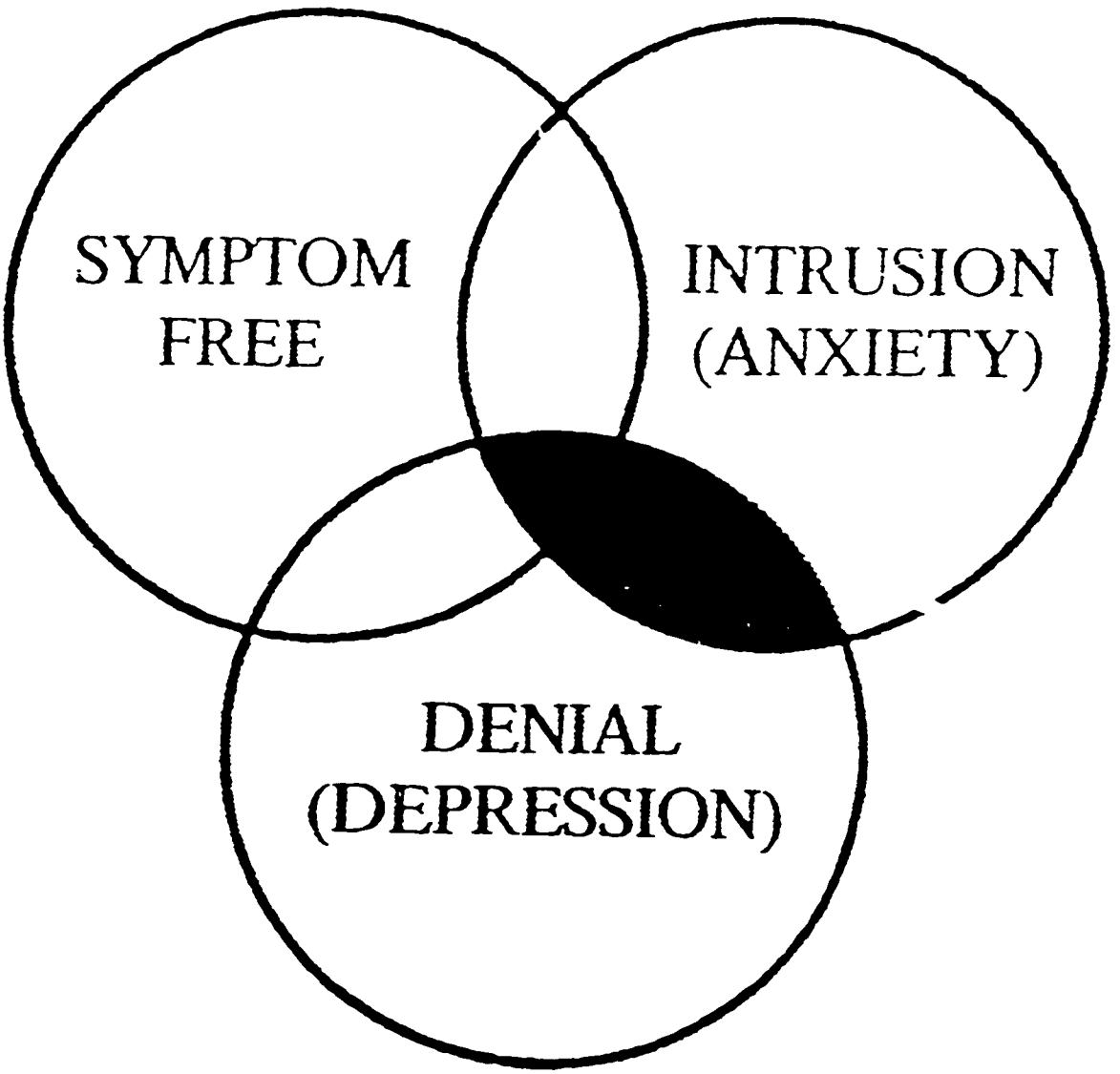

Figure 3

COMPARISON OF SYMPTOM PROFILES FOR GROUPS EXPOSED TO DIFFERENT TRAUMATIC EVENTS

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Our research team at the University of Cincinnati recently received funding to study similarities and differences in long-term symptoms and functioning between groups that have been exposed to different types of traumatic experiences. We had a broad data base from our work in a number of collective "disastrous" events, and the present report summarizes our pulling together of this information in order to compare and contrast outcomes.

The work presented here was done with colleagues Mary Grace, Jack Lindy, Goldine Gleser, Paule Steichen, and Tony Leonard, and was funded by a grant from the National Institution of Mental Health (R01 MH 40401-04).

The "disasters," or collective traumatic events, that we studied, include the following:

1. The Buffalo Creek Dam collapse, which killed 125 people and devastated a small mining community in West Virginia in 1972. We collected data on 381 adults in 1974 and recently completed a 14 year follow-up.

2. The Beverly Hills Supper Club fire, which killed 165 people over the Memorial Day weekend in May of 1977. We collected data on nearly 150 adults from that event approximately one year postfire. We did a two year follow-up as well.

3. We studied a sample of 200 Vietnam veterans in the early 1980s; they were approximately 10-15 years past their war experience.

In each of these studies we were interested in the nature of any chronic pathology displayed by these survivors, including posttraumatic stress disorder in the later samples. Further, we carefully measured stressor experiences and used them to predict long-term psychological consequences, along with other aspects of the individual (e.g., coping strategies) and of the recovery environment (e.g., social supports).

We began to wonder how the various types of experiences/disaster that we studied might differ with regard to their psychological effects, and particularly with regard to patterns or types of symptoms that were evidenced by the various groups. We hypothesized, based on our model, that <u>which</u> specific symptoms were manifested in a survivor might relate to a number of factors that we could study across populations; such factors could include: (a) the type of traumatic event, (b) the person's experience <u>within</u> the event, (c) the time period following the trauma in which the symptoms were measured, (d) the gender of the survivor.

Since our groups differed in a number of ways (e.g., age and gender composition) in addition to the type of traumatic event, we would not be able to tie different profiles to specific factors in this study. However, we would be able to explore some of the hypotheses and ascertain the range of types of symptoms as well as to identify similarities and idiosyncrasies in clinical presentations between groups.

All of our studies used community samples. A small portion of each sample had sought treatment for stress responses to the traumatic event they experienced. In the Buffalo Creek and Beverly Hills samples, this proportion was negligible; in Vietnam, it constituted about a third of our sample. Remaining subjects were functioning in the community without treatment. The original (1974) data on the Buffalo Creek survivors was gathered in the context of a lawsuit, and psychiatric diagnostic reports on each plaintiff, from both sides of the lawsuit, were used as the data base for clinical ratings. The average symptoms from the two sides were used for all data analyses.

On all four samples we had clinical ratings on the Psychiatric Evaluation Form. These scales have specific criteria for rating 19 different symptom/functioning dimensions including anxiety, depression, social isolation, alcohol abuse, etc. Eight of these were chosen as relevant for comparison purposes. Except in the early Buffalo Creek sample, all subjects underwent extensive interviews with trained clinical interviewers, which included the rating of diagnoses from a structured interview in the later (second decade) studies, an interview about stressor experiences, and a number of scales and self-report measures covering factors from a variety of domains.

In the Vietnam study, we used the Schedule for Affective Disorders and Schizophrenia (SADS), while for the Buffalo Creek follow-up, we used the Structured Clinical Interview for DSM III (SCID) to make diagnoses.

In the three later studies we had self-report data on the Symptom Checklist-90. In the two second decade studies, we added 12 items that better covered the realm of symptoms associated with PTSD. We worked with these 102 symptoms to develop a subset of items that were associated empirically with various aspects of the stressor experience. These 80 items were factor analyzed and formed seven factors. We extrapolated scores for the Beverly Hills fire subjects who did not have the extra 12 items. The Buffalo Creek 1974 original plaintiffs had only a 47-item version, so we did not include this measure in our comparisons.

In order that the samples not overlap, the Buffalo Creek residents who were in the follow-up study represented the "second decade" group, and all remaining residents (those who did not participate in the follow-up), were used as the Buffalo Creek 1974 sample so the two groups are comprised of different people.

We call the 80-item scale derived from the SCL-90, and the 12 additional items, the Cincinnati Stress Response Schedule. The largest cluster (21 items) we labeled **"Core PTSD"** because it included a variety of items cutting across the three DSM-III-R PTSD criteria sets (i.e., intrusion, denial, arousal). Examples of items in the cluster are frightening dreams and nightmares, feeling no interest in things, feeling easily annoyed or irritated. This cluster included typical depression and anxiety symptoms as

well. The **Sleep Disturbance** cluster included all of the sleep problems in the original inventory of items. Phobic Avoidance overlapped a great deal with Derogatis' **"Phobic Anxiety"** scale on the SCL-90 and included fear of a variety of situations (travel, open spaces, being alone) and avoidance of or discomfort with certain activities. These first three clusters we viewed as central to the stress response and expected that they would be elevated in all groups of survivors. The four additional clusters included symptoms that are not included in the PTSD criteria. We hypothesized that they would be less frequent and more likely to vary by type of trauma or group.

The **Obsessive-Compulsive** cluster overlapped somewhat with the SCL-90 cluster of the same name and included repetitious acts and trouble concentrating. **Paranoid** symptoms covered primarily issues of trust, along with some more psychotic symptoms. The **Somatic** cluster overlapped somewhat with Derogatis' "Somatization" scale on the SCL-90. Our cluster also included additional physical aspects of anxiety and depression. Our final cluster contained a range of symptoms that were somewhat difficult to name. The symptoms included hostility, guilt, thoughts of death and suicide, uncontrollable temper, not feeling close to others. These items seemed best united under a diagnostic term that encompasses this range of symptoms, so we called it the **Borderline** cluster.

SUMMARY OF FINDINGS AND CONCLUSIONS

Profiles were shown for PEF and CSRS scores for a variety of subgroups in the larger study. The results of these profile comparisons are summarized below.

First, there was some evidence of an effect for decade, particularly for the clinical ratings, with samples that are closer in time to the traumatic event being rated as having higher levels of symptoms. This seems particularly true in the areas of anxiety, depression, somatic concerns and belligerence. Decade effects for self-report symptoms were less clear-cut, but our longitudinal data supports a decrease over time in both types of ratings.

The primary types of symptoms that we reported for all groups, whether by clinical rating or self-report, were anxiety, depression, sleep disturbance, and social isolation, all of which are part of the present PTSD criteria. Somatic symptoms were also relatively prominent, although they are not presently part of the criteria. The fact that sleep disturbance was the highest rated self-report symptom category is also of interest.

There was evidence that certain types of symptoms were more prominent in different samples. Specifically, the Vietnam veteran group, whether one looks at the sample as a whole, or only at those veterans with PTSD, showed particularly high social isolation, belligerence and alcohol abuse relative to the other second decade sample. They also reported more paranoid and "borderline" symptomatology. The Buffalo Creek sample was relatively higher on somatic symptoms and anxiety. However, we cannot be sure that these differences are due to the type of event (i.e., war vs. dam collapse). While the two samples were compared at the same point in time following the traumatic event, so that time frame does <u>not</u> explain the differences, the samples differed in other ways. The Vietnam sample was younger males, which

may account, at least in part, for their higher scores on some of the "acting out" types of symptoms. The Buffalo Creek group, an older sample of mixed gender and a cultural background in Appalachia were higher on anxiety and somatic symptoms. These demographic differences seem less likely as an explanation for the higher social isolation and suspicion scores for the veterans. These latter differences seem more likely to be associated with differences in the nature of the trauma (including homecoming for the vets) between the two groups. The "borderline" symptoms could go either way.

Gender effects were minimal. Although some differences were statistically significant, the profiles were quite similar. Profiles were also similar for the different types of stressors.

These findings present rather clearly that stress response syndromes can take somewhat different forms. The factors that could make a difference in symptom patterns include demographic characteristics of the survivors (age, gender/education), and cultural characteristics, as well as the overall nature of the stressor experience. Differences in coping resources and other aspects of the recovery environment, as well as individual differences in pretrauma-trauma vulnerability, are <u>also</u> likely to affect responses but may vary considerably <u>within</u> a sample and so are less likely to explain clear-cut differences between samples.

The factor analysis of the self-report CSRS symptoms did support some basic assumptions about PTSD. Although we were not looking at PTSD specifically, the most common symptoms found indeed were those included in the PTSD criteria.

It seems that one important outgrowth of the present study is calling attention to the different ways in which stress response syndromes might present to the clinician. Using an example from our studies, the Vietnam veterans "presented" with borderline symptoms, isolation, belligerence, and suspicion. This constellation of symptoms would not necessarily call to mind a potential PTSD diagnosis unless the clinician specifically inquired about intrusive phenomena and sleep disturbance, and took a careful trauma history. Yet knowing these latter elements would be crucial to appropriate and effective treatment. These extra symptoms should perhaps be considered potential "flags" for exploring a PTSD diagnosis. Other trauma groups not studied by us might have other, atypical presentations (e.g., incest victims with borderline type symptoms and/or amnesia). Therefore, with regard to detecting PTSD, one important step might be to have PTSD be considered as a differential diagnosis (i.e., ask about reexperiencing phenomena) in several other diagnoses. Further, inquiring into the patient's trauma history seems especially important and should be routinely incorporated into the standard clinical interview.

UNIQUE PROFILES IN RESPONSE TO SPECIFIC STRESSORS: IMPLICATIONS FOR DEALING WITH STRESS CASUALTIES

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The experience of psychic trauma is a multifaceted, dynamic process that includes an interaction of situational and personal characteristics with psychological and physiological dimensions. Traditionally, the focus has been on the factors that might contribute to an individual's susceptibility or vulnerability to stress effects. More recently the emphasis has been on resiliency factors--those personal characteristics that might serve to protect individuals from the deleterious effects of psychic trauma. For example, factors that indicate personal strengths such as high self-efficacy, high self-esteem, or effective coping resources, often reflect a greater capability for dealing with stress.

While resiliency, as a converse of susceptibility, generally refers to a person's initial resistance to detrimental stress effects and/or to their ability to recover or adjust easily, the underlying factors that determine both resiliency and susceptibility are similar. Following a discussion of the factors that contribute to the experience of psychic trauma, the preliminary results of a stress research program (Hudgens, Torre, Chatterton, Wansack, Fatkin, & DeLeon-Jones, 1986) currently investigating the links between psychological and physiological stress responses and performance will be presented.

FACTORS CONTRIBUTING TO PSYCHIC TRAUMA

Susceptibility to psychic trauma is influenced by a variety of situational characteristics. For example, in continuous operations, the soldiers might experience severe sleep deprivation or have to cope with brief, fragmented sleep. Either situation will elicit emotional and/or physical responses that may affect performance. The situational characteristics that influence susceptibility to stress include: (a) the nature of the situation or stressor (type, duration, and intensity); (b) tactical or logistical resources and availability of equipment; (c) confidence in leadership; (d) group cohesiveness; (e) an estimate of the opposition's resistance; and (f) preparedness (Bourne, 1970; Grinker & Spiegel, 1963; Noy, Nardi, & Solomon, 1986). It is important to note that an evaluation of the preparedness factor is not only based on a unit's actual pre-mission knowledge and experience or the occurrence of false alarms, as one would expect, but also the commander's perception of the Battalion level of training. Here we begin to see an interaction of some critical personal characteristics with these situational factors.

Research on reactions to traumatic combat experiences, including the "shell shock" or "war neurosis" of World War I, the psychiatric evaluations during World War II, the combat stress reactions of international defense forces, and the post-traumatic stress experiences of the Vietnam veterans, has resulted in a wealth of information on personal factors that may influence susceptibility to psychic trauma (Bourne, 1970; Grinker & Spiegel, 1963; Solomon, Noy, & Bar-On, 1986). In addition to the situational characteristics

described earlier, the critical personal characteristics that influence susceptibility to trauma include: (a) the type or branch of service; (b) age; (c) education level; (d) military rank; (e) previous occurrence of CSR; (f) concomitant stressors; (g) frequency of previous maladjustments; (h) motivation to avoid damage to self-image; (i) attributional styles; (j) prior experience and training; (k) coping strategies or support resources; and (l) confidence expectancy (Bourne, 1970; Keinan, 1986; Solomon & Benbenishty, 1986; Solomon & Flum, 1986). The confidence expectancy factor relates to the individual's expectations and is negatively correlated to incidence of physical injury. It is described as a sense of personal invulnerability ("nothing can happen to me") versus the belief that there is little hope of surviving the mission. It is important to note that the personal characteristics described above account for only a portion of the individual variability in response to stress or psychic trauma. Situational variables are also important. They have been found to account for the level of psychiatric casualties after the fact, and to predict psychiatric casualties before the fact (Goodwin, 1987; Noy, Nardi, & Solomon, 1986). A research program designed to investigate the relationships between these situational and personal variables and the stress response is discussed below.

HEL STRESS AND PERFORMANCE RESEARCH PROGRAM

Some of the primary concerns of the U.S. Army Human Engineering Laboratory (HEL) Stress and Performance Research Program include investigating the effects of stress on performance, developing ways to reduce or eliminate stress effects on performance, determining the individuals' susceptibility to stress, and reducing the oppositions' effectiveness by stress manipulations. These concerns led to the fundamental goals of this program which include developing standard procedures for soldier/equipment performance testing, as well as determining which combination of psychological and physiological indices would constitute the most efficient and reliable measures of stress (Fatkin, Hudgens, Torre, King, Chatterton, in press; Hudgens, Fatkin, Torre, King, Slager, & Chatterton, in press).

The definition of stress used in this paper is one conceptualized by Lazarus (1966) within the general context of homeostasis; a state of stress is produced when stressors (environmental or social) tax or exceed an individual's adaptive resources. The stressful state will be characterized by the arousal of various emotions of negative affect (e.g., uncertainty, frustration, irritability, tension, fear, or sadness), as well as by a variety of positive affects (e.g., excitement, enthusiasm, curiosity, or adventure). Lazarus emphasized that there are few general claims that can be made regarding psychological responses to stress, because individual differences pervade every step in the process of stress arousal and reduction. Hogan and Hogan (1982) observed that although this pervasiveness of individual differences in stress reactions has been noted in literature reviews over the past three decades, rarely are valid and reliable measures of an individual's stress proneness or vulnerability, perceptions and appraisals of the stressors, expectations, experiences, moods, and coping resources used within the same study.

The dominant view of what constitutes the experience of stress or psychic trauma is, therefore, one of a multifaceted, dynamic, and interactive process with both psychological and physiological dimensions. Although there are many psychological and physiological parameters that have been shown to be

responsive to the effects of stress, stress response measurement in specific studies has typically employed a narrow range of the indices potentially available. Hence, our objective was to use batteries of psychological and hormonal measures, obtained in a standardized manner across stress situations of varying types, intensities, and durations. The variables used in test of the interactive stress model are listed in Table 1.

As was noted, the interactive model of stress used within the HEL Stress and Performance Research Program (Hudgens, Torre, Chatterton, Wansack, Fatkin, & DeLeon-Jones, 1986) includes as psychological variables the type and intensity of the stressor, as well as a variety of individual variables (e.g., personality, perceptions, experience, or outcome expectations). Present research indicates that these variables may yield unique physiological and psychological response profiles within both the anticipation and recovery phases.

These data were obtained from a combination of in-house and contract efforts to measure stress experienced by spouses of surgical patients, medical students taking an important written examination, soldiers participating in competitive weapon firing, and military fire fighters. With the exception of the fire fighters, who received only the stress perception measures, participants were given a battery of standardized psychological measures to assess their personality traits, coping strategies and self-efficacy, and perceptions of how stressed they felt at different times. Because of the large amount of data collected, the results reported in this paper will be limited to the two stress perception measures common to all the groups studied to date. A complete report of the physiological and psychological data can be found in Hudgens, et al. (in press) and Fatkin, et al. (in press).

The two state measures discussed here are the Multiple Affect Adjective Check List-Revised (MAACL-R. Zuckerman & Lubin, 1985) and the Specific Rating of Events scale (SRE, Fatkin, et al., in press). The MAACL-R consists of five primary subscales (Anxiety, Depression, Hostility, Positive Affect, and Sensation Seeking) derived from a one-page list of 132 adjectives. The participants were instructed to check all the words which described how they felt during the stress event (or during a comparable time period for controls). Because of the improved discriminant validity and the control of the checking response set, the MAACL-R has been found to be particularly suitable for investigations which postulate changes in specific affects in response to stressful situations. The SRE is a measure designed for the HEL Stress Research Program, wherein the study participants rated (on a scale of 0-100) how stressful the event was to them.

COMPARATIVE STRESS DATA

Multivariate Analyses of Variance (MANOVAs) indicated that there were significant group differences on the stress perception measures. The results presented in Figures 1 through 6 are mean responses (+standard error of the mean) for the stress perception measures taken immediately after the stress event (post-stress measures) for the respective protocols ("Abdominal Surgery," "Written Exam," "Salvo Stress Competition," and "Yellowstone") or after a comparable control interval for the Northwestern Nonstressed Control Group ("Independent Control") and the Salvo Stress Control Group. A MANOVA indicated there were significant differences between the groups on all of the measures (Wilks' Lambda $<.001$; $F(35,4078)= 11.43$, $p<.001$). Post-hoc tests

conducted on the significant interactions used the Tukey-Kramer modification of the Tukey HSD test, which is appropriate for comparisons with unequal numbers of observations (Wilkinson, 1988, p. 709). The level of significance was set at .05 for the Critical Values ($CV_{.05}$) used in determining significant differences between means. The actual difference between the means (Dm) will also be reported. The results will be discussed by comparing the soldiers involved in competitive weapon firing (the "Salvo Stress" group) and the Yellowstone Army fire fighters with both Control groups and with the other Northwestern protocols.

MAACL-R Anxiety

As illustrated in Figure 1, the Salvo Stress Competition Group had a significantly higher level of anxiety than the Salvo Stress Control Group (Tukey HSD $CV_{.05}$= 13.72; Dm= 14.9) and had a level of anxiety associated with a moderate level of stress (about comparable to taking a written exam). The fire fighters had a significantly lower level of anxiety than the Surgical Group (Tukey HSD $CV_{.05}$= 13.72; Dm= 18.2) and did not differ significantly from any other group.

MAACL-R Depression

Although spouses of surgical patients and the fire fighters reported the highest levels of depression of all the groups (Figure 2), the differences observed were not statistically significant (Tukey HSD $CV_{.05}$= 27.09; Dm(Surgical-Independent Control)= 22.5 and Dm(Yellowstone-Independent Control)= 23.7).

MAACL-R Hostility

The Salvo Stress Competition Group reported significantly higher ratings of Hostility than the Independent Control Group (Tukey HSD $CV_{.05}$= 26.84; Dm=30.5) and the Surgical Group (Dm= 34.3) (Figure 3). The fire fighters reported a level of Hostility comparable to the Salvo Stress Competition Group and significantly higher than those reported by the Surgical Group (Tukey HSD $CV_{.05}$= 26.84; Dm= 39.1) and Independent Control Group (Tukey HSD $CV_{.05}$= 26.84; Dm= 35.3).

MAACL-R Sensation Seeking

Figure 4 illustrates that the Salvo Stress Control and Salvo Stress Competition Groups reported significantly higher Sensation Seeking than any of the other groups studied to date, including the fire fighters (Tukey HSD $CV_{.05}$= 6.31).

MAACL-R Positive Affect

As illustrated in Figure 5, the Salvo Stress Competition Group, Salvo Stress Control Group, and the Exam Group reported significantly lower Positive Affect than the Independent Control (Tukey HSD $CV_{.05}$= 5.45; Dm= 10.2, 6.4, and 6.7 respectively). The fire fighters reported Positive Affect levels that were comparable to the level of the Salvo Stress Competition Group, and were significantly lower than those reported by all other groups: the Surgical Group (Tukey HSD $CV_{.05}$= 5.45; Dm= 7.8), the Exam Group (Tukey HSD $CV_{.05}$= 5.45; Dm= 6.4), the Independent Control Group (Tukey HSD $CV_{.05}$= 5.45; Dm= 13.1) and the Salvo Stress Control Group (Tukey HSD $CV_{.05}$= 5.45; Dm= 6.7).

Specific Rating of Events (SRE)

The Salvo Stress Competition Group reported significantly higher stress ratings than the Independent Control Group only (Tukey HSD $CV_{.05}$= 20.28; Dm= 33.8) (Figure 6). The Yellowstone fire fighters differed significantly from the Salvo Stress Control Group (Tukey HSD $CV_{.05}$= 20.28; Dm= 24.0) as well as the Independent Control Group (Tukey HSD $CV_{.05}$= 20.28; Dm= 38.0).

INDIVIDUAL DIFFERENCES IN PSYCHOLOGICAL RESPONSES

Salvo Stress Study

In order to address the effect of individual variability in stress response, cluster analysis was performed on the total number of participants from the Salvo Stress Control and Competition Groups. Cluster analysis is a method of statistically grouping individuals based on the dependent measures; for example, it can be used to evaluate whether the individuals tend to fall into groups having similar characteristics (Wilkinson, 1988). It minimizes the variance for each cluster across the measures so that the result is groups or clusters of individuals that are most alike.

When cluster analysis was performed on the personality measures of the Salvo Stress soldiers, two distinct clusters of individuals emerged: one with a high-stability (and low emotionality) profile, and the other with a relatively low-stability (and high-emotionality) profile. A MANOVA was conducted on the performance measures (targets hit in either the Semi-automatic or Burst modes of fire) to test the effects and interactions of Trait Clusters (High- and Low-Stability Profiles) X Groups (Competition and Control). While there was no significant Group main effect (Wilks' Lambda= effect (Wilks' Lambda= .997; $F(2,54)$= .08, p= .925), there was a significant Cluster main effect (Wilks' Lambda= .858; $F(2,54)$= 4.47, p= .016). Individuals with a trait profile of lower anxiety, depression, and hostility scores, less external locus of control, and higher positive affect performed better in the semi-automatic mode of fire than those with a profile of higher anxiety, depression, and hostility scores, external locus of control, and lower positive affect. Individuals in the high-stability profile also reported using more problem-focused coping strategies than those in the low-stability profile.

Yellowstone Fire Fighters

A MANOVA was performed on the data to evaluate differences in stress responses that may have been due to the number of days actually spent fighting the fires (fire-fighting experience) or based on military rank categories. The soldiers were assigned to task forces that varied in their amount of exposure to actual fire fighting (0, 6, 8, 10, and 13 days). Rank categories consisted of two groups of enlisted soldiers (E1-E3s and E4-E6s) and two groups of commissioned officers (01-02s and 03s). No significant differences due to fire-fighting experience were found on any of the stress perception measures, and there was no significant Fire-Fighting Experience X Rank interaction effect. However, significant differences between soldiers in the different rank categories were found on the MAACL-R subscales and the SRE as described below (Wilks' Lambda= .943; $F(24,2178)$= 1.84, p= .008). The Tukey-=Kramer modification of the Tukey HSD test was used to conduct the post-hoc tests on these measures to determine where the significant differences occurred.

Specific Rating of Events. The stress ratings illustrated in Figure 7a indicate that E1-E3s rated the fire-fighting experience as more stressful than all other soldiers. These junior soldiers reported significantly higher stress ratings than the 01-02s (Tukey HSD $CV_{.05}$= 11.38; Dm= 13.2), while the E4-E6s reported significantly higher stress ratings than the 01-02 Group (Tukey HSD $CV_{.05}$= 11.38; Dm= 14.9).

MAACL-R Anxiety. Figure 7b illustrates a similar pattern to the stress ratings reported above. The E1-E3s have the highest anxiety scores, and reported Anxiety levels that are significantly higher than the 01-02 Group (Tukey HSD $CV_{.05}$= 7.69; Dm= 9.9) only.

MAACL-R Depression. As illustrated earlier in the comparative ratings, the depression scores fall in the moderate to high range as assessed by the investigators in previous reports. In Figure 7c we see a descending pattern of these scores with the E1-E3s on the top end of the scale. Both enlisted groups reported significantly higher depression scores than the officers. The E1-E3 Group reported higher depression levels than both the 01-02s (Tukey HSD $CV_{.05}$= 15.56; Dm= 21.4) and the 03 Group (Tukey HSD $CV_{.05}$= 15.56; Dm= 26.1), while the E4-E6 Group scored significantly higher than the 03s (Tukey HSD $CV_{.05}$= 15.56; Dm= 18.8).

MAACL-R Hostility. Hostility scores for both enlisted groups are relatively high as is illustrated in Figure 7d. The overall pattern of responses is similar to that found for depression. The E1-E3s reported Hostility levels that were significantly higher than both the 01-02s (Tukey HSD $CV_{.05}$= 15.68; Dm= 15.7) and the 03s (Tukey HSD $CV_{.05}$= 15.68; Dm= 28.7), and the E4-E6s scored significantly higher than the 03s (Tukey HSD $CV_{.05}$= 15.68; Dm= 20.4) on this measure.

CONCLUSIONS

The analysis of the physiological, psychological and performance data from the HEL Stress and Performance Research Program is still in progress. In the Salvo Stress Study, we demonstrated that competition can be used to reliably produce a moderate level of stress in soldiers. When these results are considered along with findings from a number of similar studies, we see the emergence of a reliable profile of psychological and hormonal responses to stress which can be related to soldiers performing combat-relevant tasks (Hudgens, Chatterton, Torre, Fatkin, & King, 1990).

The psychological measures used to evaluate the stress experience illustrated a discriminant sensitivity to the type of stress in this field situation compared to the other surgical stress, examination stress, and competitive weapon firing situations. For example, the different subscales of the MAACL-R seem to be sensitive to the particular situation being measured, with relatively high Anxiety scores for the Surgical Group, relatively high Sensation Seeking scores for the military weapon firing in the Salvo Stress Groups, and relatively high Hostility scores for soldiers in both the Salvo Stress Competition Group and the Yellowstone fire fighters. The measures also distinguished between variations in the stress levels within the military rank structure. Overall, the fire fighters experienced moderate to high stress levels, as assessed relative to previous reports (Fatkin, King, & Hudgens, in press), with particularly high scores on the MAACL-R Depression and Hostility subscales. The scores on the two state anxiety measures (SRE and MAACL-R

Anxiety) seem to reflect the overall stress experience of the situation (i.e., the uncertainty and unpredictability), while the depression and hostility measures reflect a more personal sense of failure and frustration (Zuckerman, personal communication, April 3, 1989).

A major contribution of the HEL Stress Research Program is the identification of critical psychological and physiological factors for use as indices against which other stressors can be evaluated. The data obtained using the MAACL-R subscales and the SRE, for example, measure a variety of affective components within the "stress experiences" across studies. In addition to being reliable and efficient to use, these measurements are valuable tools in investigating individual differences in response to stress. The response profiles which have emerged from the Salvo Stress Study, in conjunction with the Surgical and Exam Studies, have brought us closer to identifying the significant factors that can assist us in the development of an optimum methodology for prospective research on the experience of stress or psychic trauma.

It is important to note that the personal factors discussed earlier, such as stable personality characteristics and military rank, account for only a portion of the individual variability in response to stress or psychic trauma. The high efficacy of the situational variables has been demonstrated for the prediction, identification, and treatment of traumatic experiences (Goodwin, 1987; Noy, Nardi, & Solomon, 1986). Based on her research and the review of literature on peacetime police operations, for example, Williams (1987) pointed out that psychological disturbances in officers are typically attributable to job-related hazards rather than existing personality traits at the time of hire. She maintained that if the behavior and attitudes of people in a certain profession become more similar, this phenomenon can only be described as learned behavior: the result of environmental factors and conditioning. Williams (p. 268) suggested that instead of searching for "model officers" and "model soldiers," we should be concentrating on teaching individuals how to deal effectively with environmental conditions. With the appropriate training, we can provide normal people with the information, skills, and support to operate in an abnormal environment.

Acknowledging both situational and personal factors that contribute to the experience of psychic trauma is critical. Their consideration in organizational, managerial, and treatment strategies will enhance our efforts in the prevention and/or treatment of stress casualties.

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Table 1

Variables Investigated in Test of Model

Stressors Variables

Kind	Intensity
Exam	Major Moderate Control
Surgery	Major Moderate Control
Competition	Major Moderate Control

Individual Variables

Personality (Trait)

- Anxiety
- Depression
- Hositility
- Positive Affect
- Sensation Seeking
- Locus of Control
- Extroversion/ Introversion
- Psychoticism
- Neuroticism

Experience

- Life Events
- Demographics

Resiliency

- Self-Efficacy

Response Profile Variables

Physiological

- Epinephrine
- Norepinephrine
- Cortisol
- Growth Hormone
- Testosterone
- Prolactin
- Luteinizing Hormone
- Beta-Endorphin
- Met-Enkephalin

Psychological (State)

- Anxiety
- Depression
- Hostility
- Positive Affect
- Sensation Seeking
- Stress Perception Ratings
- Coping Strategies

Time

- Before Stress Event
- After Stress Event

Performance

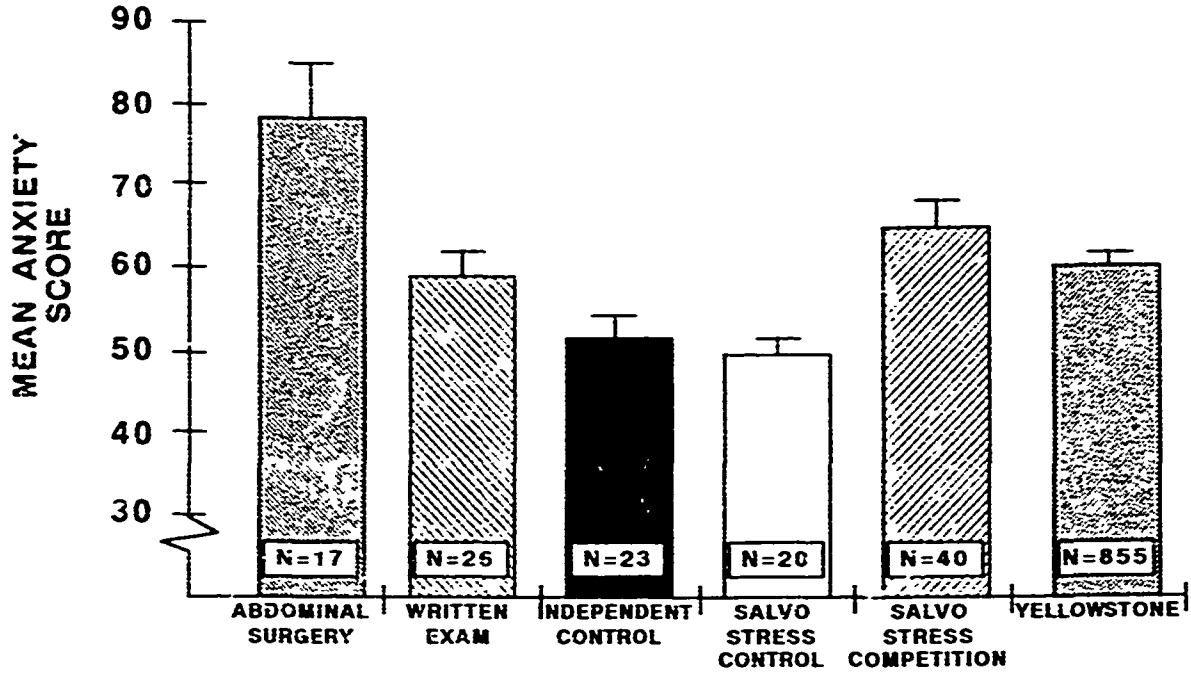

Figure 1. Comparison of mean post-stress MAACL-R Anxiety scores for participants in the conditions: 1) spouse having serious abdominal surgery; 2) taking an important medical written exam; 3) independent non-stressed control; 4) weapon-firing control conditions; 5) competitive weapon-firing; or 6) fire fighting.

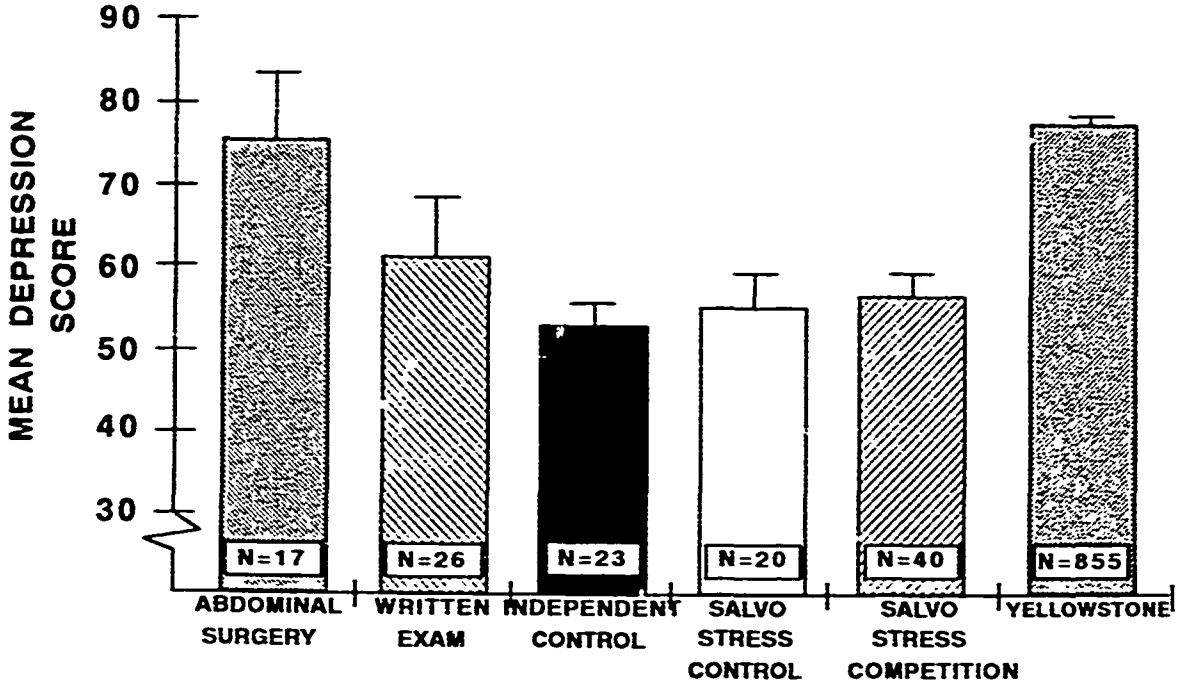

Figure 2. Comparison of mean post-stress MAACL-R Depression scores for participants in the conditions: 1) spouse having serious abdominal surgery; 2) taking an important medical written exam; 3) independent non-stress control condition; 4)weapon-firing control conditions; 5) competitive weapon-firing; or 6) fire fighting.

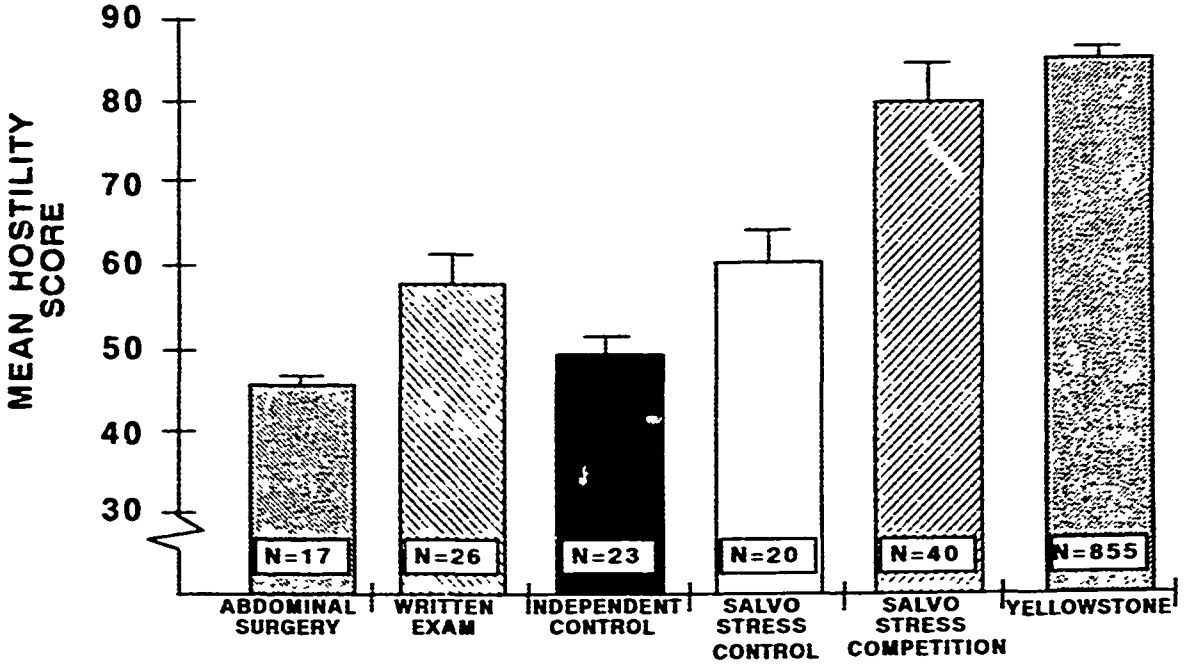

Figure 3. Comparison of mean post-stress MAACL-R Hostility scores for participants in the conditions: 1) spouse having serious abdominal surgery; 2) taking an important medical written exam; 3) independent non-stressed control conditions; 4) weapon-firing control conditions; 5) competitive weapon-firing; or 6) fire fighting.

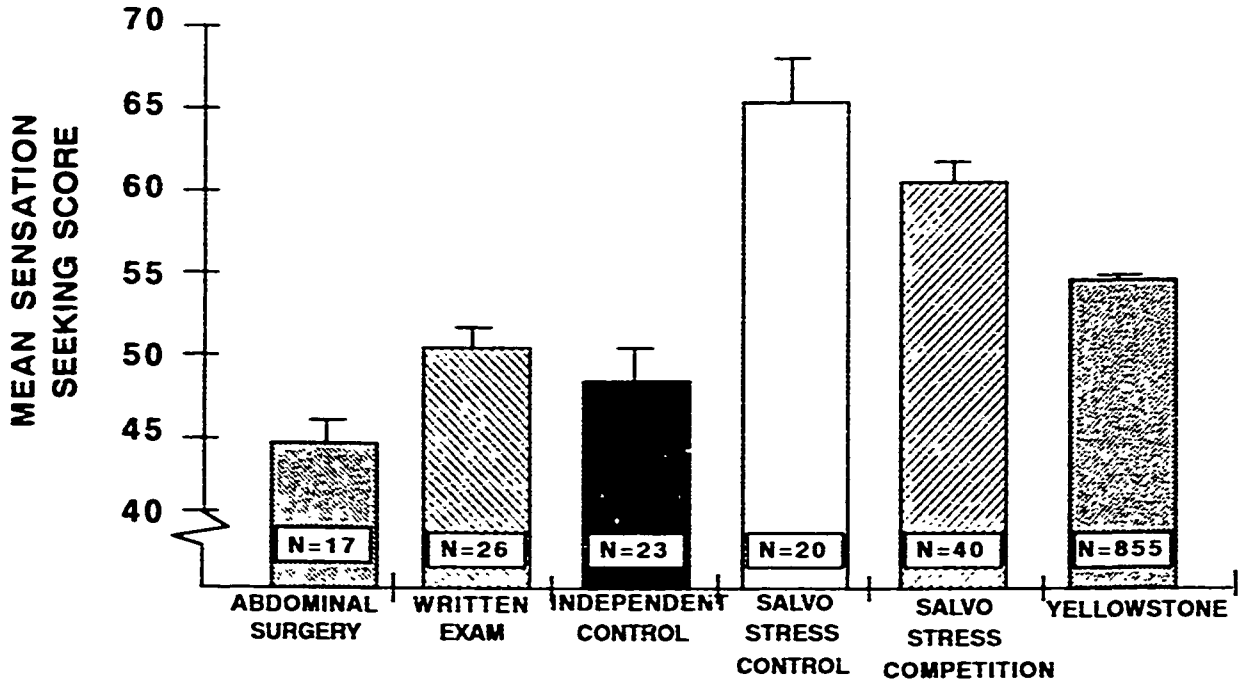

Figure 4. Comparison of mean post-stress MAACL-R Sensation Seeking scores for participants in the conditions: 1) spouse having serious abdominal surgery; 2) taking an important medical written exam; 3) independent non-stress control; 4) weapon-firing control conditions; 5) competitive weapon-firing; or 6) fire fighting.

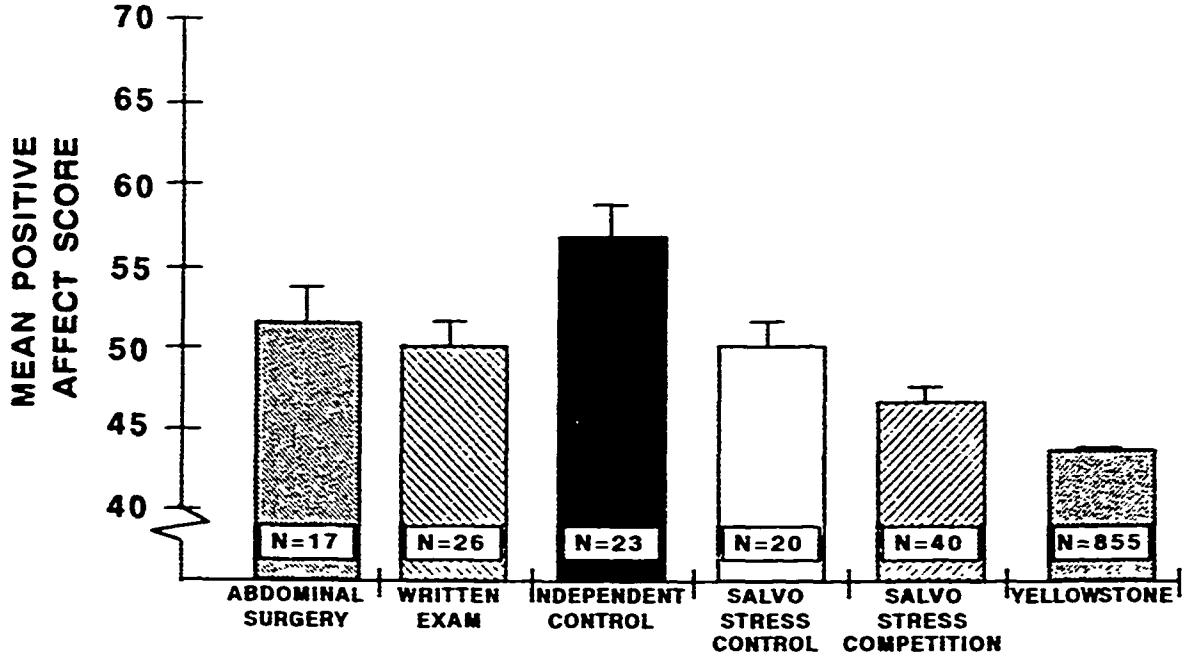

Figure 5. Comparison of mean post-stress MAACL-R Positive Affect scores for particpants in the conditions: 1) spouse having serious abdominal surgery; 2) taking an important medical written exam; 3) independent non-stressed control conditions; 4) weapon-firing control conditions; 5) competitive weapon-firing; or 6) fire fighting.

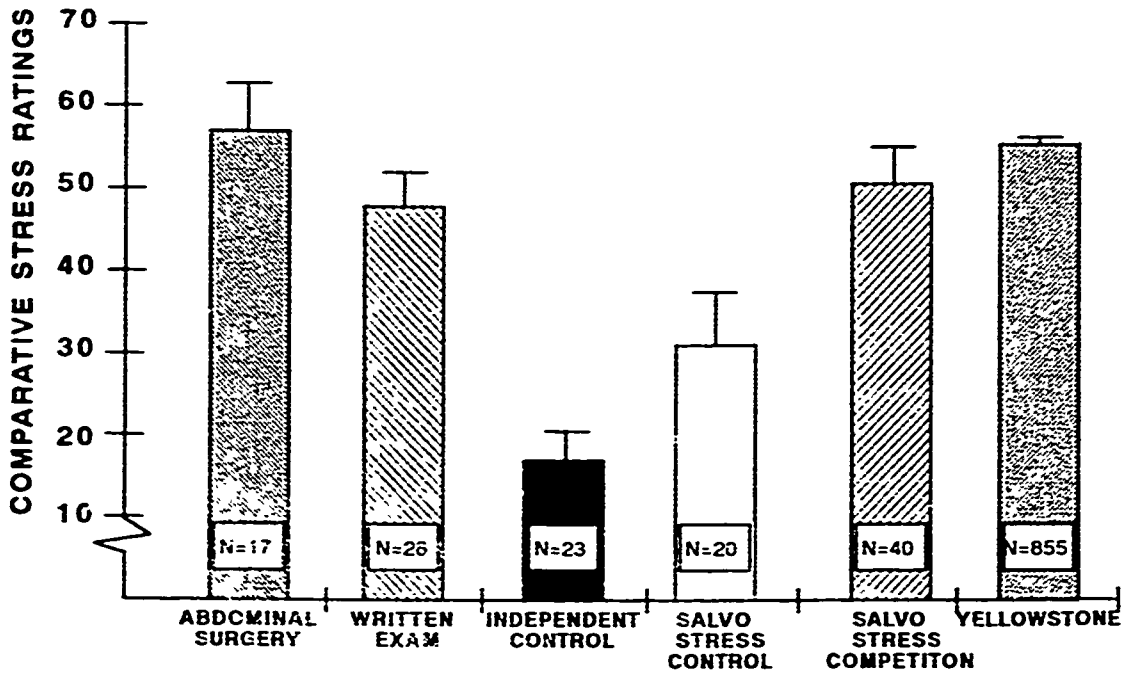

Figure 6. Comparison of mean stress ratings from the Specific Rating of Events scale for participants in the conditions: 1) spouse having serious abdominal surgery; 2) taking an important medical written exam; 3) independent non-stressed control conditions; 4) weapon-firing control conditions; 5) competitive weapon-firing; or 6) fire fighting.

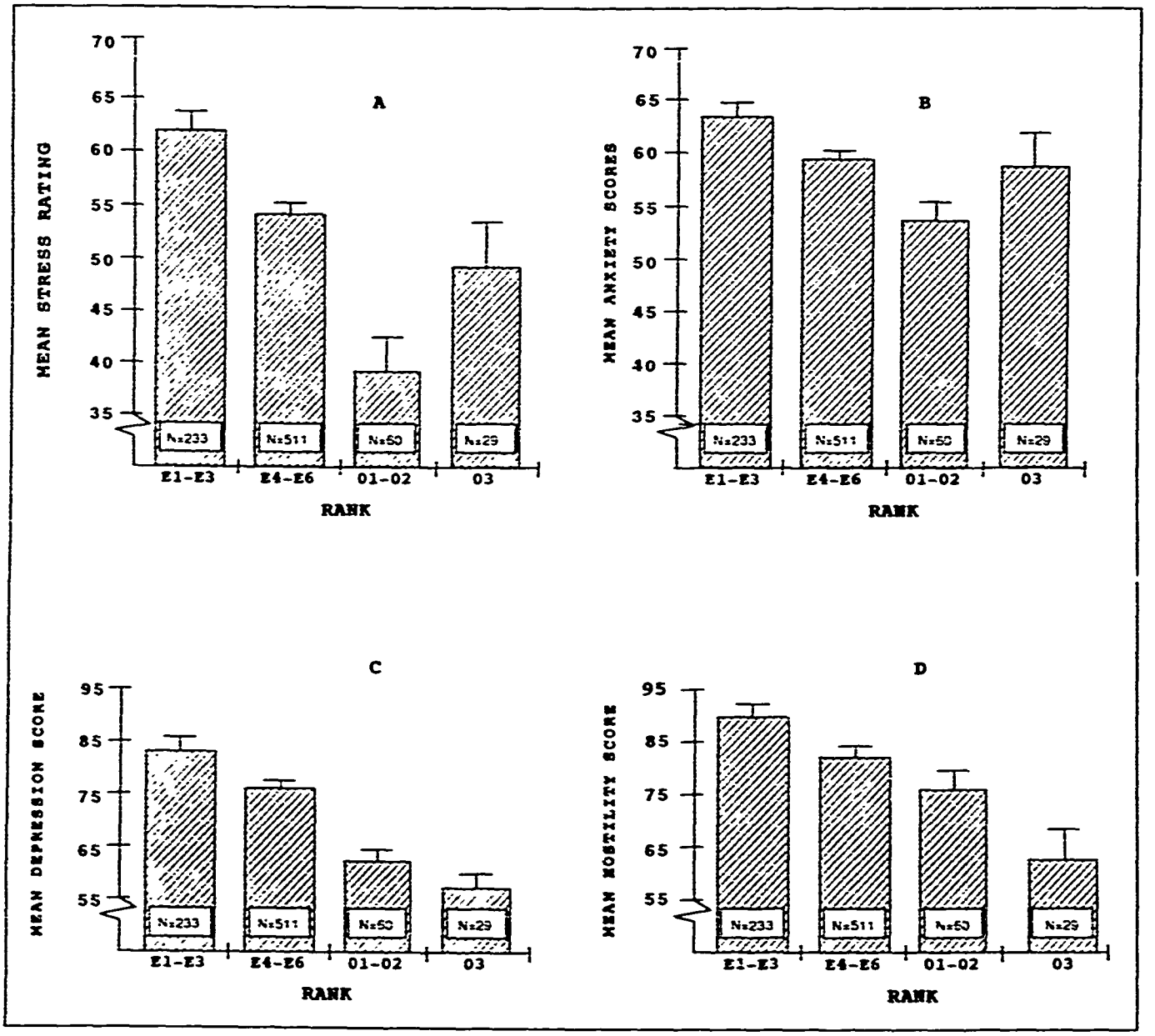

Figure 7. Mean post-stress ratings from the SRE, and the MAACL-R subscales according to rank.

DECISION MAKING UNDER STRESS

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The question we are examining is how stress affects decision making. We need to understand the impact of stress in order to adjust for it and take steps to reduce dysfunctions. In this paper we argue that naturalistic decision making is done primarily on the basis of recognition, rather than on formal analysis. We identify several types of stress (time, physical discomfort, psychological discomfort) and show that they do not necessarily disrupt decision strategies and that their impact is most pronounced for people with low experience levels. We also examine some barriers to effective team decision making that might be affected by stress and describe types of training that could be helpful.

DECISION MAKING

For the past two decades, decision research has been primarily defined as the analysis that surrounds "the psychological moment of choice" (Pitz & Sachs, 1984; Berkeley & Humphreys, 1982). The ideal decision maker is seen as an analyst--generating alternatives and evaluating outcomes--and decision making as a highly analytic activity.

However, it has become clear that analytic approaches are not very helpful in the field. The behavioral decision theory that has evolved over the past 20 years is insufficient. It has focused on research that is prescriptive rather than descriptive. The techniques derived from behavioral decision theory emphasize analytical processes. These techniques include Multi-Attribute Utility Theory, Decision Analysis, and Bayesian statistics. Sage (1981) has documented the research showing that people do not follow these prescriptive guidelines. Decision makers do not judge utilities and probabilities, weight evaluation dimensions, calculate the effects of base rates. Decision aids that are built using these prescriptive models generally are rejected for field applications. Training programs to teach the use of these methods have usually been shown to be ineffective. At best, such training programs misuse the time of the trainees. They also diminish the credibility of the courses and the instructors, since they teach methods that will not be used under operational conditions. At worst, there can be negative training, with decision makers attempting to put into action decision methods that are inappropriate. These methods work only on well-defined problems with clear sets of options, and all the necessary data available in unambiguous formats. How often are these conditions met? When they are not met, it can be difficult if not impossible to apply the analytical methods.

To replace the analytical approaches of behavioral decision theory, we have advanced a model of decision making based upon individual decision makers engaged in real world tasks. For the past several years, we have been studying command-and-control decision making and have generated a recognitional model of naturalistic decision making. We began by observing and obtaining protocols from urban fire ground commanders (FGCs) about actual emergency events (Klein, Calderwood, & Clinton-Cirocco, 1986). Some examples of the types of decisions these commanders had to make included whether to

initiate search and rescue, whether to initiate an offensive attack or concentrate on defensive precautions, and where to allocate resources.

The FGCs' accounts of their decision making do not fit into a decision tree framework. The FGCs argued that they were not "making choices," "considering alternatives," or "assessing probabilities." They saw themselves as acting and reacting on the basis of prior experience; they were generating, monitoring, and modifying plans to meet the needs of the situations. We found no evidence for extensive option generation. Rarely were even two options concurrently evaluated, so that opportunities for tradeoffs between the utilities of outcomes were largely absent. We could see no way in which the concept of optimal choice might be applied. Moreover, it appeared that a search for an optimal choice could stall the FGCs long enough to lose control of the operation altogether. The FGCs were more interested in finding actions that were "workable," "timely," and "cost-effective."

Nonetheless, the FGCs were clearly encountering choice points during each incident. They were aware that alternative courses of action were possible, but insisted that they rarely deliberated about the advantages and disadvantages of the different options.

Instead, the FGCs relied on their abilities to recognize and appropriately classify a situation. Once they knew it was "that" type of case, they usually also knew the typical way of reacting to it. They would use available time to evaluate an option's feasibility before implementing it. Imagery might be used to "watch" the option being implemented, to discover if anything important might go wrong. If problems were foreseen, then the option might be modified or rejected altogether and a next most typical reaction explored.

We have described these strategies as a Recognition-Primed Decision (RPD) model (e.g., Klein, 1989; Klein et al., 1986; Klein, Calderwood, & MacGregor, 1989). For this task environment, a recognitional strategy appears to be highly efficient. The proficient FGCs we studied used their experience to generate a workable option as the first to consider. If they had tried to generate a large set of options, and then systematically evaluated these, it is likely that the fires would have gotten out of control before they could make any decisions. Indeed, research has shown (Howell, 1984; Rouse, 1978; Zakay & Wooler, 1984) that analytic decision strategies cannot be effectively accomplished in a minute or less.

As we applied the RPD model to different settings we expanded and elaborated it. The current version is presented in Figure 1. The simplest case is one in which the situation is recognized and the obvious reaction is implemented. A somewhat more complex case is one in which the decision maker performs some conscious evaluation of the reaction, typically using imagery to uncover problems prior to carrying it out. The most complex case is one in which the evaluation reveals flaws requiring modification, or the option is judged inadequate and rejected in favor of the next most typical reaction.

The model is characterized by the following features:

Situational recognition allows the decision maker to classify the task as familiar or prototypical. The recognition as familiar carries with it recognition of the following types of information: plausible goals, cues to monitor, causal dynamics to monitor, expectancies about the unfolding of the situation, and typical reactions.

Options are generated serially, with the most typical as the first one considered. Option evaluation is also performed serially, involving testing the adequacy of the option. and trying to identify weaknesses of that option and find ways to overcome them.

A key process for evaluation is the use of mental simulations to portray the way the option would be implemented in that specific environment, to allow the decision maker to detect possible barriers or opportunities in the specific environment, and to help the decision maker improve options. Mental simulations can also alert the decision maker to important dynamics and thereby modify the situation assessment.

We do not propose the RPD model as an alternative to analytic approaches. Rather, we postulate that recognitional and analytical decision strategies occupy opposite ends of a decision continuum similar to the cognitive continuum described by Hammond, Hamm, Grassia, and Pearson (1984). At one extreme are the conscious, deliberated, highly analytic strategies such as Multi-Attribute Utility Analysis (MAUA) and Decision Analysis. Slightly less analytic are strategies such as Elimination-by-Aspects. At the alternate end of the continuum are Recognition-Primed Decisions, which involve nonoptimizing and noncompensatory strategies, and require little conscious deliberation. The RPDs are marked by an absence of comparison between various options. They are generated by a starting point that involves recognitional matches that evoke generation of the most likely action in the situation.

We have tested applications of the model in a variety of tasks and domains, including fire ground command, battle planning, critical care nursing, corporate information management, and chess tournament play (Calderwood, Klein, & Crandall, 1988; Crandall & Calderwood, 1989; Crandall & Klein, 1988; Klein et al., 1986; and Thordsen, Galushka, Klein, Young, & Brezovic, 1987). These studies have shown good support for the validity and utility of the model as it applies to individual decision makers.

Does recognitional decision making entail lower quality decisions? Hammond et al. (1984) studied highway engineers making decisions about potential safety of designs, aesthetic qualities of decisions, and highway capacity, and found that what they called "intuitive" strategies generally resulted in higher quality decisions than analytical strategies.

STRESS

The phenomenon of stress has been described by Cannon (1932), Selye (1961), and others. It is an ambiguous phenomenon because there are common features to different stressors (e.g., time pressure, physical discomfort, psychological anxiety) and also different features for each type of stressor. Many psychological concepts present much confusion (e.g., workload, anxiety, learning, and intelligence). Therefore, we must be careful in approaching such concepts. We want to be able to find general relationships, but we also must worry about dissimilarities. Time press and anxiety are both uncomfortable, but they could affect cognitive processes differently. Time stress would prevent a decision maker from examining all the evidence, whereas anxiety could lead to obsessive over-examination of evidence and hyper-evaluation of options. We will therefore not try to draw general conclusions about stress, but instead will discuss psychological and physical stress as distinct phenomena and will primarily focus on time pressure. Even here we will have to be careful since the main impact of time pressure may be practical (simply a lack of resources to handle all subtasks) rather than emotional.

EFFECT OF STRESS ON DECISION MAKING

The general belief is that time stress degrades decision making by interfering with the generation of options, the careful evaluation of options, and so forth. A number of researchers have shown that attempts to train subjects to use analytical strategies such as Multi-Attribute Utility Analysis are unsuccessful for tasks that provide less than one minute (Howell, 1984; Rouse, 1978; Zakay & Wooler, 1984). Time pressure may also produce tunnel vision, reduced sensitivity to cues, and other effects that diminish the likelihood of effective decision making. These types of degraded performance are consistent with a general suspicion that human decision making is often biased and untrustworthy (Kahneman & Tversky, 1979; Nisbett & Ross, 1980).

Janis and Mann (1977) have put forward a standard analytical account of decision making and have pinpointed all the places where decision making might be degraded: failure to gather all relevant information, failure to generate all relevant options, failure to evaluate each option along all relevant dimensions, and so forth. The effect of stress is straightforward--here it should exacerbate each of these failures and result in lower-quality decisions.

However, we have argued that there is little analytical decision making in naturalistic settings. We have claimed that recognitional decision-making strategies enable experienced decision makers to use their expertise to make effective decisions in short amounts of time. If you were using an analytical decision strategy, generating a set of options and evaluating them along a set of dimensions, and time ran out, you would be left helpless, without any guidance. You would be paralyzed at precisely the moment you needed to act. On the other hand, if you were using a recognitional strategy you would be starting with an idea of the option you expected to carry out, and, depending on the time available, you would evaluate that option, improve it, perhaps reject it, but you would be always poised to act. Therefore, recognitional strategies seem to have much greater value for coping with time stress.

The RPD model offers a strikingly different account of the effect of time pressure. Since there is no deliberate comparison between options, the strategy is streamlined and fairly robust to time pressure. The only aspect of recognitional decision making that would be affected by time pressure is the mental simulation and even here one would expect a graceful degradation--a diminished forward search that is done with less care and thoroughness.

Given the different perspective, let us examine some experimental studies. Stokes (1989) has recently investigated the effect of stress on a dynamic task (piloting a small aircraft in a simulator). Stokes used four types of stressors: time pressure, dual task loading, financial risk, and irritating noise. Stokes found that coping with malfunctions where there was a high demand for performing spatial operations in working memory was particularly sensitive to the degrading influence of stress manipulation, a result most marked for the subjects with less experience. This is consistent with our expectation that the RPD component of mental simulation would be most affected by time pressure. Stokes found that stress had a very strong effect on performance involving spatial operations in working memory, which is what we would expect since working memory is one of the processes that would be vulnerable even for operators using recognitional decision strategies. The performance decrement was most marked for the less experienced subjects.

Calderwood, Crandall, and Klein (1987) found that proficient chess players (rated as Masters) showed no performance decrement at all when average time per move was reduced from two-and-a-half minutes (regulation play) to six seconds (blitz chess). Less experienced players (rated as Class B) did show performance decrements, and the interaction between player capability and time pressure was significant. The results were interpreted as suggesting that more proficient players could rely on recognitional decision making which is less vulnerable to time pressure whereas less experienced players need to analyze situations and are affected by having inadequate time.

Stuart Dreyfus (personal communication) has shown that a chess Master is able to play blitz chess on an equal level with another Master even though a secondary task (counting clicks heard over a headphone and reciting a running total) was introduced to interfere with working memory. The suggestion is that proficient decision makers can rely on the recognitional process and are not strongly hampered by time pressure.

Therefore, we infer that time pressure may not have a great impact on highly experienced personnel. It should reduce the quality of decisions for personnel with lower skill levels, who have more need for analytical processes to ensure that good options have not been overlooked, and that all the implications of these options have been evaluated. These analyses take time and are sensitive to time restrictions.

With regard to stressors other than time pressure we would expect that there would be a lower confidence in the decisions. We would expect quality to stay the same or to be reduced. But there is no clear rationale for how stress would alter the nature of the decision strategy--obsessive preoccupation is as likely as is impulsive reaction just to be out of the situation. As the consequences of the decision become more critical, it should be harder to complete the decision process, whereas with lower criticality and higher discomfort we might expect more impulsive behavior and less care given to the decision.

STRESS AND TEAM DECISION MAKING

Thus far we have been looking only at individual decision making, but in naturalistic settings most decisions are made in team contexts.

In Figure I is diagrammed the RPD model for individual decision making. This model can be extrapolated to the team setting. Thordsen et al. (1988) found that 26 of 27 decisions identified in a 5-hour Army battalion-level planning exercise followed the RPD model rather than any concurrent option analysis models. This was surprising to us, as we had anticipated that teams would show more classical patterns of generating several options and analyzing these on fixed dimensions. We found that the RPD model for individual decision makers also fits team decision making--the teams were identifying prime options and progressively deepening those options just as individuals do.

Members of the team provide a wider skill/knowledge base, as well as more eyes, ears, and hands to increase the potential for handling additional workload. Yet some team functions will be hindered by the added burden of communication of intent and situation assessment. There is an additional tradeoff: the cost for coordination. For each component of the RPD model presented in Figure I, there is a potential for problems in team decision making. Thordsen and Klein (1989) identified eight potential barriers to team decision within the team RPD model. These include (1) distorted perception, (2) difficulties with situation assessment hand-off, (3) difficulties in the formulation or transmission of intention, (4) directed attention, (5) missing expectancies, (6) restricted improvisation, (7) synchronization, and (8) metacognition. (See Figure 2)

1. Distorted Perception. Unlike an individual, a team cannot have direct access to events. Therefore, perceptual cues available to the individual, and the experience gained in perceptual learning, may be lost to the team; external events are usually not directly experienced, and the descriptions are communicated verbally. Since these perceptions are experienced outside the team, there is the additional factor of the credibility of the information source.

2. Hand-off of Situation Assessment. An individual can recognize a situation, but how does that recognition get transmitted to others in the team? This is another opportunity for distortion or omission.

3. Intent. One aspect of situational recognition is the recognition of goals. Individual decision makers know directly what the goals are in a situation. In a team, goals must be communicated and if the communication is poor, the activity of the team can become confused.

4. Attention. An individual naturally looks at data sources that are of specific interest to what she/he wants to accomplish (i.e., attention is directed to what is important). In a team, the data gatherers are often different from the synthesizers and planners, and they may be in different places. Therefore it is harder to get the information that is needed at the moment, and it is harder to shield team members from irrelevant information that can create overloads.

5. Anticipation/expectancy. An experienced decision maker can use expectancies to check situation assessment and to prepare for smooth reactions. In a team, these expectancies are difficult to communicate and may be missed, so team members may operate for long periods of time on outmoded and obsolete expectancies. In ineffective teams there is often little anticipation, so the team is too often behind the power curve rather than ahead of it.

6. Improvisation. Generals know that even the best plans can become obsolete within a day or so. Individuals can quickly recognize that assumptions have failed, and can switch their assessment to match field conditions. Teams have difficulty improvising. They have trouble giving up plans that no longer make sense, and they have trouble seizing opportunities that were not expected.

7. Synchronization. Skilled decision makers can play out a planned action in their heads to see if it will work. Teams try to do the same thing, but they have trouble representing all the different dimensions (e.g., logistics, artillery, intelligence, weather, air support, etc.). Complex plans can be stymied by the mistiming of only a few, sometimes only one, of the components that must be synchronized.

8. Metacognition. Just as an individual decision maker must learn how to allocate the proper amount of resources to a task, so must a team, and it is both more important and more difficult for a team to do this well. Both the leader and the team members must be able to communicate about workload, actual and impending, so that functions are assigned appropriately, and the allocations are made in enough time to smooth the performance rather than disrupt it. The function of metacognition does not appear in Figure 2 because it is not a stage of decision making, but rather the management of the decision process.

These eight barriers to effective team decision making may also be seen as the processes most susceptible to stress effects. Again, we are not claiming that stress (psychological or physical) alters the decision strategy. Rather, we are suggesting that an individual's stress may degrade task performance and that such degradation could affect team decision making by its effect on the elements listed above. If stress affects concentration, it can lead to communicating inaccurate perceptions to other team members. We saw this happen in the Vincennes incident. If stress results in excessive vigilance then we may see delays in communications, resulting in different types of disruptions. Similarly, the communication of situation assessment and commander's intent can be affected. If stress affects an individual's sense of time it can disrupt team decision making that depends on coordinated activities. When stress results in impulsive behavior, we would expect to see degraded synchronization of different activities; when it results in excessively reflective behavior we would expect to find time-consuming and overly-detailed forward searches.

TRAINING TEAM DECISION MAKING

There may be more opportunity to train team decision making than individual decision making, which is fortunate since the need is greatest at the team level. At the team level, there are many aspects of performance that are unnatural (e.g., ensuring that the leader take a strategic perspective and not micro-manage) and can be significantly improved through training. The type of training we have found most effective (Calderwood, Klein, & Thordsen, 1989) is to provide rapid feedback on team decision processes in the context of realistic training exercises.

CONCLUSION

For individual decision makers, stress need not alter the strategies used; psychological stressors such as time pressure primarily affect less experienced personnel. At the level of team decision making, it is more obvious how stress on individuals might degrade decision making, and there may also be greater benefits to be realized from team decision training.

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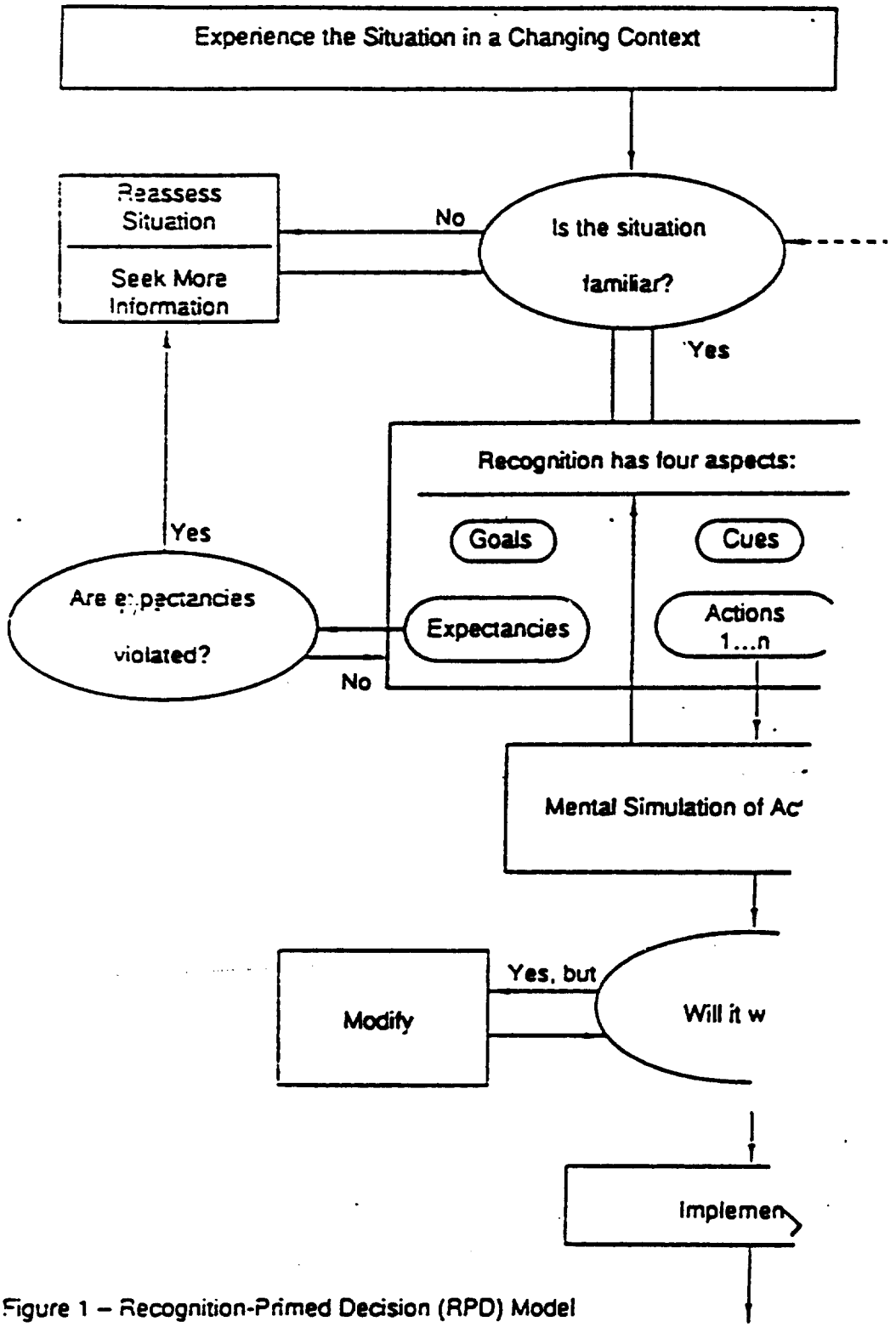

Figure 1 – Recognition-Primed Decision (RPD) Model

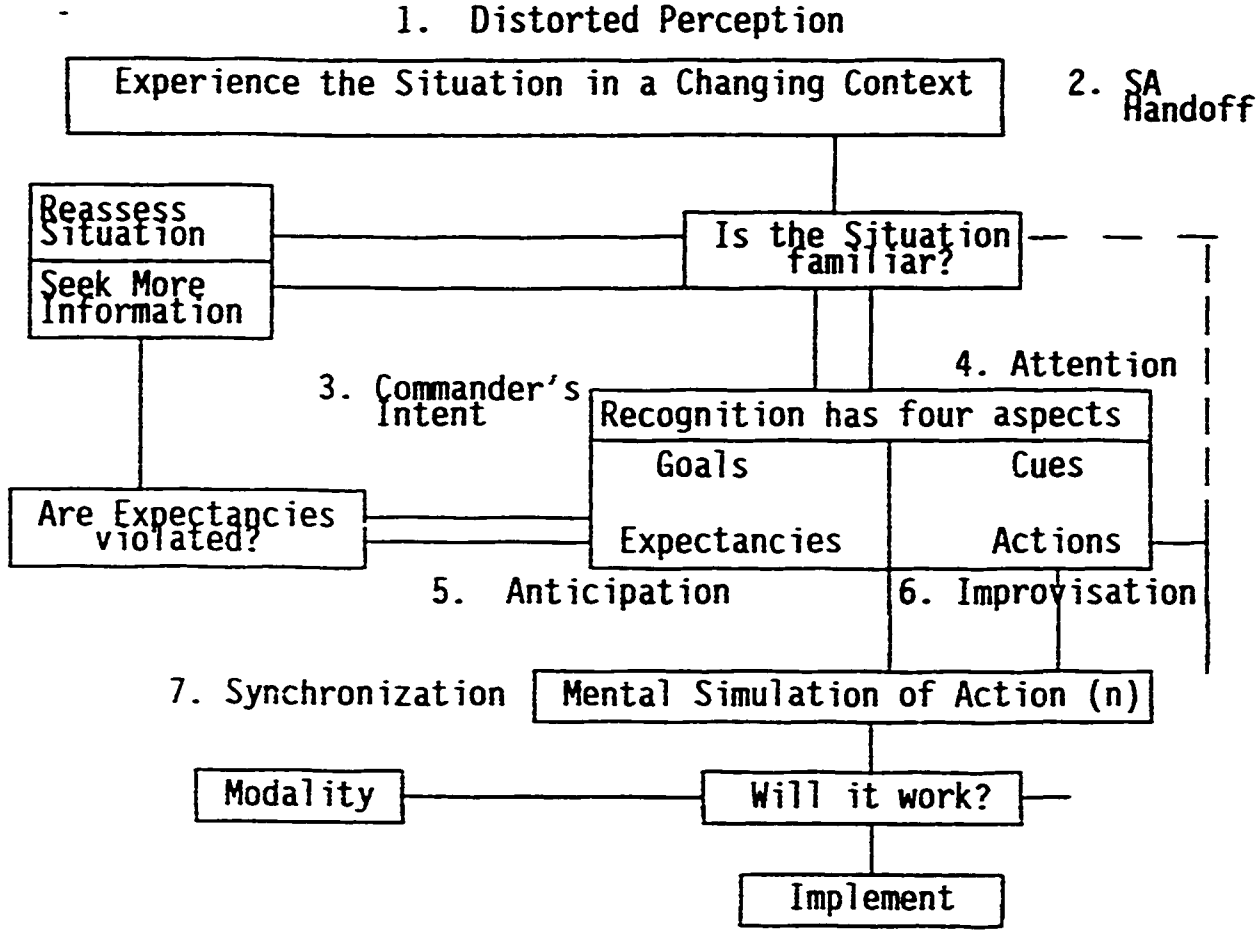

Figure 2: Seven Barriers to the Team Recognition Primed Decis.

CRITICAL INCIDENT STRESS TRAINING PROGRAM STANDARDS

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> The News and Observer, Raleigh, NC, Saturday, September 25, 1989--Washington--President Bush cleared the way Friday for the distribution of federal disaster relief money for some mainland areas devastated by Hurricane Hugo, ...
>
> San Juan, Puerto Rico--Desperately needed emergency power generators, water purifiers, and medical supplies arrived in the hurricane-devastated Caribbean Friday, but officials pleaded for more--faster. "The big effort now is to put the people in economic conditions to build their houses..."

What are the basic needs of people following a major disruption in their lives? Food, clothing, shelter, money to rebuild, electricity, indoor (or at least, clean) toilets and bathing facilities, security and protection from further threat of harm? The basics for survival are the first and foremost needs.

When people suffer a major disruption in their lives from a natural or man-made disaster, dealing with the stress, depression, and grief that follow is not in their first thoughts. Neither is it the primary concern of most local, state, and federal officials. This is not because the officials are callous or uncaring individuals. It is because they have to be most concerned with problems of physical survival. Months later we begin to see articles that recognize the stress involved and the toll it takes.

> The Richmond News Leader, November 20, 1989, Columbia, SC--Every time a breeze stirs, Jackie Puckett's mind races back to that horrible September night when Hurricane Hugo smashed into Charleston and devastated the state. "It's hard for me to hear the wind blow and not to think of 135 miles per hour winds," said Puckett, who coordinates a 24-hour mobile crisis unit in Charleston that offers help for the mentally ill and hurricane victims. "I'll probably always remember that sound, and I'll probably never be able to be in high winds without having a twinge." Two months after the storm, even the counselors are receiving counseling. The state mental health department conservatively estimates that 60,000 people will need counseling.

Most of you in this audience are concerned with the stress and symptoms of stress that follow disasters. However, we are all aware that there are limits to what we can do to help people with these problems. Since it would be close to impossible for one treatment group to reach everyone affected by a disaster, there are many groups now available to work with victims. One of these treatment groups is the Critical Incident Stress Debriefing (CISD) teams available to Emergency Service personnel throughout the U.S., Canada, Australia, and several other countries. Those of us who work with the CISD teams come into contact with other victim assistance groups. We have noted that there can be a great variation on the theme of "helping people to cope with the stress of a major event." Because these variations exist, those of us involved with training CISD teams are finding it necessary to work toward a standard for training criteria.

There are several other reasons for establishing a standard for training CISD teams. These include issues of liability, expectations of emergency service providers, the use of teams by these providers, quality assurance, and issues of consistency. We are all aware of the necessity for standards, local and national, in the provision of basic medical and psychological care. These standards allow us to practice our professions with the assurance that if we are sued, we have an accepted model or standard for comparison. This type of standard is a protection for the provider of service and the recipient.

Emergency service providers are not yet totally accepting of CISD services. However, these providers do read the numerous articles in their trade journals that relate to CISD, what to expect from the process, and what it is like to participate in a debriefing. Given the availability of this information, CISD teams find it advantageous to adhere to a specific model in an effort to develop and maintain the trust of emergency service providers. Without this trust, emergency service providers will not use the CISD team, at least not more than once.

The provision of consistency and quality assurance by CISD teams is of prime importance and is closely related to the preceding issues, especially those of liability and developing trust. Research to show the effectiveness of CISD team activities is slowly being accomplished, but more is needed. Until research data can give us better direction, quality assurance through consistent adherence to a standard of practice is extremely important. This adherence to a standard will also mean that the studies being conducted will have a better basis for comparison between programs and CISD team activities.

The CISD group process model utilized by the 16 CISD teams working in Virginia since 1986 is the model established by Jeffrey T. Mitchell, Ph.D., in his international work with psychological service providers and emergency service providers. Anecdotal reports lead me to believe that this group process and team formation model is effective and operationally sound. The Virginia teams have conducted an average of two debriefings per team per month since September, 1986, and have provided over 3,000 hours of stress management education.

The training criteria established and utilized to train over 1,250 team members in Virginia and other states includes the following components and methods.

1. Team membership is based on completing the 2-day team training program, completing an application process (written and interviews), agreeing to and accomplishing participation in a continuing education program, and participation in debriefing activities.

2. The 2-day team training program covers the following topic areas:

   a. Emergency Service Stressors - This is particularly important for Mental Health professionals unfamiliar with emergency service roles and responsibilities.

   b. Stress and Stress Management Techniques - Presents history, research findings, specific techniques that are easily taught and utilized; brings mental health professionals and peer debriefers to a closer understanding of each others knowledge areas and limitations.

   c. The Debriefing Model - Provides definite structure to the group process without setting rigid rules for application of the model. The group composition determines how the model is utilized. The model is a framework, not the total content. This section also includes the several types of debriefing team activities that can be provided and when these are useful. There is also general discussion concerning the types of methods for setting up a debriefing or responding to a request for debriefing activities. Standards for this are set by each team.

   d. Victim Stress - Provides comparison for practitioners to understand emergency service providers as victims and to prepare mental health professionals to deal with other victims when necessary.

   e. Basic Communication Skills - This section could constitute a third day of training, especially for peer debriefers. Provides the basics of communication skills, dealing especially with communication in stressful situations and with people who are experiencing stress.

   f. Practice of Stress Management Techniques - Peer debriefers often have difficulty accepting the validity of stress management techniques. Practice in a group setting with validation by the group reinforces the usefulness of the techniques.

   g. Practice of the Debriefing Model - Mock debriefings are very difficult to structure because there is no single incident that is common to the entire group. However, the fears and concerns about conducting a debriefing and/or being on a CISD team are issues that are common to all CISD team training participants. Utilizing these issues, the group process model can be tested by the group with excellent results in terms of understanding the process, sharing concerns, learning from others, and lessening fears and concerns. I have used this type of practice session numerous times in the past year and have found it to be an excellent teaching tool.

Experience has shown the CISD teams in Virginia that this model is effective and can be utilized by a number of practitioners from various backgrounds and training to provide assistance to emergency service providers and others in need of debriefing services. The issues that cloud this model and its effectiveness tend to be those of organization and control of team utilization. Our experience is that if a team exists in a particular area of the country and there are people to be debriefed in that area, the existing team should be utilized and no attempts should be made to bring in outsiders without the existing team's request. Ruffled feathers, confused debriefees, confused debriefers, and general mayhem exist when the usual call down routine is not used to set up a debriefing activity.

It is my hope and the hope of the team Coordinators of Virginia CISD teams that this standard of training for CISD team members be accepted and utilized throughout the U.S. and other countries where CISD activities are provided. The concept of consistently trained individuals available to deal with any major event throughout the world, brings to fruition the beginning goal of Dr. Mitchell when he began working on this program many years ago. I share this dream with him and encourage each of you who are involved in this type of training to work toward this standard.

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DEVELOPMENT OF PROGRAM STANDARDS

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During the past ten years we have been working on a university-based program of instruction for preventive stress management involving several colleges and departments (University of Texas at Arlington, 1988; Quick, 1989). My primary focus has been on the development of a graduate seminar in preventive stress management within the college of business administration. I have also pursued an educational agenda at the national level, representing the American Psychological Association in the formulation of national health objectives for the year 2000 (Quick, 1988). It is in the context of these two experiences that I would like to address two issues. First, I would like to identify a number of problems encountered in developing a program of instruction in the field of stress. Second, I would like to outline the domains of competence which appear important to the development of program standards. Here I will broaden out, using a taxonomic framework that I believe applicable in the areas of both stress and psychic trauma.

PROBLEMS ENCOUNTERED IN PROGRAM DEVELOPMENT

There are five issues which I have encountered over the past ten years in developing a program of instruction in preventive stress management. These are (1) definitional ambiguity, (2) teacher-student relationship, (3) conflicting beliefs about health and disease, (4) audience agendas, and (5) collegial agendas. Let me deal with each of these issues in turn.

Definitional Ambiguity

My brother Jonathan likes to say that "stress" is a creatively ambiguous word, which goes to the heart of the scientific problem with the definition of the word. Or, as Kahn (1987) says, there is no precise scientific definition of the term. "Stress" is alternatively used to mean "the stress response," "the stressor" (demand), "distress" and, in some cases, "challenge." From an instructional perspective, this definitional ambiguity leads to the absence of a common frame of reference from which to proceed.

A review of the literatures related to stress reveals four basic models. These are (1) the homeostatic, medical model (Cannon, 1932; Selye, 1976); (2) the social-psychological (role theory) model (Kahn et al., 1964); (3) the cognitive-psychological or coping model (Lazarus, 1966); and (4) the psychoanalytic model (Levinson, 1975). The diversity of perspectives becomes even greater as we move to the lay community and general population. We can expect "stress" to continue as a creatively ambiguous term.

Teacher-Student Relationship

Miles (1980), in a very early attempt at a stress seminar within a school of organization, found that occasionally students would bring material of an inappropriately personal nature into the classroom. This reflects one of the more subtle pitfalls which surround the development of a program of instruction in stress. Most students do not confuse education and therapy, nor

do they confuse the role of teacher and that of therapist. However, in the field of stress there may be confusion which creeps in because of the lightning-rod effect stress has for an individuals emotional, psychological, spiritual, and medical experience. It is important to clarify the nature of the psychological contract between teacher and student as well as to amplify the competence of the teacher in the instructional context.

The reason that this may be a subtle pitfall is because good education may be very therapeutic in nature, just as good therapy may be very educational in nature. Witness the proximity of Freud's psychological theorizing and his clinical practice (Gay, 1988). However, the proximity of the experiences does not make them the same and, in fact, there are important distinctions between the two. Again, especially in view of the lightning-rod effect of "stress" for a wide range of emotional, psychological and/or spiritual experiences which students may have, it is critical to clarify the role of the teacher, the nature of the relationship with students, and, hence, the psychological contract.

Conflicting Beliefs about Health and Disease

A third instructional problem centers around the underlying, and frequently unconscious, beliefs which professionals hold regarding the processes of health and disease. While some will emphasize the psychological issues related to health and disease, others will emphasize the physiological issues. Beyond that simple dichotomy, we see many alternate beliefs reflected in allopathy, homeopathy, osteopathy, or even traditional Chinese medicine (Norris, 1988).

Underlying beliefs about health and disease are important for three reasons. First, we have come to understand that stress is, often in diverse and confusing ways, intertwined with the processes of health and disease. Second, our beliefs are important for an understanding of what causes health and disease, that is, from a practical theory perspective. Third, these beliefs are important because they shape the stress management strategies and interventions one chooses to employ in efforts to treat or avert disease and create or maintain health.

Audience Agendas

My experience has been that students do not enter the educational environment without some agenda. It may be poorly or well defined, but it is there. In well established and well defined educational arenas, the audience agendas are relatively homogeneous, though rarely is there unanimity within the audience. I do not consider it important to respond to the diverse agendas so much as to be aware of those agendas.

I have found much less homogeneity in my audience agendas when teaching my graduate preventive stress management seminar. In 10 offerings to over 200 graduate students, the majority have come from the disciplines of nursing and business. Psychology, interdisciplinary studies, social work, and teacher education are other disciplines represented. There has been a surprising degree of heterogeneity within audience agendas by discipline, with the one exception of nursing.

Collegial Agendas

As a relatively new educational and instructional program, stress will be viewed by some colleagues as a threat to their own programmatic agendas. This is true for two reasons. First, all new educational programs encounter resistance from entrenched traditionalists who are committed to established ways of thinking. Stress as a new educational program is not exempt from this sort of resistance. Second, a new program involves a reallocation of resources of various kinds. If the stress program is being attempted in a relatively munificent system, less resource reallocation threat will be involved than if it is being attempted in a scarce resource system.

Some colleagues will attack the stress program on very personal and petty grounds. I had one nemesis for eight years who conducted such harassment action to no avail. Such colleagues are a nuisance more than any real threat and are best ignored, not given the benefit of a response. However, there are colleagues with very well formulated agendas of their own who may pose a genuine threat to the program of instruction.

DOMAINS FOR PROGRAM STANDARDS

There are at least four domains in which program standards need to be considered in the fields of stress and psychic trauma. Here I will go beyond my direct experience with program development and attempt a taxonomic framework within which we may operate. The four domains within this framework are (1) the objective knowledge domain, (2) the cognitive domain, (3) the therapeutic domain, and (4) the self-knowledge domain.

The Objective Knowledge Domain

This domain concerns the standards related to objective knowledge which individuals must meet. What must the individual know objectively after having completed the program of instruction? There is no common body of knowledge in the field of stress. Rather, knowledge is spread through the disciplines of medicine (and all the relevant specialties such as cardiology, psychiatry, psychoanalysis, and preventive medicine), psychology (and all the relevant specialties such as cognitive, developmental, industrial/ organizational, and military), public health, social work, nursing, management, and so on.

The challenge in this domain becomes one of building a common body of objective knowledge from a number of disciplines and specialties. One way in which I have addressed this domain in my own program is through an organizing scheme in which all disciplines and fields of objective knowledge may be fitted.

The Cognitive Domain

This domain concerns the standards related to cognitive skills which individuals must meet. What must the individual be able to do having completed the program of instruction? A key element in this domain concerns preliminary diagnostic competencies for either individuals and/or organizational units. The result of this would be the capacity to execute referral actions through triage or solicit appropriate consultations from appropriate specialties.

One way in which I have addressed this domain in my stress program is through a diagnostic case project. Each student conducts an individual or organization case diagnosis which is then presented, evaluated, and critiqued.

The Therapeutic Domain

This domain concerns the standards related to valuative and therapeutic skills which individuals must meet. What must the individual be able to do of a clinical nature after completing the program of study? While this domain is highly important, it may also be a domain referred to various certification and licensing bodies for further action. Under those conditions, the issue of standards addressed within the program may use certifications and licenses as markers or standards of acceptable quality. This is one domain which I have not addressed.

The Self-Knowledge Domain

This domain concerns the standards of self-knowledge which individuals must meet. What must the individual know about either personal history and/or personal response predispositions? The psychoanalytic model of a personal and a training analysis as prerequisites to the practice of psychoanalysis may have some transferability here.

Again in the context of the stress program, I have approached this domain through a personal preventive stress management plan. The student must address personal life history traumas and stress; present personal and professional demands; medical, psychological, and behavioral predispositions for distress (strain); and current or proposed strategies employed for preventive stress management.

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THE GEORGIA STRESS MANAGEMENT PROGRAM

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Stress is not a stranger within the public safety community. Whether employed in law enforcement, corrections, fire, or emergency medical services, individuals can expect to meet with conditions above and beyond those confronting the general population. Indeed, at times, the conditions (stressors) are not unlike those faced by combat personnel. The long term effects of these stressors are seen in high rates of medical and emotional disabilities, turnover, substance abuse, and family problems.

To counter these problems a number of public safety agencies have established a variety of programs aimed at overcoming the effects of negative reactions to stressors. Included among these are employee assistance programs, staff psychologists, and diverse educational programs.

Recognizing that the manifestations of stress can serve to diminish the level of service provided to the citizens of Georgia, a consortium of individuals representing public safety, community agencies, and the state legislature requested a project be undertaken to research the problem (stress) and provide whatever resources could be generated to assist in combating the stress problem.

In response to that request Governor Joe Frank Harris issued an Executive Order directing that the Georgia Peace Officer Standards and Training Council (POST) conduct a study "for the purpose of identifying the specific symptoms of law enforcement personnel distress."

The study presented a number of recommendations, specifically:

1. Eliminating the stressors --

    a. Train the individual for the job rather than fit the job to the need of the individual.
    b. Continue and expand existing management training programs aimed at making executives aware of styles of management and organization that are not stress inducing.

2. Increasing the individual's stress coping ability --

    a. Cognitively increasing the stress awareness of individuals.
    b. Developing a peer counseling program, and

3. Providing the stressed individual with help.

As a result of this study the state legislature authorized and funded what was then the first state wide public safety stress management program in the country. Heading the program was the Supervisor of Stress Management Programs who was charged with the responsibility of implementing the recommendations listed above. Although initially housed within the Georgia

Police Academy services were to he rendered to all public safety agencies within the state. In 1987 the Georgia Public Safety Training Center became operational. The Stress Management program was transferred to the Instructional Services Division of that organization. This eliminated the potential problem of individuals not involved in law enforcement rejecting information presented by a Police Academy representative. Along with the transfer of the position, the unit was renamed Behavioral Science Unit providing the opportunity of offering a greater range of services.

The services fall into two broad categories. The first involves classroom instruction. Basic mandate training includes two hours dealing with issue of stress. As might be expected a block of instruction this brief serves only to give the novice officer a basic introduction to stress awareness. At this time there is no consideration being given to extend this instructional block. The reason is that at this level of an individual's career they are not yet ready to fully appreciate the stressful nature of their chosen profession and its impact upon them. A more comprehensive program is offered at the Center. This class attracts a more mature officer, one who is fully cognizant of how he or she has been impacted by the job. Additionally, blocks of instruction have been developed for a number of other courses taught at the Center. For example, each Judgmental Shooting class includes material dealing with post shooting stress, as well as what stress might do to an officer when he or she is involved in a shooting. Emergency medical technicians are given information as to what they might experience subsequent to their losing a patient. Previous training focused upon saving the patient and did not adequately prepare the student for dealing with a patient's death. Other classes in which specially developed stress management modules are presented include Child Abuse, Family Violence, Crisis Intervention, Supervision, Management, and Basic Telecommunication Operator (Dispatch).

The program having the greatest impact to date is Peer Counseling. At the onset, the program was modeled after those presented by the Boston Police Department, and the Los Angeles Sheriff's and Police Departments. Due to the nature of the program a number of changes had to be incorporated. There are over 150 counties within the state of Georgia. Many of these counties are rural and quite small in population. A large number of the police departments consist of less than 10 personnel. Approximately half of the fire fighters in the state are volunteers. Emergency medical services can be operated by the county, a private provider, or a combination. While many agencies might wish to offer some form of psychological services to their personnel these services might not be available. To overcome these obstacles it was decided to utilize the regional concept of the State Department of Human Resources, Emergency Services Section. This agency oversees the activities of all emergency medical service agencies in the state. There are 10 regions covering the state. Peer counselor training is provided to members of all public service agencies within a region. Eligibility to become a Peer Counselor includes nomination by one's agency, a "clean" record, the desire to become a Peer Counselor, and the ability to maintain confidentiality. The Peer Counselor training program involves 40 hours of classroom and experiential skills. Topics covered include crisis counseling, listening skills, assessment skills, action skills, suicide assessment, dealing with suicide survivors, and intervening in cases of substance abuse. Students are representative of all public safety agencies so that should one choose not to speak to a fellow law enforcement officer then there is still a trained peer counselor available

with whom to speak. By maintaining the program on a regional basis each region is able to adopt quality assurance programs and conduct training programs suited for the particular nature of the region. The regional concept also enables including peer counselor sessions as a part of the disaster drills conducted by the various agencies.

This latter concept has led to a third program element, that of traumatic incident debriefing. Individuals who have successfully completed Peer Counselor training may, at the recommendation of their agency head participate in this second level of training. Debriefing training is geared to make certain that each region has a sufficient number of trained peers who can be utilized subsequent to a traumatic event in the region without the necessity of calling upon a "for hire" debriefer. These individuals function in conjunction with local mental health professionals who have also been through this training.

The turnover within the various professions requires that the training be offered on a very regular basis. This has not presented a problem either logistically or economically.

It is difficult to measure success of a program such as the one described above. One criterion might be the willingness of agencies to continue participating. Based on this measure the program has been most successful. Not one agency has dropped out and many more now wish to be included. Some statewide agencies wish to restrict their participation solely to their personnel and wish to restrict their participation solely to their personnel and this has not proven to be problematic. A second measure of success may be the number of contacts recorded by peer counselors. Also the range of issues discussed during counseling has expanded. Finally, a number of debriefings have been conducted by peer Counselors and they are now called for by agency heads after unusual events suffered by their agencies; e.g., three suicides within one month.

Is the program totally successful and has it won over all of its critics? Fortunately, the answer is no. The need to constantly improve has seen a number of positive changes occur. Who are the critics? Those persons who view peer counselors as a threat to their livelihood, or consider peer counselors to be treading on their "turf."

In sum, the program's benefits far outweigh its liabilities. The grass root demand for all phases of the stress management program will serve to see that the program continues to grow and to meet the needs of its constituency, the Georgia Public Safety Officer.

PREVENTION OF COMBAT STRESS: THE NBC EXPERIENCE

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AIM

The overall aim of the Research Program at the 352d Evacuation Hospital is to maintain mobilization readiness. Other aims include conserving the fighting strength by (a) investigating factors that impede soldiers' performance, (b) understanding soldiers' training needs, (c) designing training programs to meet soldiers' training needs, (d) enhancing soldiers' ability to tolerate stress, and (e) improving soldiers' performance under simulated conditions of combat stress.

Limitations of the Research Program include (a) it is not an essential mission of an Evacuation Hospital, (b) there is no research budget, (c) no personnel are specifically allocated for conducting research, and (d) administrative support varies with the change in Command.

RESEARCH PROGRAM

The 352d Evacuation Hospital implemented the first United States Army Reserve Research and Development (R & D) Section in 1983. Research activities emerged as a result of the Commander's concern for the welfare of soldiers training in Mission Oriented Protective Posture (MOPP) ensemble. Carter and Cammermeyer have described biopsychological responses of soldiers wearing MOPP gear (1985, 1989b) the emerging quality of real casualties training under simulated combat conditions (1985b), early warning signs of heat injury (1988; Carter, 1988), and effective and ineffective coping in MOPP gear (in progress).

A review of literature conducted in 1983 showed that most researchers used quasi-experimental designs to investigate human performance, task degradation, and heat stress factors, and to evaluate equipment. Most studies used small samples of active duty enlisted personnel wearing MOPP ensemble under various performance conditions. (Carter and Cammermeyer, 1985a) In theses studies, many research subjects performed tasks that were unfamiliar to them. Most studies did not include large sample sizes, medical personnel, women, both officers and enlisted personnel, and were not conducted in naturalistic settings during routine training exercises.

The Research Program at the 352d Evacuation Hospital is unique in that it (a) addresses research questions not discussed previously in the unclassified literature, (b) uses large samples of medical reserve personnel, (c) includes women, and officers and enlisted personnel working together as a unit in naturalistic settings, and (d) uses both quantitative and qualitative methodologies, and combined methodologies to enhance the understanding of human responses to simulated chemical warfare training.

COMPLETED RESEARCH

Study I investigated the relationship between demographic, prior training, biopsychological responses, and termination variables in 100 medical reserve personnel wearing MOPP IV ensemble for about one hour in a simulated chemical warfare training exercise conducted on a drill weekend. The sample was heterogeneous with respect to age, ethnicity, education, civilian work, and sex. Sixty-nine percent reported developing biopsychological responses to wearing MOPP gear. There was a 7% attrition rate.

Demographic factors were not very important in relationship to termination variables. Although many biopsychological responses were reported, responses did not correlate with completion of the exercise. Women reported biopsychological responses with greater frequency than males; however, the responses did not contribute to termination of the exercise. Most frequently reported responses included rapid breathing, shortness of breath, loss of side vision, and sweating. Personnel were inexperienced in wearing MOPP gear, (i.e., only 52% had worn the gear previously and 49% had worn the gear for less than 30 minutes). Previous experience with wearing the gear for extended periods of time correlated with fewer total responses reported. Times of unstructured activity increased anxiety and frustration for many subjects.

Study II examined biopsychological responses and background practices of 182 medical and allied medical reserve personnel participating in a one-hour simulated chemical warfare scenario. The study was conducted as part of a 10-day field training exercise. It explored the relationship between demographic, training, biopsychological responses, and termination variables in two groups. Group I (n = 81) conducted chemical warfare training in the A.M. and group II (n = 101) in the P.M. In this study, 85% of the total sample reported developing biopsychological responses. There was a slightly higher (11%) drop out rate for the one hour exercise than was reported in Study I.

Consistent with findings reported in Study I, demographics were not very important in relationship to response variables and ability to complete the exercise. In both Group 1 and Group II, anxiety, feeling trapped, and visual problems correlated significantly with sex. In both groups, women showed the tendency to report these responses slightly more often than male subjects; however, sex correlated mildly with ability to complete the exercise only in Group II. Most frequently reported biopsychological responses in Study II were consistent with those reported in Study I: feeling hot, shortness of breath, rapid breathing, visual problems, and anxiety.

Managing equipment was reported as the most difficult part of the exercise by 42% of the terminators. Terminators, like subjects in the entire sample, were inexperienced in wearing MOPP gear: 57% had worn MOPP two times or less, and 74% had worn MOPP gear for less than one hour prior to the exercise. Over half of the terminators reported wearing glasses (11 or 68%), yet only one of the terminators had glass inserts in the mask. Although ingestion of alcohol, medication, and/or drugs did not correlate significantly with termination, 13% of the morning group, 29% of the evening group, and 32% of the terminators in the combined sample reported consuming such substances.

Study III (Carter & Cammermeyer, 1985b) described a 72- hour simulated chemical warfare scenario that was conducted during a 10-day field training exercise for 195 medical reserve personnel. Personnel functioned efficiently during Scenario I which was conducted under conventional warfare conditions. Training needs became apparent during Scenario II when personnel received chemical casualties. Use of an organized plan (or decision tree tool) for triage would have been useful. Knowledge of decontamination procedures and treatment of chemical casualties was required. Unit personnel became increasingly disorganized during Scenario III when under hostile chemical attack. This situation was characterized by confusion, uncertainty, and panic. The following factors contributed to the emergence of five real casualties during the exercise: heavy activity (running in gear), reactivated or recent medical problems, inadequate rest, limited food and fluid intake, obesity, prior difficulty wearing gear, and poorly fitted equipment, masks and inserts.

Study IV (Carter & Cammermeyer, 1988) investigated early warning signs of heat injury in reserve personnel participating in a 10-day field training exercise conducted under high heat conditions. Fifty-one subjects were screened for potential heat injury at the Troop Medical Clinic (TMC). Common characteristics of the 26 subjects who were heat injured included an acute onset of symptoms, referral for treatment by others, inability to recognize their own illness, and prior history of heat injury. Patient interviews uncovered retrospective descriptions of confusion, alteration in affect, and impaired ability to function in the work environment as early signs of heat injury. Confusion emerged as the predominant early sign of heat injury. Heat injuries tended to occur on days when the ambient temperature was rising. Heat cases tended to make multiple visits to the TMC and to be treated more aggressively than non-heat cases. Both heat and nonheat injured patients showed classic signs of heat injury and showed difficulty on mental status examination.

CONCLUSIONS

These four studies have generated the following conclusions:

(1) Most personnel have minimal training in wearing MOPP IV ensemble, both in the number of times worn and duration of time in gear with each wearing.

(2) Demographic factors are not very important in relationship to biopsychological responses and ability to complete MOPP exercises.

(3) Studies showed attrition rates of 7-11% of medical and allied medical personnel wearing MOPP IV ensemble for one hour during simulated chemical warfare exercises.

(4) Studies showed 69-85% of personnel reported biopsychological responses to wearing MOPP IV ensemble during one-hour training scenarios.

(5) Higher attrition rates and biopsychological response rates were reported during the long-term (10 day) training exercise as compared to the drill weekend exercise. These higher rates may be the effect of accumulated heat stress work load.

(6) Training exercises become increasingly chaotic and disorganized during threatened and actual chemical attack scenarios.

(7) Participating in simulated chemical warfare scenarios may induce post-traumatic stress disorder symptoms in some combat veterans.

(8) Heavy activity, such as running, in MOPP gear may result in dropouts and contribute to the development of real casualties.

(9) Inadequate food and fluid intake, inadequate rest, and prior medical illness may generate real casualties during exercises.

(10) Early signs of heat injury include confusion, acute onset of symptoms, referral for treatment by others, inability to recognize illness, history of heat injury, alteration in affect, and inability to perform work.

(11) Heat injury tends to occur on days when the ambient temperature is rising.

(12) Heat cases tend to make multiple visits to the TMC and to be treated more aggressively than non-heat cases.

TRAINING RECOMMENDATIONS

Recommendations for training include

(1) Providing didactic and practical training in performing job related tasks in MOPP IV ensemble.

(2) Providing properly fitted clothing, especially masks.

(3) Providing optical inserts for soldiers who wear glasses.

(4) Providing adequate sleep, food, and fluids to sustain troops, using extreme caution while training under conditions of heat stress.

(5) Providing easy access to shelter, food, fluids, and latrines during MOPP exercises.

(6) Observing reasonable work-rest cycles.

(7) Teaching coping strategies including use of relaxation techniques, self-care, and buddy aid to assist soldiers in managing biopsychological responses.

(8) Identifying individuals prone to panic and assisting them in developing effective coping strategies.

(9) Limiting or restricting use of alcohol, drugs, and unnecessary medications during field training exercises since substance use may increase the potential for dropping out of exercises.

(10) Complying with heat stress safety guidelines, using extreme caution during MOPP training exercises.

(11) Training medical personnel, commanders, administrative personnel, and soldiers in the prevention and early recognition of heat injury.

(12) Protecting individuals with prior heat injury from heavy heat stress work load conditions, (e.g., by avoiding direct exposure to sunlight, working in ventilated areas, promoting adequate rest, and assuring adequate food and fluid intake).

Barriers to the implementation of training recommendations include

(1) Finding the time to do proper MOPP training in reserve units because of multiple training requirements.

(2) Eliciting the cooperation of trainers: the training officer, the NBC team, and nursing educators.

(3) Retaining reserve personnel in order to promote an accumulative effect of training.

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CRITICAL INCIDENT STRESS DEBRIEFING

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Beginning in the early 1970's emergency medical services systems and subsequently the fire and police services in various locations began to offer stress management and critical incident stress debriefing programs. The programs were at first strongly resisted by the personnel, the command officers and the organizations. However, the continuous occurrence of tragic events such as major disasters and the recognized losses of emergency personnel from the services as well as the long range stress symptoms in those personnel eroded the resistance and opened the door to the development of effective intervention techniques which are now applied widely throughout the emergency services.

Intervention programs include pre-incident stress education which enable the personnel to understand stress reactions and to more easily recognize the signs and symptoms of stress and to seek out appropriate relief. Relief can be found by utilizing various methods which are designed to reduce stress and restore the individual or group to full and healthy function. Some of the intervention techniques include on scene psychological "first aid" by peers who are trained to recognize the stress reactions in their fellow workers and to act quickly to mitigate those reactions before they seriously debilitate the performance of the affected individual. Other techniques are company level (usually six or eight person teams for non-military emergency organizations) defusings which allow for 20 to 45 minutes of discussion about a traumatic event with a trained peer from another company. Defusings allow the stressed individuals to express their fears, frustrations, anger and other emotions shortly after the event. They tend to reduce the impact of the incident and enhance the ability of emergency worker to return to service.

Other interventions include disaster demobilizations, follow up services, significant other support services, one-on-one support, command officer support and informal debriefings. These techniques have been adequately described elsewhere (Mitchell & Bray, 1990).

The subject of this paper, Critical Incident Stress Debriefings (CISD), is one of the intervention techniques which has gained significant acceptance in fire, law enforcement and emergency medical services as well as in hospitals and other emergency related organizations. The Critical Incident Stress Debriefing (CISD) process depends heavily on a properly trained team of mental health professionals combined with peer support personnel who can be available to the traumatized personnel to provide a facilitated group in a reasonably brief period of time after the traumatize event. Most debriefings take place between 24 and 72 hours after the highly distressing event. Currently there are over 150 CISD teams in the United States and another 25 in various countries such as Norway, Germany, Canada, New Zealand, and Australia. Since 1983, when the first team was structured in Arlington and Alexandria counties in Virginia, over 8,000 debriefings of traumatic events have been provided for emergency personnel. In addition, when the CISD teams are not intervening, they are busy providing pre-incident stress education programs to the emergency services. In the same time frame (1983-1990) between 12,000 and 15,000 educational programs have been provided by the teams.

CISD teams rely on the basic principles of crisis intervention theory as a basis of operation (Hafen & Frandsen, 1985; Mitchell, 1986). Crisis intervention theory calls for rapid intervention by a stabilizing force, protection from additional stress during the crucial time frame surrounding the crisis, mobilization of an individual's or a group's own resources and restoration to normal function in as timely a fashion as possible. The four keys to success in managing a critical incident according to crisis intervention principles are (1) speedy intervention, (2) getting the person to talk about the traumatic event and its consequences, (3) establishing or restabilizing the social network and (4) providing education which helps the personnel to manage the current as well as future crises. A CISD provides all four of those keys. Clinical observations clearly indicate that when a traumatic event is managed according to the principles outlined above, most personnel respond quickly and return to normal duties in brief periods of time.

The Critical Incident Stress Debriefing can best be described as a psychologically and educationally based group discussion which has been carefully designed to achieve two main goals. First, the CISD is intended to mitigate against the impact of the event in order to limit the damage incurred by the emergency personnel. Second, the CISD has been designed to accelerate normal recovery processes in normal people who have normal reactions to abnormal events. The CISD is not psychotherapy, psychoanalysis, or group therapy. One of the most important issues for a trained CISD team is to clearly recognize that the population is not a psychiatric population but a population which is "normal" and has simply been exposed to an event which has temporarily overwhelmed their abilities to cope effectively. Full recovery is generally expected after the CISD intervention for the majority of the personnel. In a small percentage of cases, short term therapy (one to three sessions) may be needed to restore the person to full function. Only in a tiny percentage of cases will long term therapy and or life style change (new job, new location, etc.) be indicated because those few may have developed post-traumatic stress disorder (Everly, 1989).

The Critical Incident Stress Debriefing consists of seven phases. They are (1) introduction, (2) fact phase, (3) thought phase, (4) reaction, (5) signs and symptoms, (6) teaching phase and (7) re-entry. The CISD has been developed over several years of trial and error. The concepts of the debriefing process are easy to understand, but the clinical applications of the process demand the resources and skills of a trained team. These seven phases and this exact sequence have been found to work best for emergency personnel. Variations from this model may produce an increased risk of too deep a penetration beyond the healthy and necessary defense mechanisms which emergency personnel need to keep intact in order to return to their jobs and successfully complete operational tasks. The CISD process should not be viewed as a final, absolute, or "do or die" intervention technique. Instead, it should be viewed as one of the earliest steps in a process of recovery. There is always room for additional therapeutic contact as long as the CISD team recognizes the fact that a debriefing may have its best value in the window it provides into a group to assess the need for further intervention. Since significant harm can be caused by well meaning but badly managed attempts to help a person or a group through a crisis, not one except specially trained CISD teams should be attempting to utilize the procedure.

In the introductory phase, the task of the CISD team is to motivate the participants in the debriefing and to set the ground rules. The group is encouraged to participate actively in the discussion which is to follow. They are assured that no notes will be taken, that there are no recorders present and that only those involved in the traumatic event are present and that no report is to be made about the discussion to the command staff. The issue of confidentiality and the need to protect one another from disclosure of the material discussed in the group is heavily emphasized. The participants are advised that they do not have to speak although they will all be given the opportunity to speak if they wish. Finally the group is told how the debriefing will proceed and the participants are told that the team will be available to assist them on an individual basis immediately after the debriefing.

The fact phase is the second phase in the debriefing process and the participants are asked to describe who they are, what their role was in the incident and what happened during the operation. It is not necessary to have the participants talk in the greatest detail during this segment of the debriefing. A brief synopsis of the operational activities will usually suffice. Generally the team leader starts the process and has each member of the group discuss their role in the incident. If there are too many people present to allow for this procedure, then the CISD team encourages spokespersons to summarize the incident.

In the thought phase, the task of the CISD team is to get the participants to discuss the first or most prominent thought which entered their mind during the incident. This is frequently the first time that the members of the group have had the opportunity to personalize their experience by expressing their personal thoughts on the situation. This is the last time in the debriefing in which the flow of the discussion follows an orderly movement around the circle. In the subsequent phases of the debriefing, anyone who wishes to speak may do so in any order in which they wish to talk.

The reaction phase is probably the most emotionally powerful. In this phase people answer the question "What was the worst thing about this event for you personally?" The discussion may move slowly or rapidly depending on the nature of the incident. Ample time is allowed to have everyone discuss the worst part for them if they wish to talk. Anger, fear, frustration, grief, loss, emptiness, guilt, and other emotional responses to a traumatic event are very common in debriefings. All of the feelings are accepted as valid and expected under the circumstances.

The next phase is the signs and symptoms phase and the group participants are able to discuss specific signals of distress which they may have encountered during the incident. The CISD team tries to obtain information about the group's responses while involved in operations at the scene, a few days later and at the time of the debriefing. This phase is particularly important as a mechanism by which the CISD team can determine the need for follow up services.

The teaching phase is a very important opportunity for the CISD team to teach stress survival skills to the group. Many practical suggestions are given and personnel are encouraged to continue to take appropriate steps to manage their stress in the days which follow. The teaching aspects of the program are developed in accordance with the needs of the personnel as assessed during the debriefing.

The re-entry phase gives the opportunity to the group to ask any questions or to review material presented during the debriefing. It is also the last opportunity within the group setting for the members to bring up any new information which they would like to discuss before the group adjourns. The CISD team makes every effort to summarize their comments, encourage the personnel, offer further assistance and to round out the discussion and tie up the loose ends. The debriefing team remains available to the group for as long as the members of the group seem to want to talk individually after the debriefing.

Until recently, only anecdotal reports of the success of the debriefing process were available. However, there are several important studies underway which should yield results by the end of 1990. Lynn Kennedy-Ewing of Media, PA, Ogden Rogers of Baltimore, MD, and Robyn Robinson of Melbourne, Australia are all conducting important research into the effects of CISD's on traumatized emergency personnel. So far, the results are very encouraging. It would be inappropriate for this author to report on the results of those studies in this paper since the researchers are about to publish their results. Contact points have therefore been provided to assist those who may be interested in corresponding with the researchers.

The Critical Incident Stress Debriefing process is timely, cost effective, easily learned and structured according to a specific model. When applied by a properly trained team of mental health professionals and peer support personnel, it holds great promise of reducing the effects of traumatic stress, preventing the development of post-traumatic stress disorder and assisting the personnel rapidly recovering from the effects of the traumatic event.

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THE STRESS OF MANAGERS, RESCUERS, AND MEDICAL TEAM MEMBERS IN DISASTERS

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Managers, rescuers, and medical team members are normal people with sensitivity, empathy, and their own emotional reactivity. In case of disaster or other urgent situations, they respond with their own stress which can be useful, hampering, or totally maladjusted. If this stress is maladjusted, it can have as consequences: an insufficient or dangerous action, a bad influence on the mental health of the victims, a disturbance in the rescuer's organization, or an ephemeral or durable impact on the health of the rescuer himself.

So, it was opportune to study the stresses on these personnel, its clinical manifestations, and its pathogenic factors and mechanisms in order to elaborate on the measures for its prevention and its reduction.

CLINICAL STUDY: SEVEN TYPES OF STRESS REACTIONS

Quantitatively, stress reactions in managers, rescuers, and medical personnel are less frequent than stress reactions in disaster victims. Authors agree that, in a major disaster, 15% of the victims present adapted stress reactions, another 15% present maladapted and pathologically explicit reactions, and the remaining 70% present a reaction apparently normal, but really anxious-stuporous-inhibited and apt to develop panics, rumors, or social inhibition. These proportions are less in rescuers. It is exceptional that a manager, a rescuer, or a medical person present a totally maladapted stress reaction. But, on the other hand, only a few of these personnel are able to completely cope with their stress and work with the same coolness as in a routine situation.

Qualitatively, the different adapted, maladapted and pathological stress reactions are the same as those in other populations, and it is possible to distinguish seven types of reactions.

The exhaustion or fatigue reaction

Exhaustion or fatigue is not really a stress reaction. It is a physical and physiological reaction resulting from the accumulation of physical factors (such as muscular effort, lack of rest and sleep, cold or warm surroundings, noise, dust, etc.). Personnel who have worked for too long in these severe conditions can present a state of physical and psychic asthenia that makes them unable to perceive the environmental stimuli, unable to evaluate, understand or decide, unable to have normal relations in the group, and unable to control their emotions. Because of this mental incapacity and this uncontrolled emotion, we tend to call this reaction "stress" when it is only "exhaustion," even if some stressors have interfered in the etiology. This exhaustion reaction is not lasting; it is spontaneously reducible with sleep and rest; it does not lead to chronic sequelae. However, it can be frequent in personnel, because the narcissistic ideology of the managers forbids him to sleep, or when there are many victims to help and care for, medical and rescue workers do not permit themselves to sleep.

The normal adapted psychophysiological stress reaction

As defined by Hans Selye, the normal stress reaction is a useful reaction that permits the individual to cope with the situation. It is the normal good response to the arrival of a danger or a threat (or even an urgent situation such as the necessity to work hard and quickly in an emotional environment). Without analyzing the biological and physiological mechanisms that make the organism ready for the physical action, let us see its psychological incidences: on the perceptive-intellectual level, it focuses the prospective attention, it mobilizes the intellectual capacities for evaluating, reasoning, and making decisions; on the affective level, it pulls away the individual from his indolence and his romantic dreaming to give him a present and anticipatory anxiety which will maintain him in a sufficient tension of warning and will protect him against surprises; on the volitional level, it pushes the individual to make decisions and execute actions without hesitation.

Because of the difference from habitual mental and physical responses in routine situations, the stress response is expensive in physiological and psychological energy. So, if it is too intense, too prolonged, or too often repeated, the stress uses up the organism's energetic reserves and makes room for maladapted archaic or pathological stress responses.

From a clinical point of view, the normal adapted stress reaction incites behaviors of making good decisions and executing accurate and efficient gestures with rapidity. Subjectively, personnel remember having experienced an exceptional feeling of gravity and psychic tension, sometimes accompanied by neurosomatic symptoms such as tachycardia, pallor, tremor, nausea, gastro-intestinal spasms, and even an imperious need of micturition. When the stress is appeased, even before the end of working, they feel a mixed impression of physical fatigue and physical relaxation.

The initial emotive reaction and the splitting process

In many cases, this adapted normal stress reaction, waking up capacities and mobilizing energy, places the individual at his optimal efficiency, even at his exceptional efficiency. In other cases, the environmental situation is so aggressive that the stress reaction becomes more intense and hampering, delaying adaptation, and making it less perfect.

The first modality of incomplete or imperfect stress reaction is the initial emotive reaction, mainly observed in young rescuers. When they are surprised by the brutal immersion into the disaster, they stay motionless, pallid, without initiative, gathering together instead of each going to his work, and repeating the same useless gestures instead of remembering and executing the useful learned actions. The reaction is, happily, very brief (some seconds) and without sequelae, and soon the young rescuer masters his own exaggerated stress and begins his normal work.

The second modality of imperfect stress reaction is the splitting (or "cleavage") process. It happens following the initial emotive reaction, or as soon as the arrival on the site, or later with the accumulation of emotional stimulation, as a means for protecting the ego against the stressful aggression of the environment. The rescuer (or the manager, or the nurse) spontaneously, chooses to concentrate his mind exclusively on his technical activity and to not see or hear the environment itself. He does not mentally

perceive the intolerable spectacle of the ruins, of the corpses, or of the pain of the wounded. This attitude can be useful because it protects the rescuers against being emotionally overwhelmed and allows him to accomplish his work; but it is not the best response, because it makes the rescuer deaf to the real calls of the wounded and solitary, separated from his fellows and from his team. It also makes him automatic, doing and repeating his gestures mechanically, without possibility of modulating his action or of adjusting to the victim's needs or requests.

Many rescuers remember that they lived "as in a dream," acting "as a mechanic." Leaders remember also having ordered their plans in a subjective atmosphere of unreality. Even the physicians, when they are urgently called on the site of a disaster without preparation (and if they are not "disaster professionals"), have a tendency to act routinely by attending to only one patient, and forgetting the necessity of triage and the mission of commanding the nurses and the volunteers waiting their orders.

However, this splitting process, with its economic automatic behaviors, is a solid means for escaping from emotionally intense stress, and for ensuring the capacity for a long period of hard work without fatigue or emotional decompensation.

The archaic stress reactions

Exceptionally, in hard aggressive situations, and in fragile individuals, we can observe an archaic stress reaction, immediate or delayed, but totally maladapted. There are two models of this archaic reaction, which happen when the psychophysiological capacities of normal stress defenses are overwhelmed: one is the cataleptic posture (i.e., a total immobility of the intellect, astonishment of affectivity, and inhibition of action), the other is the agitation crisis, with uncoordinated movements, gesticulation, inefficiency, or distracted flight, alone or with a group of fugitives. So, we have seen rescuers still, dumb and dazed, the face haggard, unable to answer questions or to decide to move, who must be retired by their fellows. At the opposite pole, we see men who gestic late and shout without self-control, become dangerous to themselves, to those around them, and to the social organization.

These two extreme reactions are the survivors of philogenetic archaic reactions for salving: the prey which stays motionless for confounding with the landscape and being unseen to the predator, the animal who tries to dissuade his enemy by a demonstrative gesticulation, and the game which escapes from the hunter by flight.

These two reactions are very grave and seem psychotic because the subject has lost the clear consciousness of his status and of reality. So they can reveal or inaugurate a psychotic disease. But, in some cases, they are only short-lived psychotic-like reactions with a rapid return to clear consciousness, to autocratic and to normal behavior. Also there is a fundamental question about this archaic stress: is it a brief psychosis?

Delayed emotive reactions

The stress is expansive in mental energy. In many situations of rescue or acting in disasters, there is a permanent continuation and removing of stressing factors (e.g. view of ruins, view of corpses and hearing the calls and complaints of the victims). In permanence, the rescuer must cope with his stress and not be overwhelmed by the wave of his own emotions. During this

time, he must work in discomfort and suffer a lack of rest and sleep. So, when he receives the order for stopping the mission, it can happen that he is not ready to rest, and that he must cope with the flow of his emotions and ventilation of his accumulated tensions in an uncontrollable catharsis.

In other circumstances, this delayed emotive reaction can happen after coming back from the mission, at home and near the family. So we can see rescuers, managers, and even medical personnel who present periods of depressive prostration, crying with tears, and gestures or words of aggression. There are brief attacks, lasting a few minutes, that lead to feelings of autocracy and guilt. They are more frequent in situations of hard operations, and they are facilitated by a group's conflicts and by the feeling of insufficiency and failure of the mission. Although even spectacular, they are always short-lived and without psychic sequelae.

The psycho-traumatic neurosis

The (psycho)-traumatic neurosis is a late and chronic neurotic state that sets in when the psychological trauma has not been abreacted early and has been sufficiently strong to durably mark the mind.

The traumatic neurosis is one modality of the P.T.S.D. Its clinical profile is defined by a latency period of some days o. some weeks ("meditation" or "rumination time" of Charcot) during which the mind ruminates on the traumatic experience using a specific neurotic semiology, that is the repetition syndrome (in nightmares, flash-backs, mental ruminations, and startle reactions) in which the individual tries without success to obtain catharsis, and by a typical regression of the personality, is blocked in its three functions (filtering stimuli, showing interest in the world, and loving others). The DSM III and DSM III-R profiles of P.T.S.D. mention all these criteria, but classed in another category that loses the "structure" of the neurosis, that is a new organization of the personality, which generates and perpetuates a specific semiology.

Rescuers who suffer delayed chronic P.T.S.D. or traumatic neuroses can be detected during their latency phase (they remain alone, silent, and depressed), and in the first manifestations of the repetition syndrome (they complain of startle responses and nightmares). If they are not helped early in an efficient medically controlled abreaction, they can evolve toward a true confirmed traumatic neurosis.

Anybody can develop a traumatic neurosis, if the trauma is strong and if the circumstances are very stressful, but it happens more easily if the trauma is personally significant and if the personality is fragile, with a neurotic predisposition. We must distinguish the "predisposition of a neurotic style of response, that is qualitative, from the "vulnerability" by expending the reserve of energy necessary for coping with the trauma, that is quantitative.

There is no statistical data about traumatic neuroses in rescuers. Many rescuers cope with their neuroses without asking for medical help, and many uncomfortable remembrances of the disaster are considered normal by the rescuer, but are perhaps light traumatic neuroses or chronic P.T.S.D.

Neurotic or psychotic pathological responses

It might happen that neurotic, or psychotic, or border-line personalities are included in teams of rescuers or are fortunately recruited for rescue work. They could silently adapt themselves to the situation although their reliability is problematic, but they also could express their stress according to their pathological personality, or decompensate from their precarious equilibrium in a pathological psychotic or neurotic episode.

We see anxious personalities with panic attacks (more often in awaiting the event than when they have only to execute orders after the event has occurred), phobic personalities with phobic anxiety when significant signals occur (view of corpses, smell of dust, sound of ambulance sirens) and behaviors of avoidance and reassurance, and hysterical personalities with spectacular demonstrations of emotion, conversions, dreamy states, depersonalization, fugue, and, mainly, an insatiable need of catching the other's attention and concern, while in the meantime victims really need this solicitude.

Especially in rescuers, the psychotic personality could decompensate in a manic or melancholic episode, or in a delusional or schizophrenic state where the "interior seism" echoes the exterior disaster. More often, some rescuers or medical team members (border-line personalities) are difficult to integrate into groups and to work efficiently with their fellows. Also, paranoid personalities in managers do not allow the best organization for a rescue.

ETIOPATHOGENESIS

Many papers have been written about the etiological factors of stress in disasters, comparable to the stress factors in combat. However, the situation is not the same for rescuers as for victims, and not exactly the same for the leaders, the rescuers, and the medical personnel.

We can retain the principles of a tripartite model of stress (Jones), associating physical, psychic, and social factors.

As physical factors, we can mention the warm or cold environment, the rusticity of camping in "military conditions," the noise, the dust, the rain, and the fatigue with lack of rest and lack of sleep.

The psychological factors are more important. They are the "immersion" into the site, with the view of ruins and corpses (mutilated adults and children's corpses) that provoke a strong emotional shock, and a feeling of unreality or transplantation into another world, where the human activity is stopped, the human landscape destroyed, and where the only human expressivity is to cry and beg for help or care,

The social factors are the loneliness with the imperious obligation to decide and to act (for the manager), the loneliness in a lesser degree for the rescuers and the medical personnel which are integrated in groups but must cope with the group's tension and conflicts. Even in a group, the individuals are relatively alone with the task that is always greater than the means at their disposal.

All these factors are differently combined according to the successive phases of the mission, and give rise to different feelings and psychological defenses.

1. The preparation phase, with its uncertainty, its expectations, its excitement of preparation, its orders and counter-orders, produces a feeling of apprehension of not being able to accomplish the mission and of insecurity at separating from home and family.

2. The starting and transport phase continues and exacerbates this feeling of apprehension, with the possibility of mental ruminations during the long flight in a plane.

3. The arrival phase is also the phase of uncomfortable installation and appearance of disorganization, a source of deception. Some rescuers think that they should be better received by the local authorities and the local population and they feel disappointment.

All these factors can undermine the rescuer's moral and impair his future efficiency. For instance, the "dog handler" is very concerned for the comfort of his dog, and the conditions that influence the dog's efficiency. On one mission, there was only soda for dogs to drink; in another one, the organizer of the installation had the idea to gather all the dogs and their masters under the same tent, that provoked noisy conflicts between the dogs! Both situations affected morale and efficiency.

4. The mission phase begins with the emotional shock of immersion into the site, with the discovery of ruins, corpses, and those suffering from injuries. The rescuer feels intensively the brutal realization of omnipresent death, of the sudden suspension in the society's life, and of human unhappiness. It is for him the breakdown of his profound narcissism and an intense feeling of discouragement, in the face of the immense task to accomplish with inadequate derisive means.

During the execution of the mission, all these stressors are continually renewed. An exhausting, continuous stress is maintained. We have seen that some rescuers are inhibited by this stress, and that others cope by a process of splitting between concentrating on their mechanical activity and mentally refusing to perceive the aggressive environment. Moreover, in all cases, there is progressive increase of fatigue and anxious tension.

The initial emotional shock can be grave in the case of the manager whose inhibition can lead to the absence of decisions and whose emotional turmoil can produce inappropriate or dangerous decisions. We have seen a case where the manager, because he could not endure viewing the wounded, interfered in the mission of the medical personnel, and ordered the evacuation of the wounded before triage.

5. The coming back phase is rarely a phase of satisfaction. The order of "end of mission" exacerbates the feeling of insufficiency and failure. Rescuers think that many victims are still prisoners under the ruins; the local population think so too, hope that their loved ones can be saved, and implore the rescuers to continue their work. All that provokes an acute conflict of consciousness in the rescuer.

With the cessation of the physical effort and of the focused attention on the task, the emotional tension which was restrained and delayed comes back brutally and gives rise to emotive delayed reactions or true abreactions. These reactions are useful and help rescuers avoid chronic emotional complications, but, in many cases, the rescuer feels only an intense sensation of fatigue -- physical, psychical, and moral-- a feeling of dissatisfaction and remorse because of his insufficient efficacy.

During the long wait before coming back and the long time of travel, the rescuer tends to relive in lonely thoughts all these depressive and guilty elements.

6. The after mission phase should be a phase of rest and relief, but, to the contrary, most of the rescuers desire to withdraw alone, to not speak to anyone, even their families, and feel themselves strained, irritable and depressed. They cannot remove their minds from the recollections of the disaster and from the interrogations about the injured that they have sent to the hospital. They tell others to "leave me alone;" they walk alone in the country; they isolate themselves for listening to music; they show reluctance to write their reports; and they suffer difficulty in falling asleep, often having nightmares; they have anxious chest pain, gastrointestinal pain, precordialgic pain, and loss of appetite. They feel a general impression of disappointment, bitterness, and dissatisfaction with themselves, their fellows, their chief, and the efficiency of the mission.

PREVENTION AND TREATMENT

Must we require a psychological selection for the rescue personnel: leaders, rescuers, and medical personnel?

1. Selection. Negative selection, that consists of detecting and eliminating the mentally unfit or fragile personalities, should be useful. It is necessary in the case of acknowledged mental patients, who can feel a pathological motivation for these posts, but risk aggravating their own mental state on the ground and the emotional state of the victims and risk provoking tension in the teams of rescuers and social perturbation in the rescuer's organization. In practice, this negative selection has been made in the recruitment of the professional rescuers, but it has not been made for the volunteers and helpers which flow in disasters and can be used singly or integrated into teams. We have known some such cases of hysterical or borderline personalities, or psychopathic ones, who have shown themselves useless and a cause of perturbation.

Negative selection has its limits. It can be applied to the explicitly pathological individuals but cannot detect the individuals who are only emotive and can adapt themselves to the routine situations but decompensate in urgent situations. There are always, in the mass of the rescuers, state employees, medical team members, and even the managers, such fragile emotive personalities which unforeseeably manifest themselves in such exceptionally difficult situations.

Moreover could be foreseen the question of the positive selection of rescuers, that is, establishing requirements for special capacities or a special level of capacity, in accordance with the expected profile of the mission. Such dispositions are effective in the armed forces, for some

special posts or commands; but can you recognize, in a non utopian world, such a "positive selection" for all the rescuers, the medical team members, and the managers? In the case of the managers, particularly, we risk a veto from the authorities, who have a concept less "psychological" of the manager profile.

2. Character building and training. The technical character building for personnel, at all levels, must be completed by psychological and a psycho-sociological evaluations and training. They must be informed about the different stress reactions in victims, and about the psychological attitude to adopt in each of them. For instance, they must know that the somatic cares have a beneficial psychological effect if they are given with explication and without bluntness or precipitation; for instance, they must know that the victim feels the imperious need of speaking, as soon as he realizes he is alive, and to speak to the person who has saved him, and that we must lead the victim to speak as a useful catharsis, and do not order him to shut up if his words disturb us.

The rescuers must be informed about the different modalities of their own stress, and about the usefulness of recognizing and analyzing it, in order to cope with it and not to suffer from it. Eventually, rescue personnel should be trained in the techniques of mastering the emotive reactions and stress reactions (relaxation, respiration, etc.), but, the mere insight of recognizing the stress is already the beginning of self-control.

Finally, they must be informed about the normal social phenomena in groups and especially in groups working in exceptional situations (tensions, conflicts, and accepted or unaccepted leaderships), and about the obligation of keeping the group's cohesion and respecting its discipline.

This information must be kept in mind during practical exercises and in special exercises during realistic conditions, and repeated until a rational decision can lead to the immediate reflex of choosing immediately the well learned response (from the brain to the leg's or arm's memory).

3. Briefing before the mission. The briefing before the mission is habitually a technical briefing, informing the chosen personnel about the disaster, the site, and the particulars that result for their work. However, we must obtain from the managers and leaders that this briefing will also be a psychological and psycho-social briefing. Each member of the team must remember the eventuality of stress in the victims, and the consequences of his own stress, and how to cope. Each member of the team must also be advised about the risk of tension in the group and about the absolute requirement for discipline.

This psycho-social briefing before the mission is particularly important when the teams chosen are not preformed but spontaneously constituted as new groups and when new members are integrated into established groups.

4. Psychological support during the mission. It would be a good idea to include a psychiatrist or a psychologist in all the missions to provide psychological help to the victims as well as for the psychological support of the teams, for this idea is not yet understood as a necessity in the minds of the managers. However, in great disasters, the use of psychiatrists is foreseen for the triage of the "psychic casualties," for the urgent treatment of the agitated or psychically shocked victims, and for the prevention and the

reduction of collective panic.

Also, until now, the psychiatrist has been the physician of the rescue team who must assure the psychological support of his fellows as a supplementary task of his principal task of triage and care of the victims. He will listen to the complaints of the rescuers, in confidence their dissatisfactions, and he will facilitate the expression of their thoughts in order to channel their abreactions.

5. Psychological debriefing after the mission. Must we organize a special psychological procedure after the mission? The frequency of P.T.S.D. and psychological discomfort in rescuers when coming back from the mission could justify this disposition. Until now, this psychological debriefing has been made haphazardly by the physician of the team during the technical debriefing conducted by the chief of the mission or by the manager. Also, at the minimum, the physician must be advised by the psychiatrist on the aims of this psychological part of the whole debriefing:

- to attenuate the feeling of failure of the mission
- to allow the mastering of stress by verbal objectification and controlled abreactions,
- to produce in each one the insight that his own emotional reactions were the same in his fellows (i.e. normal reactions)
- to establish the "conclusion" of the event which has no more reason to be a seed of mental rumination
- to liquidate and resolve the group's tensions and conflicts and restore the group's cohesion.
- to detect and evaluate the subjects who are more stressed than others and see them again in clinical interviews or send them to the psychiatrist for a short inductive psychotherapy.

THE END OF FLIGHT SIMULATION

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It is widely accepted that the occurrence of a major emergency can generate stresses for the rescue personnel so that in responding to the event they too can become victims. Some of the stresses arise from the demands placed upon personnel who must coordinate and control the response to the emergency.

This paper describes the use of a simulation as a means of training personnel who will be involved in managing a response. The purpose of the simulation is twofold:

(1) To demonstrate the interrelatedness of emergency response by creating a situation in which participants can experience the problems facing other responding groups.

(2) To give participants experience of using a role-playing simulation as a method of devising and evaluating the effectiveness of a response to an aircraft emergency.

The simulation exercise is designed to give the opportunity to manage the simulation as well as participate in it. The managers work from an outline scenario to develop the simulation. They then brief the participants, run the simulation and conduct a debriefing. The participants in the simulation take the roles of airport and airline management as well as those of emergency services personnel. The roles of manager and participant are then reversed in a second exercise after which the directing staffs conduct a full debriefing.

Aviation is a safe, reliable and efficient method of transporting people and cargo around the world. Compared with other forms of transportation, flying is safe, but the current levels of safety have only been achieved by means of diligence and careful attention to detail in both the product and its operation.

The high utility of aviation has been achieved by developing aircraft which offer efficient load carrying capacity together with systems and procedures which permit reliable operations not affected by adverse weather conditions.

The consequence of these achievements is that when emergencies do occur they are likely to

(a) involve large numbers of passengers and/or exotic cargoes;

(b) occur in weather conditions which do not favour the ease of rescue operations;

(c) be accompanied by dangers arising from the presence of toxic, radioactive and highly inflammable substances which form component parts of the aircraft;

(d) have a coupled and interactive affect upon other par of the aviation system.

An emergency may arise as the result of an incident or an accident. These two events differ in their severity. Nevertheless, each will cause the mobilisation of the emergency services and test their ability to respond effectively to the situation which arises.

Should the emergency result from an accident it will amplify the effect in the following ways:

(a) The impact will be more extensive as added resources are involved in the response.

(b) The implications of the emergency will extend outwards as legislators, the media and the community at large become drawn into the processes.

(c) The impact of the emergency will be longer lasting. This latter may be seen in two ways:

(1) The administrative ramifications of the emergency will show themselves in terms of investigations and possible legal actions.

(2) The psychological sequelae will show in terms of the increase in those persons who qualify as victims of the emergency and who are likely to suffer the aftereffects of exposure to the emergency.

THE SPECTRUM OF INVOLVEMENT IN EMERGENCY RESPONSE

The Airport Services Manual, Part 7: Airport Emergency Planning, published by the International Civil Aviation Organisation, states:

> The object of airport emergency planning is to minimise the effects of an emergency, particularly in respect to the saving of lives and maintaining aircraft operations.
>
> Each airport/community has individual needs and peculiarities, but, in spite of the political, jurisdictional and agency differences, the basic needs and concepts of emergency planning and drills will be much the same and involve the same major problem areas: COMMAND, COMMUNICATION and COORDINATION.

One crucial aspect of emergency management is that it requires a command and control structure which can be quickly and effectively superimposed upon normal functions in order to coordinate disparate and previously semi-autonomous resources. Rescue organisations may have to abandon some of their own normal structure in order to work for a common goal (Rolfe & Taylor, 1989).

The range of agencies which will be brought together by an aircraft emergency may be appreciated by looking at the pattern of response that is followed if the incident or accident occurs on or near an airport.

The first agency to be aware of the situation will be the air traffic control (ATC) services. As well as taking their own actions, ATC must alert other agencies involved in the emergency. These will include the rescue and fire services, police and security services, airport authority, aircraft operators, medical services, hospitals, government authorities and information officers.

While the various members of the emergency organisation are working in conjunction, they may be simultaneously having to attempt to satisfy more than one objective.

The following examples will demonstrate the point:

THE POLICE - In an emergency the police will be expected to take firm control in order to ensure access for the emergency services and protection of the accident site. At the same time it will be the police who set up and man the casualty bureau which must handle calls from concerned relatives. In this role sympathy, care, tact and understanding must be a primary requirement.

AIRPORT MANAGEMENT - While the first objective will be to deploy efforts to ensure the safety of the aircraft involved in the emergency, the management will also be keeping in mind the possible effects of any outcome on the subsequent operation of the airport.

AIRCRAFT OPERATOR - In the event of an emergency the operator must provide the emergency services with vital information about the aircraft and be ready to take responsibility for the care of uninjured survivors. At the same time the operator will have to be giving attention to the potential impact of the loss of an aircraft on the airline's schedules and operating commitments.

There is nothing inappropriate about any of these goals. But what is essential is that other members of the emergency organisation are aware of them and able to recognize their relatedness. For example, the police and the aircraft operator must see the need to work together when handling enquiries from next-of-kin. The airport management and the aircraft operator must explore together the implications of diverting the aircraft. When the full number of organisations involved in the operation is taken into account, it becomes very important that a great deal of talking and planning go on in order to formulate an effective and comprehensive emergency response plan.

A second feature engendered by the emergency is that of exposing members of the emergency services to stress. McGrath (1970) defined stress as

"A substantial imbalance between environmental demands and the response capability of the focal organism."

A key element of this definition in this context is the occurrence of events which are significantly more severe than those normally experienced by the individual or group and for which they may be mentally and physically unprepared. Therefore, some elements of the stress experienced by personnel responding to a disaster may arise from role conflict, role ambiguity and role intensification.

Training in anticipation of an emergency should satisfy two requirements. It should provide the opportunity for responding personnel to acquire appropriate skills. Secondly, it should expose personnel to the role stresses of emergency management and help them to "do the work of worrying" in advance of an emergency.

THE SIMULATION

The exercise was devised for students attending the Post Crash Management Course at Cranfield Institute of Technology. Students in the course come from a wide variety of professions and locations. Some will have extensive experience responding to emergencies, and others will not. Consequently a common baseline for the exercise had to be established. The procedures set out in the ICAO Manual met this requirement by fulfilling two functions: acting as an operations manual for the participants and providing criteria against which to assess response to the simulated emergency.

Management simulations can be enhanced in value if they can also be used to give operating staffs insight into the problems and requirements of exercise planning, operation, and analysis. In order to achieve this objective the students in the Cranfield course are given the opportunity to manage the simulations as well as participate in them. Consequently the purpose of the simulation is twofold:

(1) To demonstrate the interrelatedness of emergency response by creating a situation in which participants can experience the problems faced by other responding groups.

(2) To give participants experience of using a role playing simulation as a method of devising and evaluating the effectiveness of a response to an aircraft emergency.

In the simulation the various agencies responding to the emergency may be represented at two levels: generating the simulation (THE OPERATORS) and responding as part of the simulation (THE PARTICIPANTS). The operators are responsible for managing the simulation. The participants will be enclosed by the operators as they represent elements of the emergency situation which are above and below the level of operations at which the simulation is located. Additionally the operators will have the task of representing other parties who may become a part of the emergency (e.g., the media, next-of-kin, welfare organisations and politicians).

When the simulation is used at Cranfield, students are divided into two groups each taking the roles of operators and participants in two exercise scenarios. The scenarios differ in content and context in order to demonstrate the effect upon the response required from those dealing with the emergency. The main variables manipulated are whether

the aircraft is arriving or departing
the crash occurs on or off the airfield
the crash is during the day or at night
there are survivors.

A representative scenario is summarised as follows:

The simulation commences at sunset which is 1900. At 1905 a Southdown Airways aircraft, carrying 112 passengers, returning to Luton Airport from Munich, declares an emergency with an undercarriage problem. After being held while an attempt is made to solve the problem, the aircraft is diverted to Cranfield. It lands at 1935. On touchdown, it leaves the runway and slides into the airfield boundary adjacent to the village of Cranfield. There is no major fire and a satisfactory evacuation occurs. There are some injuries to passengers and crew. Rescue teams encounter problems locating and marshalling the passengers, and some are unaccounted for until it is recognized that they have been taken into homes in the village. A fuel leak from the aircraft is discovered to be contaminating a stream flowing through the village. As next-of-kin move to Cranfield, additional problems develop. These are not helped by the presence of the media and by a request from customs and immigration officials that all passengers be held until clearance procedures are completed.

The duration of the simulation scenario is two hours but this time is extended by preparation, briefing, and debriefing sessions. Normally the exercise is run in a number of stages throughout the week of the course at Cranfield. The preparation and debriefing stages are two-level procedures. In the first, the directors of the simulation will prepare the managers who then repeat the process for the participants. In the debriefing stage there is first an in-simulation debrief carried out by the managers. This is followed by a debrief on the total exercise carried out by the directors.

Typical roles that will be represented by the participating group are the

Duty airport managers at Cranfield and Luton
Duty operations officer Southdown Airways
Duty air traffic controller Cranfield
Police officer I/C emergency control room
Fire and ambulance officers at emergency control room
Control room log keeper
Incident information officer.

Managing group will contain

an exercise director
a Prompter
role players (e.g., ATC, rescuers at the crash site, media, etc.)
observers.

All the participants receive detailed information about their roles and the resources they have available to them. The managing group is provided with a detailed scenario for the emergency and guidelines for preparing, running, and debriefing the simulation. In particular they are instructed to

(a) Read through the scenario and note the sequence of events, their location and the time of the key occurrences.

(b) Decide if any additional information, events or inputs are needed in order to make the scenario more comprehensible.

(c) List the essential actions that have to be taken by the managers of the simulation in order to sustain the pattern of events that make up the simulation.

(d) Make a list of the essential actions that should be taken by the participants as part of the disaster management plan. For each action record,

(1) Who should initiate it, in response to what input, and to whom the action should be directed.

(2) Having taken the action what response will be made by the managers of the simulation. For example the number of rescue vehicles that will be available to go to the accident and the time intervals before they arrive.

(e) Prepare a briefing for the participants. The briefing must cover

(1) the form and purpose of the simulation, what it does and does not seek to achieve,

(2) how the exercise will be operated- an outline the roles to be taken by the managing group and the means by which the simulation will operate,

(3) the situation the participants encounter as they come on duty at the beginning of the exercise.

Guidance is also given on debriefing. The managers are encouraged to recognise that it is necessary for both sides to tell the other what they have learned from the simulation.

The debriefing must remain part of the simulation and not become an appraisal on the merits of the method of running the exercise. One very effective way of doing this is to go through the exercise event by event, using the detailed scenario, eliciting the participants' reactions.

A second approach to debriefing is to get the participants to outline the actions they saw as necessary in the hour following the end of the simulation. How well prepared were they to cope with these subsequent events? This "extension appraisal" can be used as a subtle way of leading into a debrief with a group who resist the idea of having their performance examined at all.

EXPERIENCE WITH THE SIMULATION

The simulation has been used for three years at Cranfield. In the context of the Post Crash Management Course it has provided students with the opportunity to explore different methods of operating a training exercise of this nature and proved a very effective vehicle for demonstrating a number of important points relating to dynamic training of this kind. The first has been the need to allow adequate time for exercise preparation and debriefing. The second is the importance of keeping effective records of events during the simulation - a lesson learned by managers and participants alike. A third has been the danger of oversophistication when planning the simulation. The students taking part in the simulation are provided with a variety of communications aids (e.g. telephones, intercoms etc.). They also have a range of rooms available which can be set up to represent control rooms and offices. While they are encouraged to use these facilities, it is explained to them that simulation can be run as an "across the table" information passing exercise.

The simulation has also been used away from Cranfield in order to exercise the resources of an airport and local authority. In this application the actual emergency control room which would be activated in an emergency was used, and two scenarios specific to the location were derived. A number of lessons were learned about the effectiveness of emergency procedures and the debriefing session provided an opportunity for members of different elements of the emergency services to question each other and comment upon procedures (Peebles, 1989). One outcome of the debriefing was a proposal that a full exercise based on the simulation should take place to test the reliability of the response to the emergency encountered in the simulation.

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Note: The views expressed in this paper are those of the author and do not necessarily represent those of the Ministry of Defence.

STRESS AND STRESS MANAGEMENT IN THE ROYAL NETHERLANDS ARMY: PLANNING, ORGANIZATION, TRAINING

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The RNLA comprises around 50,000 soldiers, two-thirds of whom are conscripts. In wartime this number increases well over three times. Education and training thus require a very great deal of of energy and work, since two-thirds of the army is entirely replaced once every one to two years. The First (and only) Netherlands Army Corps has its field of operations in Northern Germany, an area 300 to 600 kilometers removed from the peacetime locations in the Netherlands. Moreover, the RNLA has an entire armoured brigade permanently stationed in West Germany.

Individual psychological support and psychotherapy in the Royal Netherlands Army

In the early 1970s, the army welfare bodies in existence at the time, the medical service, the social services section, and the chaplaincy services, were increasingly being confronted with the problems of army personnel.

Until then the overall extent of these problems had never been fully realized. However, in 1974, the Director of Personnel of the Royal Netherlands Army requested the Behavioural Sciences Department of his Directorate to carry out a study into the causes of dysfunctioning in the RNLA; the mandate included the establishment and testing of a psychological support structure.

The results of the study led to the conclusion that, in addition to taking general measures to improve living and working conditions within the Army, it was also necessary to give special attention to finding a suitable psychological support structure.

The system established is based on the Social Coordination Committees (SCCs) functioning at battalion and equivalent level, known as the first echelon of psychological support.

The second echelon consists of the Psychotherapy Section (SIH), composed of a staff group, and four regional Psychotherapy Bureaus (BIHs), three of them in the Netherlands, and one in West Germany.

The third echelon (psychodiagnostics and psychotherapy) consists of the SIH-staff, who coordinate the work of the bureaus.

Social Coordination Committees

The Social Coordination Committee (SCC) is a collaborative body which is active in medical, spiritual and social fields. The Committee plays a central role in the psychological support structure.

The SCC comprises
- a personnel officer in the unit (SI)
- unit chaplains and spiritual/humanist counselors
- an army doctor in attendance
- a unit social worker/social work officer

The SCC has an open structure; that is, it is possible to consult other officials, for example in the field of personnel work such as welfare officers, accommodation officers, psychological support bureau personnel and so on.

The SCC has the following duties:

1. Coordination
   Coordination of the support services offered to military personnel.
2. Individual support
   Providing help for personnel who request it (clients). where problems are not limited to one type of support or service.
3. Prevention
   Identifying the development of personnel problems at as early a stage as possible and attempting to prevent real problems by advising the commander.
4. Advice
   Advising the commanding officer on
   - personnel care in general
   - support for personnel with problems at work or socially
   - measures to alleviate or solve personnel problems
   - structural measures to prevent personnel problems or alleviate or solve existing problems.
5. Referral
   Referring clients to a psychological support bureau, if this is necessary and the client concurs.

The Psychotherapy Bureau

The Psychotherapy Bureau (BIH) is a multidisciplinary collaborative body which is active in medical, psychological, spiritual and social fields. It comprises:

- A lieutenant-colonel with the Military Psychological Service, who is a clinical psychologist, head of the BIH, and a qualified psychotherapist; 2 conscript ensigns/second lieutenants, who are clinical psychologists with training in psychotherapy;
- two social workers with supplementary training;
- a regular or conscript doctor with interest in, or training in psychotherapy.

On a part-time basis, there are also:

- a Humanist counselor from the BIH region;
- a Roman Catholic chaplain from the BIH region;
- a Protestant chaplain from the BIH region.

BIHs have clerical or administrative personnel as well.

The BIH has the following duties:

1. Coordination
   Coordinating individual support in a multidisciplinary context at the first echelon in the region.
2. Psychological support
   Providing psychotherapy, conducting interviews to place problems in a framework and discussions providing insight (counseling).
3. Guidance
   Giving support, where necessary, to the SCCs in the region by supervising and advising the SCC in the discharge of its duties, especially at its meetings.
4. Advice
   Giving advice to commanders in the region on
   - measures to solve personnel problems
   - measures to solve structural problems which give rise to personnel problems.
5. Notification
   Notifying the head of the SIH of problem areas of a structural kind.
6. Referral
   Referring clients to the SIH staff if this is necessary and the client concurs.
   Referring clients to the Military Hospital via the attending army doctor.
   Advising the doctor or social service on referral of a client to other institutions.
7. Compiling research data
   Gathering data for research purposes or policy recommendations.

The SIH Staff Group

The Psychotherapy Section (SIH) is assigned to the Deputy Director of Personnel of the Directorate of Personnel (DPKL) RNLA. The section comprises

- a lieutenant-colonel with the Military Psychological Service, who is a clinical psychologist, head of the SIH and a psychotherapist;
- a second lieutenant, who is a clinical psychologist, diagnostician, with training in psychotherapy;
- three conscript ensigns/second lieutenants, who are clinical psychologists with training in psychotherapy;
- a major, assigned for general duties, who is, if possible, a group therapist;
- a warrant officer, for general duties, test and clerical work; a clerical assistant to assist with testing; and
- a research psychologist.

The SIH has the following duties:

1. Coordinating the psychological support services at the second echelon level.
2. Supervising the work of the BIHs.
3. Providing support to clients not treated by a BIH.
4. Providing more specialized psychotherapeutic help to individual clients. Examples are specific behaviour therapies, group training in social skills (assertiveness training) and treatment of traumas (Lebanon).
5. Carrying out psychodiagnostic examinations, insofar as this is necessary for treatment or advisory purposes. This is partly to assist the BIHs.

6. Carrying out job suitability studies where necessary for treatment or advisory purposes.
7. Upon request, making recommendations in criminal cases by investigating whether the person concerned would benefit from treatment and the influence which the criminal law process may have on the therapeutic process.
8. Advising the DPKL and the Commander-in-Chief RNLA on personnel matters.
9. Where necessary, generalizing from personnel problems to possible structural problems within the RNLA and then advising the relevant policy making and other officials.
10. Compiling and processing data for scientific research and carrying out such research for psychological support purposes and policy recommendations.
11. The scientific supervision of psychotherapy and other forms of therapy, especially the updating of the necessary information and documentation.
12. Advancing the expertise of the BIH therapists and of the SIH staff.
13. Developing the wartime task of the SIH and providing the necessary training for this.
14. Advising the Directorate of Conscript Personnel as to which conscripts should be exempted from military service.

The Individual Psychotherapy Sector has become an integral part of the army. About 4000 clients visit the bureau or section each year. Quite some effort is put into

- providing information to the different army levels' policy preparation for
- anti-alcohol policy
- reducing problems connected with ethnic minorities
- developing working procedures for wartime conditions and accompanying training.
- training of SIH staff and the staff of other support services in psychotherapeutic techniques such as relaxation, hypnotherapy, social skills training.
- research into psychodiagnostic instruments, such as computer aided testing.
- developing screening procedures for the selection of personnel for the expeditionary forces in Germany.
- crisis intervention.

RNLA study on the human implications of modern warfare

Modern combat will make heavy demands on future soldiers, requiring a great deal of attention to combat stress reactions in planning. This is one of the reasons why the human element is often referred to as a limiting factor, certainly in the case of combat which will require round-the-clock or continuous operations. Four reports on this subject are published by the RNLA Behavioural Sciences Division.

Psychological selection of personnel for modern warfare.

The report presents the findings of a literature survey carried out as part of the study entitled "Human implications of modern warfare". Data are given on the key psychological characteristics required by military personnel in modern warfare and how they can be selected accordingly. Modern warfare involves round-the-clock operations. an NBC threat, the use of advanced materiel and a high level of mobility.

Physical stimuli such as cold, noise and heat make military duties more onerous. Heavy demands are made on military personnel. They must possess many psychological characteristics to continue to function in modern combat situations. In the report, these psychological characteristics are subdivided into three categories: personality traits, intellectual characteristics and psychological functions.

Military personnel should suffer the least possible permanent psychological damage resulting from events on the battlefield. The personality trait of being proof against stress (coping) and emotionally stable is required if one is to continue to function adequately despite the many stressful aspects of combat.

Modern warfare demands a person's utmost, keen motivation to perform and enormous self-confidence. Commanders set the example. They have to display initiative. Leaders who do not dare or want to take the lead are basically unsuited to their jobs. They must be prepared to be leaders. Rapidly changing combat conditions require frequent exchanges of information with others. Since emotions also play a role, sound social skills are a prerequisite. Commanders must possess the following intellectual characteristics: capacity to solve problems, creativity, verbal skills, the ability to reflect, and field independence. Practical and technical insight are equally necessary. Military personnel must be able to apply the knowledge gained during military training in the course of modern warfare. Thus they must have good memories. The ability to respond rapidly to stimuli is important in dangerous situations where immediate action is a matter of life and death. Other psychological characteristics which are relevant in combat conditions are the ability to cope with more than one item of information at once and to be selective in one's attention.

In selecting personnel who have the aforementioned psychological characteristics the methods adopted must meet a number of scientific criteria, including those of reliability and validity. The methods have to be reliable so as to produce comparable results with repeated assessment using a particular test. Moreover the method must have predictive validity, allowing for a sound forecast of later behaviour on the basis of test scores. The report goes into detail on the psychological tests available for establishing the characteristics indicated. For a number of them no tests are as yet available, making selection impossible for the time being. Further research needs to be done.

In peacetime it is impossible to investigate the predictive value of each of the psychological tests referred to in the report in terms of combat behaviour. An alternative is to relate the scores in the tests to behaviour during military exercises.

Combat stress and combat stress management.

The report defines stress and combat stress in terms of military performance. Combat stress has resulted in the past in a considerable reduction in the fighting force. The report indicates the factors which are generally connected with stress and the steps that can be taken to minimize the effects. Combat stress is a normal reaction to an abnormal situation and has a detrimental influence on the performance of a number of tasks. Ways of reducing the number of victims of battle stress and fatigue are suggested on the basis of factors which play a role in their occurrence. Possible methods are training in stress control techniques, training of cadre, matching the person to the job and rapid and effective treatment at a location which is adapted to the nature of the problems. The report describes stress management programs used in other armed forces. One of the conclusions is that it is vital for military personnel to be taught ways of dealing with stress which will enable them to continue to function effectively during and after combat.

The report proposes that more publicity be given to the problem and that units be created to treat combat stress victims in the field. The main principles underlying the study are based on the Lazarus stress definition: "Stress occurs when individuals are confronted by demands which (threaten to) exceed their capabilities." The appraisal concept advocated by Lazarus is of major importance here and automatically leads to a number of practical suggestions for the prevention or reduction of stress: experience, training, and having information at one's disposal, all three being the responsibility of the commander.

One of the principles adhered to in the study is that combat stress should be regarded as an entirely normal, non-pathological reaction, all personnel being exposed to it during combat to a greater or lesser degree. Recognizing it as a normal reaction appears to be one of the ways of alleviating the problem. This means that in each unit, of whatever size, stress management will have to be put into practice by the soldiers themselves, their buddies, and by their direct superiors. In this context psychological support is the keyword.

Only in the event of the above failing to produce results will experts be summoned. Psychotherapy in the majority of cases will be very basic and of short duration (have a good cry and have a good sleep). It will have to be provided at short notice and as near to the original unit as possible, in line with the familiar principles of proximity, immediacy and expectancy formulated by Salmon in 1917.

Psychological casualties will therefore have to be treated differently from the physically wounded. Moreover, when one takes into account that social or psychological support can be regarded as a stress-reducing factor, the victims of combat stress should ideally be returned to their duties with their original unit as soon as possible.

Round-the-clock operations and sleep management.

The report examines the function of sleep and the effect of lack of sleep on people in general and military personnel in particular. Partial and complete sleep deprivation generally result in a deterioration in performance. Reduced performance is task dependent. Experiments are reported in which lack of sleep occurs under different conditions. Ways of preventing and restricting the effects of lack of sleep are also treated. The conclusion is that it is

worthwhile planning periods of sleep, taking particular account of circadian rhythms. A minimum of three hours sleep every 24 hours is necessary for a person to continue to function effectively over a longer period, but every short nap helps. Ideas are put forward for an ideal shift schedule. Methods are proposed to confine the repercussions of lack of sleep. Training in basic skills in peacetime reduces deterioration in performance through lack of sleep. Disciplined sleep management is a necessity, particularly in posts which involve higher cognitive skills. Commanders have to be trained more in sleep management and the "sleep status" ought to be a standard part of situation reports.

Figure 1 gives the performance of an operator over 48 hours. The height of the curve indicates the quality of the assignment carried out. First of all we see that performance after 48 continuous hours has dropped to below 70% - that is to say, if this were a radar screen operator he would miss three out of every 10 enemy approaches.

The performance curve shows a number of very clear dips; two approximately just after lunch (which we consequently call the post lunch dip) and two fairly serious ones, late at night or in the early hours of the morning. We shall look at these two effects separately. First of all the dips. Figure 2 shows the readiness to perform, set out over a day, with the average at 100%. We again see the post lunch dip of a minor effect: what we are in fact seeing here are vestiges of a time when it was unwise to work during the hottest hours of the day - there is a perfectly good biological explanation for a siesta, in fact, even in our part of the world. However, the decrease in performance during this period is slight. Much more serious is the decrease in performance at around three o'clock in the morning. Then the readiness to perform is less than 30% of the average! The second phenomenon is the effect of deprivation of sleep Figure 3 represents five days continuous action of an armour unit and a mechanized infantry unit.

The overall picture is that performance, that is to say the effectiveness of the unit, drops to less than 50%; there are functions for which performance is better, but we can see that it is precisely the essential tasks which suffer most from deprivation of sleep. For the tank units target designation and tracking are most sensitive to lack of sleep. It will be clear that a tank that designates and tracks fewer than 50% of its targets will no longer be very effective, and a commander will have to think very hard about deploying an exhausted unit of this kind. The same goes for the mechanized infantry; after five days, command and control only functions for one third, so that coordinated action, which is essential with infantry, is virtually out of the question. It is the cognitive functions which suffer most -- observation, decision-making etc. -- in contrast to the motor functions such as walking, steering, etc.

Aside from the dips and the sleep deprivation, there is a third related factor that can cause problems: jet lag. The human body has its own rhythm. This circadian rhythm is run by an internal clock which, as it were, is set daily by external factors, the switch from day to night being the most important one. This is one of the causes of the problems with shift-work, repeatedly having to adjust to (unnatural) environmental factors. And when one makes a transatlantic flight into a different time zone, the internal clock has not been adjusted. Apart from the fact that one "loses", for instance 7 hours on a trip of this kind, it can be 7 days before your

biological rhythm has adjusted to local time. One is expected to be at one's best in the morning at ten o'clock, but biologically speaking the internal clock is still registering three o'clock in the middle of the night, which also represents a dip in performance. It is a phenomenon which will of course particularly affect troops from the USA, who will be operating in Western Europe.

What does sleep management imply? In the first place, it implies gaining sleep whenever this is possible and permissible. Commanders will have to set an example in this respect; something which, until now, still has to be generally accepted. Taking time out to sleep is simply "not done" in the Army, and perhaps in the Navy and Air Force, too. Commanders, especially, will be the first to suffer from lack of sleep owing to the specifically cognitive nature of their duties. Sleep management will have to be practiced! Approximately 4 hours can be considered as sufficient for an individual to be able to perform adequately for the next 24 hours. Thus it is imperative that interludes in the fighting and periods of recuperation are used to sleep, and are not exclusively spent on carrying out maintenance of materiel: people, too, need maintenance! This is especially true when new assignments have to be carried out immediately afterwards. It is clearly not beneficial to start with a sleep deficit. A number of additional and certainly no less important factors need to be borne in mind. They are a high degree of physical fitness, good morale, and a division of tasks that minimizes the effects of lack of sleep by enabling tasks to be carried out by buddy teams instead of by individuals, for instance.

Coffee, tea and tobacco would also seem to have a role to play as mild drugs. No experience has, thus far, been gained in the Netherlands with psychopharmacological drugs, such as soporifics or sleeping pills and their antidotes, stimulants, and drugs, such as melatonine, which influence the biological rhythm. These in fact are remedies which are unlikely to be used in the near future, in view of the unpredictable nature of military operations. What can be expected in the near future is a NATO guide on sleep management for commanders. The NATO countries will have to incorporate this into their own military regulations.

Ideas on sleep management and stress management are now incorporated into RNLA basic training and field exercises, but it will take some time before they are well established.

Recovery units for combat stress victims.

In any future combat, all military personnel will face the risk of combat stress. Combat stress is a normal reaction to an abnormal situation. The effects of combat stress can be confined through prevention (in peacetime) and stress management during operations. It is expected that still relatively large numbers of military personnel will be unfit for combat for shorter or longer periods as a result of combat stress. The present organization of the Royal Netherlands Army is not designed to cope with large numbers of combat stress victims.

The report proposes that combat stress recovery units (GSODs) should be formed in the combat organization of the First Army Corps (1[NL]Corps) on the basis of generally recognized principles for treating combat stress victims and, by analogy, with organizations which are already in existence in the IDF, the US Army and the army of the UK. These units should preferably operate

outside the medical organization on the basis of arguments of both a practical and fundamental kind. They should consist of personnel with a training in the behavioural sciences (Military Psychological and Social Service (MPSD) officers), of reserve personnel (psychotherapists and physicians) with the present Psychotherapy Section/Bureau (SIH/BIHs) and of Army reserve NCO sport instructors.

The relief of combat stress victims would be optimal if provided at brigade or group level in view of the theory behind the treatment described by Salmon in 1917. Thus, the GSODs should preferably be located in the rear areas of the brigades and groups, although, in view of the principles of treatment, they should also be able to operate as mobile units. The battalion aid post could serve as collection point for combat stress victims. This is where triage takes place as well. The combat stress victims in need of evacuation to the rear area could be transported via the "return line" in the empty vehicles which brought fresh troops forward.

In this way, the psychologically wounded could be kept separate from the physically wounded. In the brigade support area they would then be assured of psychotherapeutic expertise. Should prolonged treatment be required, or evacuation to the Netherlands, the victims would then be "horizontally", transferred to the medical evacuation hospital where psychiatrists and psychologists form part of the organization.

The heads of the GSODs will also be able to act as staff officers to the brigade or group commander. This would involve giving advice on stress, morale and motivation, personnel deployability, to mention but a few of the aspects involved in the framework of general personnel welfare, as one of the factors contributing to combat effectiveness.

Studies on the basis of earlier war experiences have demonstrated that 50% of battle stress victims can be deployed again within 2 days of treatment and ultimately 80% within 7 days. These measures will make a fundamental contribution to maintaining the battle strength of 1(NL)Corps, and, very recently, the Dutch Army Staff agreed to our proposals. A project we are working on now is the setting up of an organization in our Army corps such as the one I described.

Some other subjects RNLA is currently studying.

First, we are reviewing the literature to see how psychological operations (psychological warfare) affects our soldiers and how we can arm ourselves against the effects of the enemy's psychological operations through psychological defence techniques.

A second subject we are studying is group cohesion and its effect on stress and coping. Results point in the direction of techniques to increase cohesion through training (e.g., by means of competitive group sports) and of organizational measures (e.g., the personnel and materiel replenishment system in the field of logistics).

On the basis of a literature review and some field experiments we are also constructing a "morale survey' which can be applied quickly and simply to the Dutch army population. It is intended to be an instrument for army psychologists as well as commanders.

A fourth subject is our more pioneering, outward bound activities, which are intended to broaden our horizons. All regular officers and NCOs are expected to do some mountaineering, parachute jumping or scuba diving during their initial training to enable them to learn to cope with stress and, through their experience, to know how their future subordinates will feel and behave in stressful situations. This will improve soldiers' management qualities during operations.

Lastly we are carrying out research into stress during scuba diving, together with the Dutch Institute for Perception of the Netherlands Organization for Applied Scientific Research. Here we are acquiring fundamental knowledge on stress appraisal, coping etc., through physiological and performance measurements. Findings have already had a positive effect on the psychological selection of underwater army scouts.

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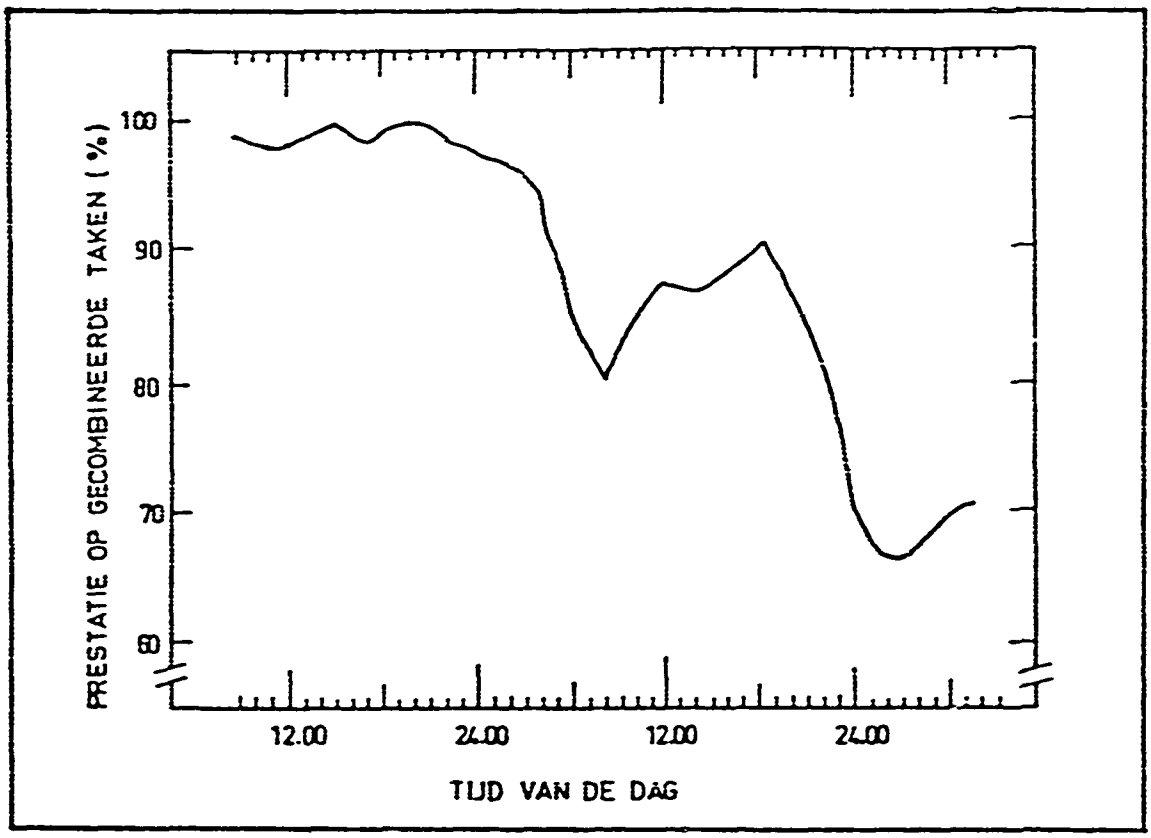
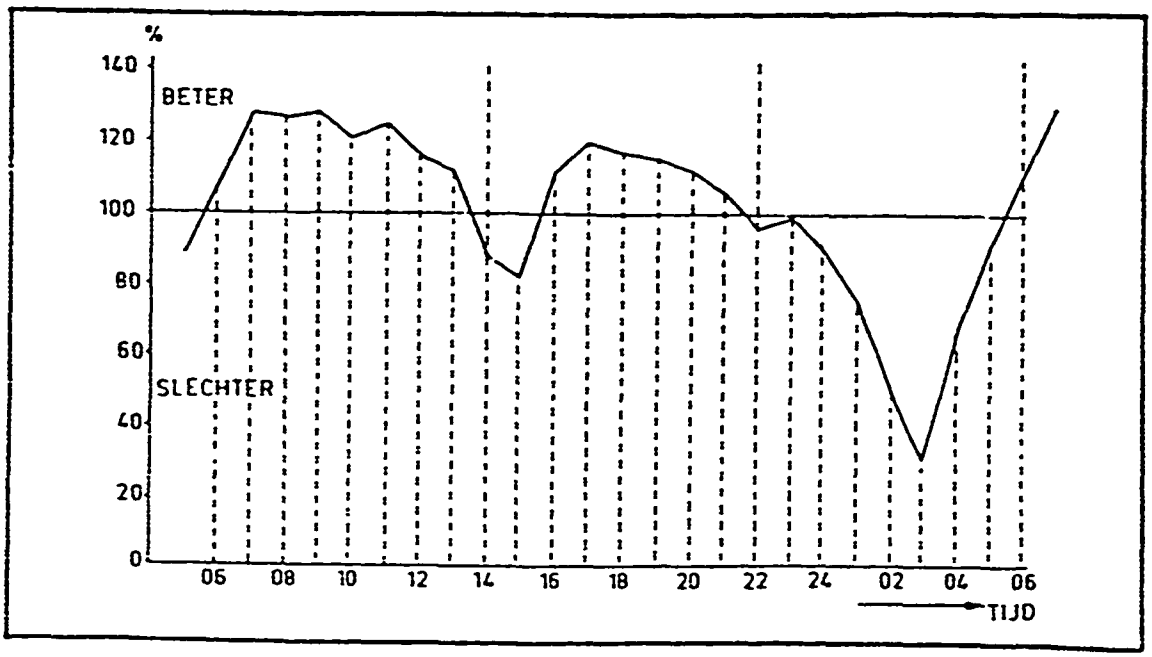


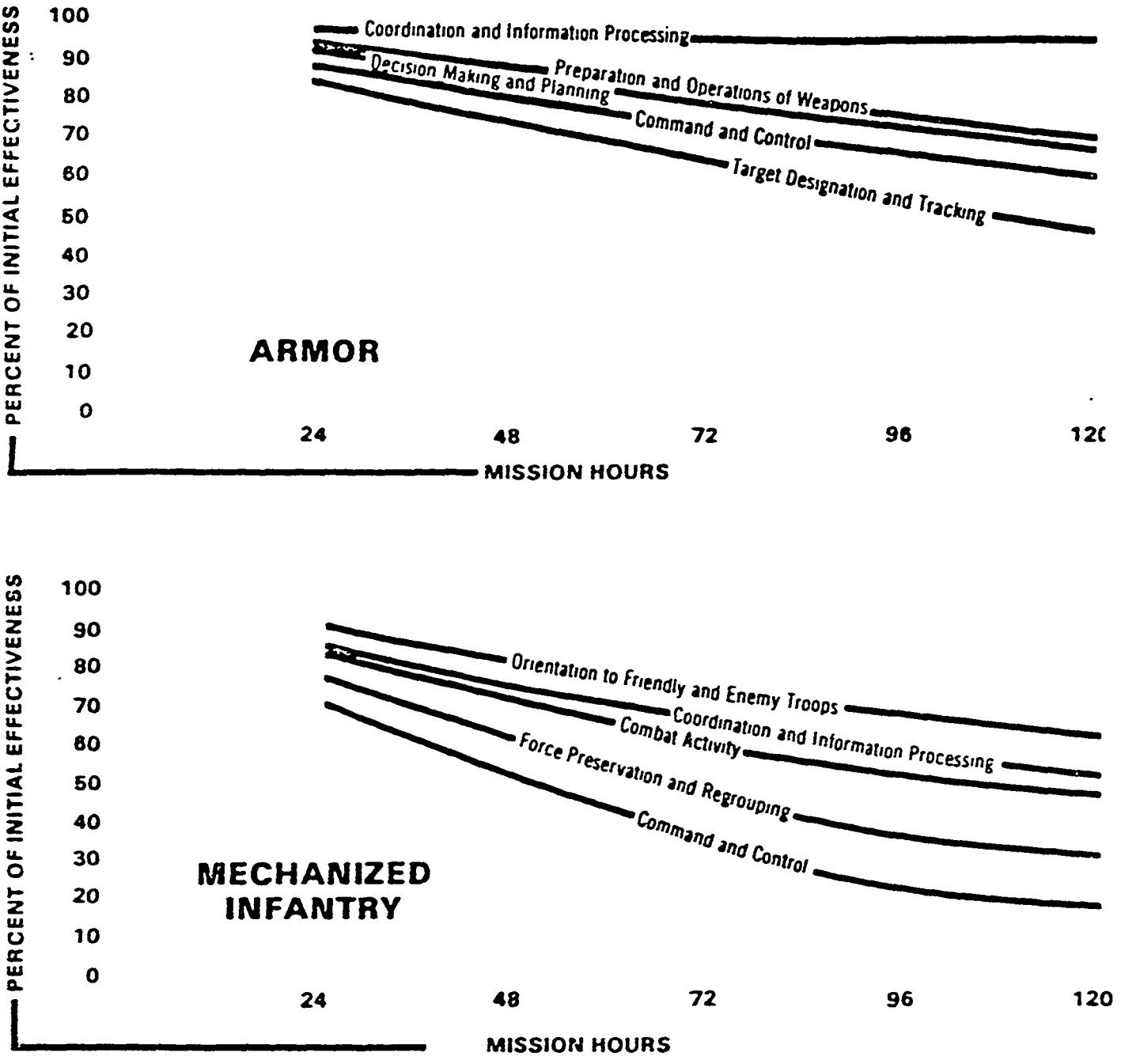
Effects of 48 hours of continuous work on a combination of vigilance tasks(from P. Morgan et al., Effect on sustained performance of 48 hours of continuous work and sleeploss. Human factors, 16 (1974), (4)406-414

Figure 1



Readiness to perform during 24 hours, mean = 100%
(from N. Diks, moet men slapende militairen wakker maken. Militaire Spectator, 152 (1983)(1)33-41

Figure 2



From: FM 22-9 Soldier performance in continuous operations (Dec 1983)

Figure 3

THE NATIONAL DISASTER MEDICAL SYSTEM

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The National Disaster Medical System (NDMS) was created for mastering the challenge to provide care in major catastrophic disasters here at home or for military casualties of a major overseas conventional conflict.

Although the impetus for developing the NDMS resulted from concerns on a national level, organization and successful operation of the system begin at the local ("grass roots") level. Local institutions, organizations and individuals have come together as part of the NDMS to improve their home town disaster medical readiness. At the same time, these local NDMS assets are essential components for effective statewide and nationwide medical mutual aid.

NDMS - Purposes/Key Elements

The purpose of the NDMS is twofold: to provide supplemental medical assistance to state and local officials in massive domestic disasters, and to support the military and VA medical systems in caring for military casualties of a conventional conflict.

At the federal level, NDMS is a partnership and joint venture involving four major departments and agencies: the Department of Defense, the Federal Emergency Management Agency, the Department of Health and Human Services, and the Department of Veterans Affairs.

NDMS has three major components: medical response, a system of patient evacuation, and definitive medical care.

Medical Response

Medical response consists of disaster medical assistance teams, or DMATs, plus medical supplies and equipment necessary for the DMATs to perform their function. The disaster medical assistance team is a volunteer group composed of about 30 physicians, nurses, technicians and other allied personnel, coming together and training as a volunteer unit. DMATs are, in the first instance, a community resource for supporting local search and rescue units in mass casualty incidents. Second, DMATs are also assets which may be used for medical response within their home state. Third, DMATs are a national resource that can be called on to provide interstate aid. Those DMATs that are capable of deployment to a distant disaster site will arrive in the area with enough supplies and equipment to be self-sufficient for a limited period of time, at least 72 hours. Much of the work at the disaster site will be to provide "triage," which is a French word meaning to sort patients according to their priority needs for care consistent with the medical resources available. In addition, DMATs will provide austere medical care and those services necessary to casualty clearing and staging. "Clearing" and "staging" are terms borrowed from the military.

"Clearing" refers to austere field medical care, and "staging" refers to those medical services required during patient evacuation. DMATs in local NDMS reception areas will provide medical services associated with receiving patients, assessing patients' medical needs and matching those needs with available local hospital capability.

Although the DMATs initially will be organized as non-federal volunteers, and will train as non-federal volunteers, upon activation of the system for a national emergency, DMAT members will become temporary employees of the federal government -- the U.S. Public Health Service. There are three reasons for doing this. First, when DMAT members are appointed as federal employees, potential problems of licensure and certification are avoided, particularly where teams are moved across state lines. In our country each state has unique requirements for licensure and certification of medical personnel. An individual may find it difficult to cross state borders and practice his or her profession without having a license in the state to which they travel, but as a federal employee, a DMAT member can be sent to any state in the union without regard to licensure and certification requirements.

The second reason for federalization is liability. Individual medical personnel who go across state lines may be subject to personal liability in the event of an allegation of malpractice committed in the course of the performance of their work. As federal employees, however, DMAT members will have the protections of the federal tort claims act in which the federal government becomes the defendant in a claim involving alleged malpractice.

The third reason for federalizing DMATs is so the members can be compensated for their service. DMAT members who are taken from their normal place of employment and moved into a distant disaster site for 4 or 5 days perhaps a week, should not suffer any personal financial hardship.

Each team will have a sponsoring organization, which could be a major medical center, public health agency or a voluntary organization, such as a local Red Cross chapter. The DMAT sponsor will organize and recruit the team, pre-enroll the members in the NDMS personnel system to facilitate temporary appointment to federal status, arrange for training of the team, and coordinate the dispatch of the team. Again, the DMATs are not reserved only for federal needs. They are equally available to local and state authorities for use in responding to incidents that don't require federal intervention or assistance. So the DMATs really represent assets, not just at the federal level, but also at state and local levels.

Currently, about 35 of the 107 NDMS areas are in various stages of DMAT development. Our goal is to have at least one team in each area and multiple teams in larger population centers. In addition to the general purpose DMATs, some specialized DMATs are being developed to respond to incidents involving mass burn casualties, hazardous materials exposures, etc.

Patient Evacuation

The second key element of the NDMS is patient evacuation and the goal is to use systems that are simple and rapid, to recognize that there will be limited patient information, and also seek to use all types of transportation, but emphasizing air transportation because of the obvious time saving benefits. The department of defense, and particularly the United States Air Force, has unique aeromedical evacuation capabilities.

The C-9 Nightingale, is a modified commercial DC9 passenger jet which can carry 40 litters. It also carries a medical crew of two flight nurses and three medical technicians. This aircraft is used today to transport military patients among various points within the United States and the Air Force operates nine of these aircraft in the U.S. today.

Various cargo aircraft can also be utilized in aeromedical evacuation. The c-141 is used to transport military casualties from overseas sites to locations back in the continental United States. It can be configured to carry a combination of 48 litter and 70 ambulatory patients, or, with additional litter stanchions, it can carry 103 litter patients alone.

The C-130 is another cargo aircraft that can be used in aeromedical evacuation and carry approximately 50 to 70 litters. This aircraft has a unique capability in that it does not require an improved runway for takeoff or landing. So if a disaster destroys or seriously damages the airports in the area, this plane could be used to bring in the DMATs and medical supplies and equipment and could land on a short stretch of interstate highway, in a desert, or field, and could also be utilized to evacuate patients.

The Department of Defense, the Department of Transportation, and several U.S. airlines are currently working on a new aeromedical evacuation program as part of the "CRAF"--CRAF standing for Civil Reserve Air Fleet. This is a program that utilizes commercial aircraft and modifies them so that in a time of major emergency they can be utilized for purposes other than carrying passengers.

The Boeing 767 will be part of an aeromedical segment of the civil reserve air fleet. The other aircraft will be the McDonnell-Douglas MD-80. The Boeing 767 will be configured to carry 111 litters, and the MD-80 will be configured to carry 40 litters.

Eighty-five B-767s and 30 MD-80s will become part of this program. The CRAF aeromedical segment is scheduled to be on-line by the end of 1991 and will increase the aeromedical evacuation capability of our nation by geometric proportions.

Definitive Medical Care

The third key component of the NDMS is definitive medical care. In selecting potential patient reception areas, three basic criteria were used. First, we focused on areas that had a minimum of 2,500 operating, staffed acute care hospital beds. Second, areas were needed that had an airport which could accept aeromedical evacuation aircraft. Third, areas were selected where there was a facility which could serve as an NDMS local coordinating center. In all but one instance, the NDMS local coordinating centers are either military medical facilities or Department of Veterans' Affairs medical centers.

Each NDMS coordinating center has the following major responsibilities: coordinating overall NDMS activities in an assigned geographic area(s); soliciting and organizing community support for the NDMS, including participation by non-federal hospitals, local emergency medical services (EMS) authorities, government officials and organizations, etc.; coordinating preparation of a local NDMS operations plan for reception and hospitalization of patients; and assisting in the planning and conduct of annual NDMS exercises in the assigned area.

The role of the participating NDMS hospital is to voluntarily pre-commit a percentage of its acute care beds by means of a memorandum of understanding. This is not a legally binding contract. The hospital provides a minimum and maximum number of beds that could be made available on activation of the system. In an actual activation, the hospital could either increase or decrease the number of beds to be made available. Obviously, if the hospital admits patients through NDMS, it obligates itself to care for those patients using the generally accepted standards of medical care prevalent in that community. The hospital also commits itself to participate in periodic exercises which will help satisfy the requirements of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO).

In return, the federal government agrees to reimburse the hospital, attending physicians, and ancillary services, such as laboratory, anesthesia, blood bank, radiology, etc. on the basis of bills charged. No money is provided up front.

Upon arrival, patients will be met by a local DMAT. They will be triaged, and assigned for priority transportation to local NDMS hospitals. Assessment of the patient's individual needs will be made by the DMAT against the available hospital beds in that area. A burn patient will go to a hospital that is best equipped to deal with that type of injury. An orthopedic patient will go to a hospital that has an orthopedic bed, etc.

Patients will be transported to the participating hospitals using local ground transportation and, where available, some patients may be transported by local helicopters; upon arrival at the hospital, patients will be provided with whatever definitive medical care is necessary to repair the injury or cure the illness.

NDMS Activation/Operations

How does NDMS get activated? Basically there are three ways to activate it. The first is a Presidential declaratation of a disaster under the provisions of P.L. 100-707, the Disaster Relief and Emergency Assistance Amendments of 1988. The second is a request for major medical assistance from a state health official under provisions of the public health service act. The third is in an overseas conventional conflict involving U.S. armed forces, where casualty levels are likely to exceed or, in fact, do exceed the capacity of the DOD-VA medical systems.

In a domestic disaster, if state officials determine that there is a need for outside medical assistance, they may either contact the FEMA or PHS regional office or may directly contact the FEMA National Emergency Coordination Center (NECC) in Washington, D.C. The NECC is staffed, and operated on a 24-hour basis. Personnel at the NECC, after receiving a request, would then contact an NDMS duty officer. The duty officer will verify the request and obtain additional information on what is needed where, etc. Then the duty officer will obtain a decision to activate from the assistant secretary for Health in the Department of Health and Human Services. Upon receiving that decision, the duty officer will notify those organizations that will be necessary to initiate NDMS response and will also activate the NDMS Operations Support Center, in Rockville, Maryland. The duty officer will also notify the official who requested assistance of the decision to activate the NDMS.

It's important to stress that each of the organizations participating in an NDMS response retains full control of its own resources. The purpose of the NDMS Operations Support Center is not to direct or control, but rather, to coordinate and process requests for assistance, to assure that those requests are channeled to the appropriate organization, and to let that organization do what it does best.

In a military contingency, the activation of NDMS would work this way: information on casualty levels would come from the theater of operations, to DoD, specifically to the Office of the Assistant Secretary of Defense for Health Affairs. Those data would be verified by that office and a decision to activate NDMS would be made and communicated to the NECC. An NDMS duty officer would again turn on the elements of the system needed to receive casualties in the designated NDMS reception areas.

For evacuation from a theater of military operations, it is anticipated that the Boeing 767 aircraft would be used for strategic evacuation from the theater of operations to various predesignated cities in the continental United States ("hubs"). Some casualties would be hospitalized in NDMS facilities in the hub cities. Other casualties would be redistributed, using the md-80s to their final destinations -- other NDMS areas within the U.S. A joint medical regulating office (JMRO) would be established in the theater of operations, to accumulate casualty data for transmission to ASMRO. The JMRO coordinates with ASMRO for casualty regulation within the overseas theater and for return to the continental U.S. The NDMS Operations Support Center would participate in the overall operation.

Summary/Benefits

In summary, NDMS is a combination of federal and non-federal medical resources coordinated in a single response system to meet civilian needs and also handle an overflow of combat casualties from a conventional conflict.

The key message is that the system can't work and won't work without the participation of local, state, and federal levels of government and the voluntary cooperation and participation of public and private sector organizations, institutions and individuals.

As of June, 1989, 75 coordinating centers, and 107 geographic areas are participating in the system. Over 1500 participating non-federal hospitals, and over 105,000 non-federal hospital beds have been precommitted as part of NDMS. As previously mentioned, about 35 areas are currently establishing DMATs.

What are the benefits of participation in NDMS? NDMS maximizes the use of existing resources. It has created nothing new but taken what's already available and organized it in a new way to cope with incidents that no single entity could ever deal with by itself. The system provides indentifiable levels of care and seeks to match the patient with the appropriate level and type of medical care. It integrates the pre-hospital phase with medical facilities. It helps to contain health care costs by avoiding the construction of expensive facilities that are simply standing idle waiting for the "big one" to occur. The facilities and people utilized by NDMS are local resources that are working today to provide care, and, of course, the bottom line is the saving of life and limb -- thus reducing mortality and morbidity.

A number of major national professional organizations have endorsed the NDMS, and several additional organizations have endorsements under consideration.

The advantages to our nation are obvious. In addition, there are benefits at the state and local level. The better prepared local areas are to support a national need, the better prepared they are to support local, state, or regional needs. With your support and participation, together we can master the challenge, and NDMS will be ready when needed.

MASS CASUALTY BURNS: THE UNITED STATES ARMY INSTITUTE OF SURGICAL RESEARCH RESPONSE TO THE SOVIET TRAIN DISASTER

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The ability of the military to transport rapidly large quantities of medical material and personnel makes military medical units valuable assets following a natural disaster or accidental catastrophe. The large number of casualties which accompany such a disaster can rapidly overwhelm local medical resources. (Layton, 1982; Baxter, 1981; Allister, 1983.) Military medical assets can be rapidly delivered to the site of such a disaster to provide prompt and effective triage, resuscitation and transport of casualties. (Mahler & Haubin, 1979; Buerk, Batdorf, Kammack & Ravenhold, 1982; Arturson, 1980.)

In June 1989, a propane pipeline leak next to a railroad line in the central Union of Soviet Socialist Republics (USSR) resulted in an accidental catastrophe when two passenger trains, carrying 1200 passengers, were involved in an explosion with the leaking gas. Four hundred passengers died immediately; most of the remaining passengers suffered burns, mechanical injuries, or both.

Casualties were triaged at the scene by civil defense squadrons and transported by helicopter to local hospitals or to hospitals in the cities of Ufa and Chelyabinsk. Because of the large number of burn injuries local and national burn care resources were overwhelmed, and outside assistance was requested.

On 8 June 1989 the United States Army Institute of Surgical Research (USAISR) was asked to travel to the Soviet Union to assist in caring for casualties of this accident. The USAISR is a research oriented organization which provides clinical burn care to United States soldiers and their dependents. The USAISR rapidly assembled a team of 26 medical and administrative personnel and 7000 kg of medical supplies and were flown to Ufa, USSR, by a United States Air Force C-141 aircraft, arriving 45 hours after the request for assistance had been received. At the time of arrival of the USAISR team in Ufa, 200 patients were located in hospitals in this city. Most of the patients had burn injuries. After evaluating the patients, the USAISR team began therapy, primarily aimed at local treatment of the burn wounds. Many of the wounds had received little treatment and were heavily colonized and/or infected with Pseudomonas or Staphylococcus species. Topical chemotherapeutic agents, silver sulfadiazine and mafenide acetate were applied to the wounds.

Results of the cultures and antibiotic sensitivity testing, performed by a microbiologist who is part of the burn team, indicated that a significant portion of the local microflora was resistent to locally available antibiotics such as gentamicin and methicillin. These antibiotics were replaced by vancomycin, amikacin, and ceftazidime, provided by the USAISR team.

After control of the burn wounds was achieved, attention was directed to operative management of the burn wounds. Twenty-six patients underwent surgical treatment. Two patients with rapidly progressive burn wound infection underwent urgent excision of the burn wound, but died of systemic sepsis. Twenty-four patients underwent tangential or fascial excision of their burn wounds with the immediate placement of split thickness autographs. These patients all had satisfactory results.

To provide a satisfactory level of care, the team had brought a substantial amount of sophisticated equipment including mechanical ventilators, pulse oximeters, a field anesthesia machine and operating room supplies including surgical instruments such as dermatones and skin meshers. Also included in team supplies were antibiotics, intravenous solutions, dressings and resuscitation equipment. The total cost of these supplies exceeded $250,000.

Translators were extremely important as no member of either medical team spoke both Russian and English. Despite the language differences, rapport between the two medical teams was excellent. All procedures and interventions were performed by joint United States-Soviets teams.

Team members were present in Ufa for two to four weeks and assisted in postoperative rehabilitation and physical therapy. Further contacts were maintained by a satellite link providing both audio and video follow-up of patients between Ufa and Houston, Texas.

This mission demonstrated that the great mobility of military medical personnel and equipment provide an ideal source of support when natural disasters or accidents generate numbers of casualties which overwhelm local or even national medical capabilities (Treat, Sirinek, Levine & Pruitt, 1980; Pruitt & Fitzgerald, 1980).

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PSYCHIC TRAUMA: TRAINING AND INTERVENTION IN NORWAY

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Compared to other Scandinavian countries, Norway in recent years has been struck with many disasters. These disasters have been mostly man-made or technological. In this presentation the focus will be partly on training and partly on organization of psychosocial intervention.

Training will be exemplified by focusing on the training required within the Norwegian offshore oil industry. This training is not so much training to prevent trauma, as training for coping with trauma. The safety training requirements for oil workers in the North Sea were issued as a direct result of the Alexander Kielland disaster because an investigation showed that most of the oil workers had either no or very insufficient training.

All oil workers first have to attend a standard two-week course at a naval safety academy. They learn safety theory and survival skills, such as first aid, fire fighting and fire protection; smoke diving; sea rescue theory and life raft exercises; life boat exercises and helicopter pick up from the sea. Then they attend a two-day seminar within the company they are to work for. This course is specific for the installation they are to work on and includes training in evacuation procedures, alarms and warning signals, and lectures on crisis reactions, among other topics. As many of the large installations use free-fall life boats as the chosen evacuation method, the workers have to attend a one-day training where they go through three falls from around 90 feet at NUTEC, a special training facility where they also are given lectures about the systems used and different aspects of crisis behavior.

The aim of this training is to reduce the chance of maladaptive behavior in an emergency (i.e., people declining to use the free-fall lifeboat in a crisis situation). As an option, and soon to become mandatory for some installations, those who want can participate in ditching training, or helicopter evacuation training under water. In this situation a simulated helicopter body is mechanically taken under water, then turned 180 degrees, and the participants have to escape through the door or window. Three-fourths of the personnel will have an additional week of further emergency training offshore, as they enter into different rescue teams or fire brigades. Lastly, all personnel go through two days of retraining every year.

Several Norwegian studies have shown that such training is effective in securing optimal behavior in a crisis situation, as well as reducing the aftermath of trauma (Weisaeth, 1984; Ersland & Weisaeth, in press; Hytten, Jensen, & Vaernes, 1989; Hytten, in press).

Training prepares personnel for strong sensory input, helps them to learn behavior patterns that can be used in emergencies, and install faith in emergency apparatus, and procedures and in their own ability to cope with the crisis situation. When properly trained, personnel are able to enter into, and go through, a threat situation with lowered anxiety, and as a consequence with a reduced risk of impaired performance in a high stress situation.

Several companies offer top and middle level offshore management two-day seminars in crisis and disaster psychology to increase the effectiveness of leaders in dealing with crisis situations that may happen to their personnel. Offshore medical facilities are manned by nurses. They go through exercises and education to help them deal with trauma victims and want their own reactions during and following critical incidents. Lately we have trained nurses to conduct CISDs following offshore critical events.

Fire brigades and first-aid teams manned by the oil workers are given lectures on behavior and reactions to be expected in others and themselves in emergencies. On some of the installations all personnel receive lectures in aspects of crisis and disaster reactions.

Onshore, the oil companies train their personnel to deal with crisis and disaster situations at different levels. This training includes training exercises and drills as well as education for onshore emergency teams; medical and administrative personnel; personnel responsible for assistance to survivors, families and bereaved; and those who man the switchboard and answer incoming telephone calls to the company.

The tremendous increase in interest for the consequences of crises and disasters in Norway has also paved the way for training of medical personnel, police, ambulance and fire personnel in how to respond to victims, as well as in how to deal with their own reactions to trauma situations. In several communities all health workers, social service workers and clergy have received basic training in crisis and disaster psychology.

Intervention: Lessons Learned.

The Norwegian system is regarded as a good system for immediate follow-up. Alongside the medical disaster intervention, we mobilize a psychosocial intervention that secures care for victims, bereaved, helpers and others. The immediate psychosocial intervention usually includes: (a) organizing teams of psychosocial helpers that can assist affected groups, (b) crisis telephone assistance, (c) other informational and practical assistance, (d) memorial services, and (e) support and grief groups. The psychosocial support system is usually manned by mental health professionals and clergy. The help is immediate and based on an outreach approach. It consists of emotional first aid, crisis intervention, group work, use of consultation, educational approaches, and use of the media.

A paradox in Norway, as in other countries, has been that the help following smaller, everyday traumas or personal disasters is often completely missing or inadequate. Following wide media coverage of the psychosocial assistance and help provided after later year disasters, there have been many letters to the newspapers from people who have not received any sort of help following their "personal disasters". This portrays the lack of responsibility. organization and attention that has been paid to this area.

There has been too little emphasis on integrating the psychosocial work into the overall disaster plans. Following a bus crash that killed 16 people, 12 of them children, and injured 19, conflict arose between the somatic personnel on the ICU ward and the psychiatric assistance personnel, mostly recruited from the hospital's child and adult psychiatric ward. The psychiatric personnel had little knowledge about the skills that the somatic

departments had for handling such situations, and paid too little attention to the ordinary flow of work on the ward. Personnel of the ICU felt that the "psych people" came in and took away the children's parents to meetings, and that they were not there when they were most needed. Better preplanning and increased knowledge about each other's sphere of work would have reduced such problems.

Preplanning should include areas such as a plan for providing catering services, room allocation, secretarial functions, telephone lines and so forth. Making a list of available personnel resources and special expertise in the community will be invaluable in a larger event. Following a hotel fire, we found that local expertise had been overlooked, and no list was available in advance. Often expertise in working with the injured and their families and with bereaved families is found elsewhere than within mental health departments.

The list of personnel should include experts in the areas of child psychology, grief, rituals and mass death, media and information, organizational work and CISD. The list should be multiprofessional and multiorganizational to reduce interprofessional rivalry and territorial "turf" issues.

While we have been able to secure good immediate follow-up, we have not provided adequate long-term follow-up. This has particularly been so for those most in need: the bereaved. Following intense involvement from helpers, family and others in the early post-disaster period, when many are protected by the numbing and unreality of the shock reaction, most bereaved have had to face the more intensive grief, longing and everyday reality without much assistance and care from the outside. Partly these follow-up problems reflect the fact that most of our disasters have hit transport or sleeping facilities (planes, a hotel, and an oil rig) with the result that the bereaved have been spread over large parts of our country.

A general organizational problem in this area is that while the disaster alert soon can be downgraded medically, the psychosocial implications of the event have just started. When the disaster ceases to be a disaster in the medical sense, the hospitals involved will return to normal functioning. This also means that the leadership and infrastructure necessary to give the psychosocial support work back-up, mandate and resources becomes less available or nonexistent. This is especially so when there is no tradition in the medical system or in the community to give assistance beyond the emergency period (Gronvold Bugge, in press). The pressure toward normalization of routines within the larger organization then become more imminent, and there is pressure for closing of the temporary organization set up for providing psychosocial follow-up.

It is very important that psychosocial interventions are structured and organized, with a coordinator in charge, and with responsible leaders for the different subgroups that are set up (i.e., for bereaved, survivors, helpers). These leaders must report directly to the coordinator. The coordinator must have the necessary authority delegated from the central disaster committee, and his/her leadership must be clear and accepted by organizations and coworkers involved (Gronvold Bugge, in press). This person must be able to make an early identification of the affected groups and the tasks at hand, and then prioritize among these. He/she should also be able to outline and

instruct the workers on the principles and intervention strategies that the group should follow in its work, whether it is in answering the incoming telephone calls, or in direct help to individual families. This is to secure that the help is uniform and not too diversified.

Ideally, the psychosocial coordinator should be selected before a disaster, and should not be placed there solely according to rank, but according to certain abilities. The psychosocial coordinator should first of all have good organizational skills, know how to lead and to delegate, have good local knowledge, know his/her limitations, have a low anxiety level, be able to make unpopular decisions, be strong, but at the same time be able to show his own reactions, be able to manage media, know when to call in outside help, and be able to work with inter- and intra-organizational conflicts (Hodgkinson, 1989).

Logging calls, contacts, initiatives taken, and plans made for victims or families (making sheets for each victim) helps to prevent parallel work and eases the changes of different workshifts.

We have been able to bring in experts with experience in psychosocial disaster intervention to assist the temporary local organization to deal with the psychological ramifications of the event. This insures that experience gathered through earlier disasters can be put to use in organizing and conducting services in the next one. However, there are some caveats. These experts should not enter leading organizational positions, as they usually lack knowledge about the local community, and they leave the community within a couple of days to attend to their ordinary jobs. These experts should be used as consultants to the psychosocial coordinator or his/her team leaders.

A related problem, which I think is universal, is the inflow of so called "experts." When a plane with 55 passengers from the same company crashed into the sea and killed all on board, many experts volunteered to the company office building to give help. The company's physician said he only called one of them, and he stated that he would have been better off with one or two of these experts, plus the clergy. Most of them, he believed, seemed to be there to learn. Mental health personnel unfamiliar with disaster or trauma work, might add to the disaster more than alleviate it.

With too many personnel present, the chance of parallel organization is increased, and energy has to be used to deal with the problems this creates (Turner, Thompson & Rosser, 1989).

Although not openly and thoroughly addressed, different models of understanding compete in this area in Norway. The most dominant is a more traditional psychiatric or medical model, reflected in the nomenclature used for describing the area (i.e., disaster psychiatry, treatment, illness, therapy), and the emphasis on the risks for psychiatric and medical disorders. The treatment approach is directed towards the individual, with less emphasis on the social and organizational ramifications of these events. The other model is less medical in its approach, with an emphasis on normal reactions to abnormal events. Here the psychiatric or medical vocabulary is less used, and the emphasis is more on family, group and organizational aspects of these events. Crisis intervention techniques and crisis theory, more than psychotherapy, are at the basis of the intervention and the mode of understanding. This approach has evolved out of work with everyday crisis

situations, outside of psychiatry, and its frame of understanding is influenced by organizational and social psychology. Unfortunately we have come to associate psychosocial assistance too much with psychiatry, and relied extensively on mental health personnel from psychiatric institutions. These personnel often have little knowledge about crisis work or work with normal populations.

Maybe because of our medical frame of reference, we have failed to make good organizational diagnoses of the organizations hit by disasters, and thus have been unable to assist properly at other levels than the individual. Crisis intervention principles can be used at different organizational levels. In some trauma situations, the whole company is traumatized.

For years we overlooked the situation of bereaved children. In the latest disasters we have paid much more attention to their situation. This attention has paralleled an increase in importance given to rituals and memorials following disasters. Children are welcome to take part in both viewing the dead, memorial and burial ceremonies. The children's remaining parents or adult caretakers are provided with information on children's grief reactions at different ages and different maturity levels, as well as information on how to meet their children's needs in such situations. Information is provided in groups or to the individual family, and is always accompanied by written information. Adults are stimulated to include the children in viewing their loved ones as well as participating in the rituals following sudden deaths, to make the unreal real, and to counteract fantasies about how the dead look or that they might not be dead.

In the organization of psychosocial interventions following major events, helpers have been given special attention in Norway in the later years. All helpers are usually invited to participate in more or less mandatory CISDs (a description of CISDs used in Norway is presented elsewhere; Dyregrov, 1989).

Unfortunately the training of debriefers has been ad hoc, and the quality of the debriefings va iable. The CISD meetings are too important to be handed over to mental health professionals who think that because they hold a degree in psychology or psychiatry they can handle such events well. Our experience definitely calls for more systematic training of the debriefers to improve the quality level of psychological debriefings.

The coordinator for the psychosocial intervention work should make sure that outside consultants are brought in to assist with debriefing of the psychosocial staff, as there is a tendency to overlook the importance of debriefing this group. It is also important that personnel from this group not mix role functions; that is, someone who has been heavily involved in providing direct assistance to victims, survivors or bereaved, should not be responsible for conducting debriefings. It is also not a good idea to debrief people within your own organization or work group. Unfortunately, some professionals have advocated such an approach in our country. Doing debriefings on your own group does not show adequate concern for the group processes involved and for the confusion and mixture of roles this invites within the organization.

I hope I have been able to give you a glimpse of some of the issues we are dealing with, some of our accomplishments, as well as some of the challenges we are facing.

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ORGANIZING FOR DISASTER:
INTERGOVERNMENTAL COOPERATION IN DISASTER RELATED ACTIVITY

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Background and Prolegomena

In the Seventh Workshop on Stress (Training for Trauma) most papers have dealt with disasters and with clinical or program activities planned for disasters in the United States. Presentations today, however, take on an international flavor. We shall hear from an officer of the U.S. Agency for International Development's Office of Foreign Disaster Assistance (OFDA) who will provide us with information on the role of USAID in foreign disasters, and we shall hear from disaster workers from other countries as well.

In this paper I will present information concerning intergovernmental organization and a policy initiative which will affect many disaster related activities over the next decade. I will emphasize the role of the United Nations and certain of its specialized agencies in disaster related activities.

This session, appearing in the program under the title Cooperative Efforts, deals with intergovernmental disaster related organization and emphasizes the role of the United Nations (UN) and its specialized agencies. While there are large numbers of both U.S. and foreign private voluntary organizations (PVOs) and also international nongovernmental organizations (NGOs) operating on a mix of private and public funding (such as the International Red Cross), we can only note them in passing in the time available. NGOs and PVOs play important roles in foreign disaster relief and recovery and frequently can respond more quickly than governmentally funded organizations. Their contributions of these organizations to work in disaster are sufficiently valuable to merit a session of their own during a future conference.

Given the many qualifications that can be made about organizations to be discussed today, I will act as though we live in a world of one-armed men, and resist the temptation to say "but on the other hand. . ." to the greatest extent possible.

I have worn two professional hats for nearly three decades. One has had international public health written on it, while the other has been a clinical hat more familiar to psychologists. The public health hat I wear this morning represents an unfamiliar optic to many here. My psychologist hat leads me to pay less attention to the context of problems I deal with and more to the individual with the problem. While wearing that hat most of us concentrate on intrapsychic and interpersonal issues, deal with persons one by one, and pay less attention to social and cultural issues.

In contrast, a public health approach forces more attention to contextual issues and problems and to systems within which problems are embedded. It mandates focusing on the needs of the group rather than on individuals and on the way things are done and organized rather than on the actual doing of them.

Public health pays attention to large structural issues. Each of these hats requires attention to different issues. We seldom take the time to examine another group's issues or problems. Today we will look at a few of them.

In keeping with this field optic, training for trauma will not be addressed directly, but rather a few organizational structures within which this activity takes place will be examined. The reason it is important to understand these structures is that for mental health disaster specialists need to make a stronger case for their inclusion in operational programs of international organizations. To make a reasonable case for inclusion in these activities, however, it is necessary to understand their terms of reference and to be able to point out the rationales and value for being included. What may be self-evident to psychologists may require explanation to others unfamiliar with the range of our skills.

International Cooperation and Disaster Assistance

International cooperation in disasters has grown steadily in volume, numbers, dollars, organization and complexity since the end of World War II. Prior to the Second World War, in the health arena, attention was largely given to epidemics, quarantine and the international spread of disease in international health emergencies. In disasters, limitations of communication and speed of transport limited the extent of significant useful help to be given in disaster relief and recovery if any substantial distance from the actual impact area was involved. Much of this has changed.

Developments in communication and travel technologies make possible the movement of persons, ideas, communicable diseases and problems in a matter of days or hours rather than weeks, months, or years. The awareness of peoples in one continent concerning events affecting other parts of the world is raised daily through worldwide interlocking communication networks.

As an example of the intercontinental news spread which took place more quickly than within the country, a few weeks ago I heard about the recent San Francisco earthquake while listening to the BBC radio news from London one hour after it happened. It was more than an additional two hours before local domestic radio reported this event and even longer before television reported it in the DC metropolitan area. Early knowledge permits rapid action, as we are all aware, and the speed of communications has facilitated the gaining of such knowledge. Some of the most important life-saving activities in a disaster must take place within 24-48 hours of the initial impact in many cases.

Not long ago, disasters such as famine in other parts of the world were often history rather than news by the time the world knew about them. Until the latter half of the 19th century, the speed of communication was, for the most part, limited to the speed of human travel. Today satellite technology brings us visual as well as auditory information in minutes from remote parts of the world that have satellite uplink capabilities.

In international cooperative efforts in disaster there are a growing number of actors and organizations. We will discuss only a few of them and only one organization in any depth during the time available.

I will use a few acronyms which may be new to you, and a glance at Figure 1 may prove useful.

Many bilateral and multilateral international organizations concerned with disaster orient their efforts to developing countries. The poorest of the poor are found in these nations. Their social and physical infrastructures are comparatively undeveloped, and the trained manpower needed in major disasters is absent or in short supply. The needs of developed industrialized countries such as our own are often more specialized in character. Most of what industrialized developed countries need in major disasters they already possess in some measure. Problems in our countries are more often those of logistics, political will, and priorities rather than those of actual availability of resources.

Quite obviously, the 160 plus nations of the world differ not only in their level of economic affluence and economic development but also markedly in their readiness to respond to and cope with major disasters which occur within their borders. All major industrial nations of the world now have some level of governmentally supported emergency organization on a standby status. Each, nonetheless, differs markedly in the effectiveness, importance, and funding of such efforts.

Bilateral assistance capabilities in international disasters are also maintained by many developed nations. The U.S. Agency for International Development maintains a fully staffed Office of Foreign Disaster Assistance (OFDA) for this purpose and does much useful work sending human resources, materials, and technical assistance on a regular basis to major disaster sites. Approximately 14 other nations in Europe, Canada, and Japan have smaller, similar units within their governments which are tasked with international disaster assistance and foreign aid. Compared with the U.S. OFDA , most of these have smaller full time staffs, but often greater operating flexibility. Many of their policies and procedures are less bureaucratized. These governments often delegate greater authority to staff, and do not require several levels of internal and external review or political clearance before acting, as we do. They are less constrained by party politics before committing resources.

Individual nations have bilateral, or country to country, organizations with organizational components responsible for foreign assistance. There also exist multilateral, intergovernmental organizations which have integral disaster related units. The United Nations and its specialized agencies are a case in point.

In light of a recent development, it is a singularly serendipitous point in time to discuss the role of the United Nations in major disasters. At the 44th session of the United Nations General Assembly, 155 member countries cosponsored Resolution 44/236. This resolution was adopted on 22 December 1989 and designated the decade of the 1990s as the International Decade for Natural Disaster Reduction.

On 1 January 1990 the work on the International Decade on Natural Disaster Reduction formally begins. The UN General Assembly charged UNDRO, soon to be known as the United Nations Disaster Relief Organization, with establishment of a Secretariat at UNDRO headquarters in Geneva, Switzerland, for this purpose. The resolution will be found as Appendix A to this paper.

The Decade is tasked with paying special attention to fostering and augmenting international cooperation in natural disaster reduction activities and programs. The UN set for the Decade an objective of reducing, through

concerted international action, especially in developing countries, loss of life, property damage, and social and economic disruption caused by earthquakes, windstorms, tsunamis, floods, landslides, volcanic eruptions, wildfires, grasshopper and locust plagues, and other calamities of natural origin.

The United Nations system has a wealth of expertise and knowledge, and the Decade will focus priority attention on disaster mitigation. The scientific and academic worlds and the private sector, with a resulting combination of technological, intellectual and financial resources, will be called upon during the Decade to participate fully, utilizing a broad spectrum of disciplines. The prospects of collaborative ventures are both exciting and attractive to those of us with commitments to such work.

The UN early accepted the reality that in matters of major disasters everybody's business can become nobody's business. It began work by establishing an Office of Disaster Relief, today known as UNDRO, in December of 1971. UNDRO was created with the primary mission of mobilizing and coordinating international emergency relief to disaster stricken areas. It was given the secondary mission of promoting disaster preparedness and prevention efforts in nations and regions at risk.

UNDRO is headed by a Disaster Relief Coordinator (DRC) who holds the rank of Under Secretary General of the United Nations. The DRC and UNDRO itself are headquartered at the Palais des Nations in Geneva, Switzerland.

In the field UNDRO is represented in developing countries on a standby basis by UN Development Program (UNDP) Resident Representatives in each developing country. Each UNDP Resident Representative also serves as the standby UNDRO Country Disaster Relief Coordinator if disaster strikes. UNDRO has a liaison office at the UN General Assembly Secretariat in New York City for overall internal UN coordination.

The primary mission and mandate of UNDRO is relief coordination. Their staff are sent to assist governments during early phases of disasters, to assist and manage damage and needs assessment teams, and to assist with local coordination of emergency relief.

UNDRO's regular operating budget is on the order of $3.0 million US; however, it receives somewhat in excess of $1.0 billion US of extra-budgetary resources yearly in the form of donations from UN member countries to manage, administer, and expend on disaster work. UNDRO also concerns itself with recurrent disaster logistics and with supply maintenance of commonly used supplies. It has established a UN Supply Depot stocked with commonly needed disaster supplies in Pisa, Italy, for this purpose.

In addition to relief activities, UNDRO provides technical assistance to national governments in the areas of emergency prevention and preparedness and information and communications technology. It recently developed a computerized global telecommunications system, and it coordinates UN specialized agency activities such as those of the World Health Organization, the World Meteorological Association, UNICEF and others involved in disaster work.

Since I began consulting with them in 1987, while researching and preparing a monograph on health emergencies for NATO, UNDRO has established data base systems to provide instantaneous data related to disasters. While system capabilities are limited, they are rapidly growing. The names, addresses, and telephone numbers of officials, applicable legislation, information on training organizations and other relevant data are added or updated daily in these systems. In disasters, rapid information retrieval and access can often lead to the direct and indirect prevention of needless deaths.

UNDRO produces technical monographs, regular publications, and instructional media for governments and nongovernmental organizations which some here may have utilized in their work and in which some presenters at this conference are cited. You may be surprised to find your names in their documents. It also underwrites a selective, unadvertised and informal, targeted research program.

During the Decade on Natural Disaster Reduction which UNDRO will coordinate, five major goals are to be pursued. Given the overemphasis emergency assistance organizations have devoted to rescue, relief, and recovery in the recent past, the Decade goals are gratifying. These goals embody and encompass hard won lessons learned by disaster professionals over many years.

The goals of the Decade are as follows:

1. to improve the capacity of each country to mitigate the effects of natural disasters expeditiously and effectively, paying special attention to assisting developing countries in the establishment, when needed, of early warning systems (mitigation);
2. to devise appropriate guidelines and strategies for applying existing knowledge, taking into account the cultural and economic diversity amongst nations (planning);
3. to foster scientific and engineering endeavors aimed at closing critical gaps in knowledge in order to reduce loss of life and property (research);
4. to disseminate existing and new information related to measures for the assessment, prediction, prevention and mitigation of natural disasters (information dissemination); and
5. to develop measures for the assessment, prediction, prevention and mitigation of natural disasters through programs of technical assistance and technology transfer, demonstration projects and education and training, tailored to specific hazards and locations and to evaluate the effectiveness of those programs (methodology and program development).

An updated version of these objectives, containing additional information to be made available in February of 1990, may be found in Appendix A to this paper.

You will note little attention is given to rescue, relief, and recovery in the Decade goals. The need for timely, rapid rescue and relief in major disasters is self-evident and requires no promotion. The framers of the goals were painfully aware that it is predisaster organization which has been ignored and undersupported by member governments for the most part. Disaster professionals know there is at least a tenfold return on dollars invested in preparedness, preventive, and mitigation activities as contrasted with relief and recovery, but it has been difficult to educate and convince Finance Ministries who are often more oriented to crisis management. Parenthetically, we must also remind UNDRO that preparedness for managing psychic trauma is also a valuable preparedness component. They have given less attention to this aspect of disaster than is warranted.

More deaths are prevented, more injuries treated, greater recovery facilitated, relief targeted more effectively, and economic losses reduced when disaster preparedness and management activities have been programmed and simulated in advance of an actual disaster event. Working out means, methods, and modalities of inter-organizational collaborative effort in advance saves not only time, but usually lives during a disaster. The best form of disaster management is almost always disaster preparedness. Post disaster help may make us feel good, but predisaster activities have the greater long-run payoff. While we know clinical medicine is more dramatic, preventive interventions regularly keep more people alive and healthy than dramatic white-gowned treatment interventions. In like manner, advance preparedness and mitigation organization also saves lives when disaster strikes. This may not be conventional wisdom, but the literature gives many examples. Flood deaths averted through river control activities can be calculated actuarially with relative precision as one illustration. Predicting structural failure rates during earthquakes of simulated magnitudes associated with building on geological fault lines can be quite accurately estimated. By adding in time of day and numbers of persons occupying the buildings during such events, scientists can quantify estimates of the expected deaths and injuries for a given magnitude and type of seismic event relatively accurately.

You may ask yourself what WHO's role is in all of this. WHO also has a mandate for emergency preparedness and response in its constitution but has little money for it. Two major specific goals WHO has with respect to disaster are first to promote emergency preparedness and response in member states within the context of the Health for All by the Year 2000 program and second to provide timely and appropriate response in major disasters and health emergencies in collaboration with member states and other organizations. Since conference participants are interested in health and medically related aspects of disaster assistance, let us next examine WHO's role in more detail.

While UNDRO serves a coordinating role and often has the funds, UN specialized agencies such as WHO and its regional offices have the health emergency specialists on their staffs. Their officers are responsible, at the request of UNDRO or member governments, for coordinating and participating in health related aspects of disasters, but often tend to play a low key role on the front lines of major disasters.

WHO headquarters in Geneva has a small, active Office of Emergency Preparedness and Response with a staff of four. This staff identifies, coordinates, advises, consults, and serves as facilitator in formation of disaster medical assistance teams, or health disaster survey teams, but often does these things marching under someone else's banner.

Short term WHO advisers or consultants may be found on UN High Commission for Refugees teams, on UNDRO teams, working with UNICEF Country Representatives, advising United Nations Development Program Resident Representatives, or working as informal broker between two bilateral foreign disaster assistance organizations who have funds to deploy. WHO's small staff travels almost constantly and is supplemented by short term advisors or consultants with whom WHO has had long association. The role of honest broker, while often circumspect, is a very valuable one.

WHO tries hard not to steal the limelight from bilateral efforts of member countries since it has only modest resources for staff or direct relief. As a result, it is more active as a low-profile catalyst or in educational, technical expert committee, conference coordination or advisory roles.

For organizations like WHO, operational scenarios are necessarily complex. WHO must be invited in by member nations or by another agency before it can provide assistance. It ordinarily operates in disasters on other people's money. From its own funds WHO performs a number of valuable disaster related functions. It modestly supports and officially recognizes centers of excellence through designating them WHO Collaborating Centers. The Centre for Research on the Epidemiology of Disasters at the University of Louvain in Brussels and the Disaster Research Center at the University of Delaware are two that will come to the minds of this audience.

Regional offices of WHO such as the Regional Office for the Americas, more familiar to Americans as the Pan American Health Organization, headquartered in Washington, DC, also perform valuable collateral functions such as giving PAHO's Emergency Preparedness and Disaster Relief Coordination Program a home. The PAHO program provides many supportive services including a publications program and a disaster literature data base which many in this room use. The PAHO program has proven important in the dissemination of health related conceptual advances from disaster research.

Much international disaster related assistance is regularly catalyzed by WHO through collaborative work with donors and organizations such as AID, the Federation of the European Community (FEC), the U.K.'s Overseas Development Agency (ODA), United Nations Children's Emergency Fund (UNICEF), United Nations High Commission for Refugees (UNHCR), UNDRO, the United nations Development Programme (UNDP), and others. It must be reiterated that WHO's role in direct disaster relief is necessarily constrained by both a tiny budget and the small numbers of full time staff they have funds to employ. It is WHO's mobilizing and coordinating capacity rather than its front line emergency operating capabilities which makes WHO valuable to us all.

Large bilaterals such as the Agency for International Development (AID), the U.K.'s Overseas Development Agency, (ODA), the Swedish International Development Agency (SIDA), the Canadian International Development Agency (CIDA), and other official bilateral assistance organizations have greater dollar and personnel resources than does WHO which makes possible even greater multiplier effects inasmuch as they can afford to hire and support persons from the private sector, and to provide materials, transport, consulting, and advisors for direct field operations. The bilateral tend to be heavy on relief efforts, lighter on preparedness support, and modest on mitigation activity.

In the Disaster Reduction Decade, in health and medical sectors WHO will be utilized as one of the lead agencies by UNDRO. Given Decade goals outlined above, we can expect to see a higher disaster profile for WHO in coming years.

The United Nations Development Program or UNDP serves as the action arm for the UN development assistance program in developing countries and often as a base for the Country Team of UN agency staffs. The UNDP lately has been receiving increased numbers of proposals from developing countries for projects in disaster relief, emergency preparedness and prevention, and mitigation and, with the impetus of the Natural Disaster Reduction Decade, can be expected to receive more proposals for the health and medical sector. Most of these proposals require some input from foreign advisors.

In preparing for the Decade, UN organizations became aware that a cardinal principle of national health disaster preparedness was not being observed by the UN system itself. Formal advance agreements between UN cooperating agencies concerning roles and responsibilities had not been negotiated or drafted fully. Those of us working in disaster organization have learned that often the process of carrying out negotiations is more important than the outcome since the negotiations provide a forum for personnel to come to know one another, to problem solve together, to work out personality problems, and to prepare scenarios which had never occurred to individual agencies, but which had distinct probabilities of occurrence.

It is far better for agencies to disagree and struggle over turf and territory before a disaster than during one. The process of professionals identifying and working through conflicts in advance of a disaster and effecting conflict resolution benefits victims immensely when disasters occur--though victims will have no awareness they may have been saved by such a process. In a health emergency, time often means the difference between life and death for large numbers of persons. Effective health emergency action must take place in a timely manner within a limited time window. Disasters often have the bad manners to occur when weather is bad, during freezing cold or blistering heat, when water is scarce, on weekends, at night, and in places in the world where in the best of times life is perilous or precarious. It is far better for disaster assistance organizations and professionals to work out differences in advance of, rather than during, major disasters.

To put a point on it, formal agreements between UNDRO and WHO are under negotiation, as are agreements between WHO and UNHCR. Absent are formal umbrella agreements between WHO and UNDP at this point, but these two organizations have a long and largely cordial history of working together, and there is a less pressing functional priority and need for a formal agreement between them even though it would be useful.

As mentioned earlier, there are a number of international nongovernmental organizations, called NGOs, such as the International Committee of the Red Cross, ICRC, which play important roles in international cooperation in disaster work. These NGOs, unlike intergovernmental organizations such as the UN family of organizations, are funded privately. For decades, they have played a well documented role in disaster relief and recovery. The ICRC is an international counterpart of private voluntary organizations such as National Red Cross Societies or Save the Children, CARE, and others which have international terms of reference and perform disaster related work.

International NGOs and national PVOs will hopefully also re-examine their terms of reference in light of the Disaster Reduction Decade goals. It seems likely that in addition to traditional relief and recovery roles that some PVOs will add or expand proactive program components to reactive program agendas they now have. These activities may well figure more prominently in their programming by the year 2000.

Returning to governmental organizations, but at a national level, by 1987 all 16 European, American, and Canadian NATO nations had in place public, private, and parastatal organizations equipped and prepared to take action nationally, and to some degree to cooperate internationally, under certain disaster scenarios. In each of these nations, in peacetime, their military and paramilitary armed forces also are prepared to participate in predefined roles in disaster readiness and disaster assistance within country and internationally when requested. For 18 months I worked with the Joint Civil Military Medical Group of NATO preparing a monograph on preparedness and management of health emergencies in NATO nations and was gratified to learn of progress made by our European cousins. As we will hear, our own NDMS is moving forward also.

Civil-military cooperation in disasters might prove to be a surprisingly useful theme at a future conference of this kind. The role of the military, the militia, and paramilitary organizations in disaster work is far greater than most of us believe and, as this conference gives witness, contributes in many subtle and evident ways to forward movement in disaster organization development.

There is an expression which characterizes some actions as being "too little and too late." Historically much international disaster assistance has often been a case of doing "too much (of the wrong kind) too late." Part of this arises from the fact that the lion's share of international efforts has been directed to postdisaster relief rather than to predisaster assistance.

It was felt in earlier times that disasters were "in the hands the Gods," and later that whatever happened was "God's will." Fortunately as time has passed, the theological optic of a more educated populace has translated this to read "God helps those who help themselves." Or as the Boy Scouts remind us "Be prepared."

The people of modern nations expect, and even demand, that their governments plan or, at the very least, respond appropriately to major emergencies. Appropriate response, however, requires training, preparation, national political and organizational will, and leadership. There is no evidence that skills needed in disasters are coded into the DNA of leaders or elected officials, or that needed equipment, like manna, can be depended upon

to descend from heaven at needed junctures. Given this unfortunate reality, the only meaningful alternative is effective organization, preparedness, and training. Few shortcuts are available.

International intergovernmental disaster organizations are accepting this reality and are devoting larger proportions of their resources and efforts to preparedness training, organizational development activities, and to new roles as catalysts, coordinators and resource agencies for national and private voluntary organizations in addition to the more traditional roles of rescue and relief. We affirm the role of reason in human affairs, and it is gratifying to see in the intergovernmental sphere hard won lessons learned from action research finally being translated into policy and action.

When we raise our eyes from the road at our feet and from the pebbles in our path to look at a wider vista and reflect a moment on intergovernmental cooperation in disaster, we see that there have indeed been developments which keep hope alive.

When I was working in India in the 70s an old man once reminded me that "it takes many rivers to make an ocean." The new decade offers all of us the chance to add new rivers of thought and the opportunity to raise the consciousness of colleagues working in more traditional vineyards of the professions to let them know that we are able, willing, and eager to contribute.

In concluding, I urge you to make your skills and interests known to those in international organizations, to those in the UN system, and to ask for a place at the table. Those working in the area of psychological and psychic trauma have learned much that can be contributed and that we can and do make a difference. We have also learned, however, that the road is long, the forest deep, and there are miles to go before we sleep. . . .

Today I have pointed to a few doors, and told you a little about what is inside. Only you individually, however, can grasp the handle, turn it, open those doors and enter. I hope you will make the effort. There is genuine promise in the Decade of the 90s for us all.

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World Health Organization, Office of Emergency Relief Operations, Avenue Appia, 1211 Geneva 27, Switzerland.

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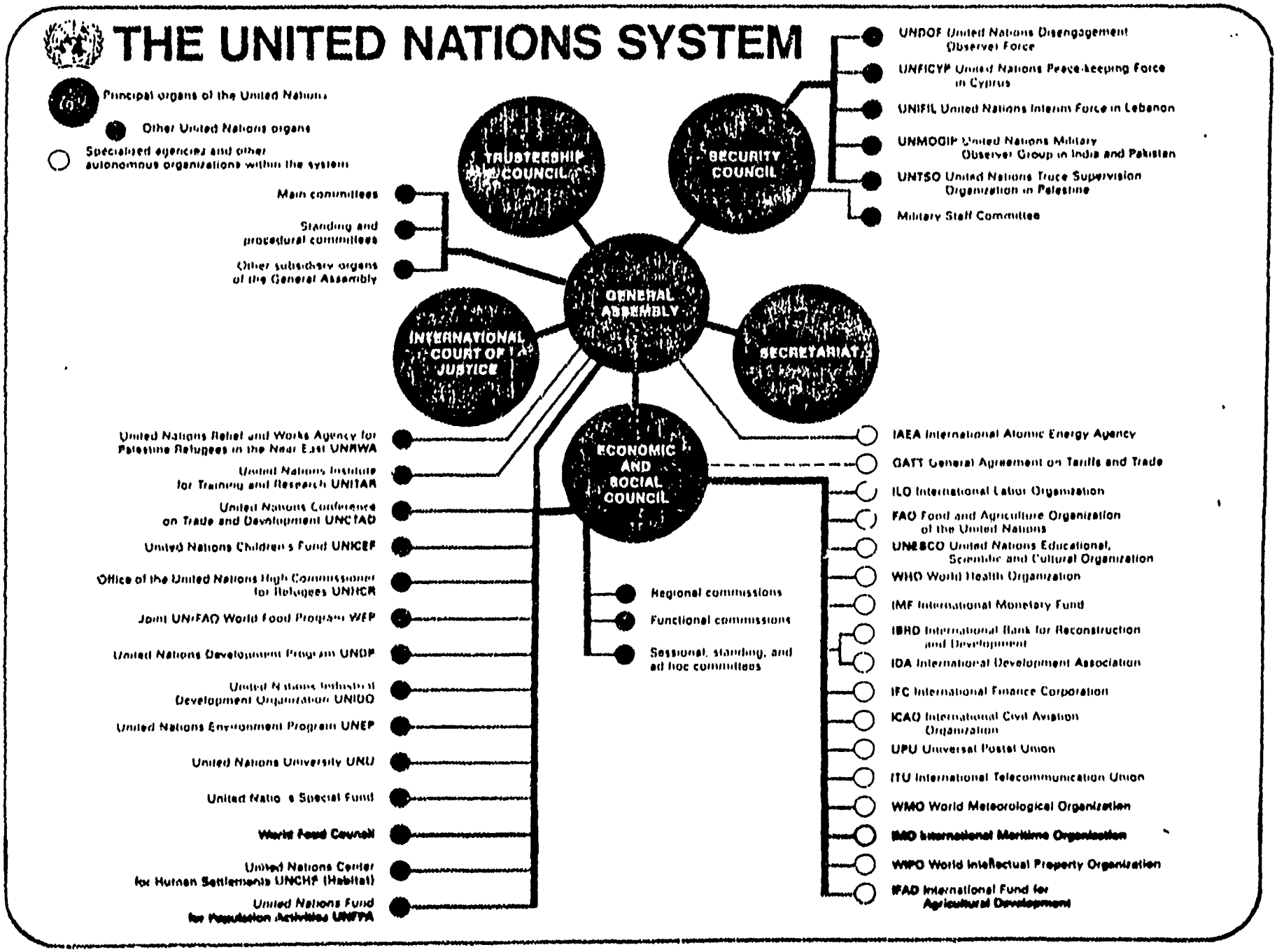
Governmental and Intergovernmental Organizations

1) Governmental organizations: -
   a) Bilateral agencies
      AID, CIDA, SIDA, ODA, FED
2) Intergovernmental organizations: -
   a) Global multilateral agencies
      FAO, WHO, WMO, UNHCR, IBRD
   b) Regional multilateral agencies
      ADB, AfDB, CDB, IABD, PASB
3) Nongovernmental Organizations [NGO's]
      International Red Cross, WMA
4) Private Voluntary Organizations [PVO's]
      Oxfam, World Vision, Save the Children
5) Church Related Groups [CRG's]
      Catholic Relief Society, WCC



International Decade for Natural Disaster Reduction

Resolution 44/236 Adopted at the Forty-fourth Session of the United Nations General Assembly, 22 December 1989

The General Assembly,

Recalling its resolution 42/169 of 11 December 1987, by which it decided to designate the 1990s as a decade in which the international community, under the auspices of the United Nations, would pay special attention to fostering international co-operation in the field of natural disaster reduction,

Bearing in mind the relevant provisions of its resolutions 42/169 and 43/202 of 20 December 1988, as well as Economic and Social Council resolution 1989/99, in which the Council recommended that the General Assembly take action to develop an appropriate framework for attaining the objective and goals of the Decade,

Considering that natural disasters have adversely affected the lives of a great number of people and caused considerable damage to infrastructure and property world wide, especially in developing countries,

Recognizing the importance of environmental protection for the prevention and mitigation of natural disasters,

Considering further that the international community as a whole has now improved its capacity to confront this problem, and that fatalism about natural disasters is no longer justified,

Recognizing the necessity for the international community to demonstrate the strong political determination required to mobilize and use existing scientific and technical knowledge to mitigate natural disasters, bearing in mind in particular the needs of developing countries,

Recognizing further the important responsibility of the United Nations system as a whole for promoting international co-operation in order to mitigate natural disasters, provide assistance and co-ordinate disaster relief, preparedness and prevention,

Recalling the specific responsibilities and functions in the field of disaster prevention and preparedness entrusted to the Office of the United Nations Disaster Relief Co-ordinator as set out in its resolution 2816 (XXVI) of 14 December 1971,

Bearing in mind the crucial role of professional and other non-governmental organizations, particularly scientific and technological societies, humanitarian groups and investment institutions, whose participation in the implementation of specific programmes planned for the Decade is highly desirable,

Bearing in mind further the need for the United Nations system to pay special attention to the least developed, land-locked and island developing countries in that regard,

Emphasizing that appropriate emergency planning for natural disasters and its integration in national development plans could also be very helpful in preventing, as a consequence, other kinds of disasters, such as those of an industrial or technological nature,

Taking note, with appreciation, of the report of the Secretary-General on the International Decade for Natural Disaster Reduction, [1]

Expressing its appreciation for the work done by the International *Ad Hoc* Group of Experts on the International Decade for Natural Disaster Reduction, which submitted its report to the Secretary-General in June 1989, [2]

Bearing in mind the common position on natural disasters of the Ninth Conference of Heads of State or Government of the Movement of Non-Aligned Countries, held at Belgrade in September 1989, [3]

1. *Proclaims* the International Decade for Natural Disaster Reduction, beginning on 1 January 1990;

2. *Decides* to designate the second Wednesday of October as an International Day for Natural Disaster Reduction, to be observed annually during the Decade by the international community in a manner befitting the objective and goals of the Decade;

3 *Adopts* the International Framework of Action for the International Decade for Natural Disaster Reduction contained in the annex to the present resolution;

4. *Requests* the Secretary-General to submit to the General Assembly at its forty-fifth session, a progress report on the imple-

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1/ A/44/322-E/1989/114
2/ A/44/322-E/1989/114/Add.1, annex.
3/ See A/44/551-S/20870, annex.

mentation of the present resolution, including the organizational arrangements made for the Decade, and on the status of existing international protocols and conventions for mutual assistance in case of disasters;

5. *Also requests* the Secretary-General to bring the present resolution to the attention of all Governments, intergovernmental organizations, appropriate non governmental organizations in consultative status with the Economic and Social Council and competent scientific institutions in the field of disaster mitigation;

6. *Decides* to include in the provisional agenda of its forty-sixth session an item entitled "International Decade for Natural Disaster Reduction".

ANNEX

International Framework of Action for the International Decade for Natural Disaster Reduction

A. OBJECTIVES AND GOALS

1. The objective of the Decade is to reduce through concerted international action, especially in developing countries, the loss of life, property damage, and social and economic disruption caused by natural disasters, such as earthquakes, windstorms, tsunamis, floods, landslides, volcanic eruptions, wildfires, grasshopper and locust infestations, drought and desertification and other calamities of natural origin.

2. The goals of the Decade are:

(a) To improve the capacity of each country to mitigate the effects of natural disasters expeditiously and effectively, paying special attention to assisting developing countries in the assessment of disaster damage potential and in the establishment of early warning systems and disaster-resistant structures when and where needed;

(b) To devise appropriate guidelines and strategies for applying existing scientific and technical knowledge, taking into account the cultural and economic diversity among nations;

(c) To foster scientific and engineering endeavours aimed at closing critical gaps in knowledge in order to reduce loss of life and property;

(d) To disseminate existing and new technical information related to measures for the assessment, prediction and mitigation of natural disasters;

(e) To develop measures for the assessment, prediction, prevention and mitigation of natural disasters through programmes of technical assistance and technology transfer, demonstration projects, and education and training, tailored to specific disasters and locations, and to evaluate the effectiveness of these programmes.

B. POLICY MEASURES TO BE TAKEN AT THE NATIONAL LEVEL

3. All Governments are called upon to:

(a) Formulate national disaster-mitigation programmes, as well as economic, land use and insurance policies for disaster prevention; and particularly in developing countries, to integrate them fully into their national development programmes;

(b) Participate during the Decade in concerted international action for the reduction of natural disasters and, as appropriate, establish national committees in co-operation with the relevant scientific and technological communities and other concerned sectors with a view to attaining the objective and goals of the Decade;

(c) Encourage their local administrations to take appropriate steps to mobilize the necessary support from the public and private sectors and to contribute to achieving the purposes of the Decade;

(d) Keep the Secretary-General informed of the plans of their countries and of assistance that can be provided so that the United Nations may become an international centre for the exchange of information and the co-ordination of international efforts concerning activities in support of the objective and goals of the Decade, thus enabling each State to benefit from the experience of other countries;

(e) Take measures, as appropriate, to increase public awareness of damage risk probabilities and of the significance of preparedness, prevention, relief and short-term recovery activities with respect to natural disasters and to enhance community preparedness through education, training and other means, taking into account the specific role of the news media;

(f) Pay due attention to the impact of natural disasters on health care, particularly to activities to mitigate the vulnerability of hospitals and health centres, as well as the impact on food storage facilities, human shelter and other social and economic infrastructure;

(g) Improve the early international availability of appropriate emergency supplies through the storage or earmarking of such supplies in disaster-prone areas.

4. Scientific and technological institutions, financial institutions, including banks and insurance companies, and industrial enterprises, foundations and other related non-governmental organizations are encouraged to support and participate fully in the programmes and activities of the Decade prepared and implemented by the international community, including Governments, international organizations and non-governmental organizations.

C. ACTIONS TO BE TAKEN BY THE UNITED NATIONS SYSTEM

5. The organs, organizations and bodies of the United Nations system are urged to accord priority, as appropriate and in a concerted manner, to natural disaster preparedness, prevention, relief and short-

term recovery including economic damage risk assessment in their operational activities. The Secretary-General is requested, in this regard, to ensure that adequate means are made available to the Office of the United Nations Disaster Relief Co-ordinator so that it may diligently discharge its specific role and responsibilities in the field of disaster mitigation and response in conformity with its mandate, as contained in General Assembly resolution 2816 (XXVI) of 14 December 1971.

6. The Secretary-General, in close association with the relevant organizations of the United Nations system, in particular through the Department of Public Information of the United Nations Secretariat, as well as national information authorities, is requested to assist in the formulation and implementation during the Decade of public information programmes aimed at raising awareness of disaster prevention among the general public.

7. The United Nations resident co-ordinators and the field representatives of the United Nations system are requested to work closely and in a co-ordinated manner with Governments to achieve the objective and goals of the Decade.

8. The regional commissions of the United Nations are urged to play an active role in implementing the activities of the Decade, considering that natural disasters often transcend national boundaries.

9. The Secretary-General is requested to designate the Director-General for Development and International Economic Co-operation, in accordance with his mandate as set out in General Assembly resolution 32/197, as the focal point for oversight and co-ordination of the programmes and activities of the United Nations system referred to above, in close co-operation with the Co-ordinator of the United Nations Disaster Relief Office and, as appropriate, in consultation with the Director of the Decade secretariat mentioned in paragraph 14 of the present annex.

10. The Secretary-General is requested to report biennially to the General Assembly, through the Economic and Social Council, on the activities of the Decade.

D. ORGANIZATIONAL ARRANGEMENTS DURING THE DECADE

1. Special High Level Council

11. The Secretary-General is requested to establish, with due regard to equitable geographical representation, a Special High Level Council, consisting of a limited number of internationally prominent persons, in order to provide him with overall advice with respect to the Decade, to take appropriate action to promote public awareness and to mobilize the necessary support from the public and private sectors.

2. Scientific and Technical Committee on the International Decade for Natural Disaster Reduction

12. The Secretary-General is requested to establish, with due regard to equitable geographical representation and covering the diversity of disaster-mitigation issues, a Scientific and Technical Committee on the International Decade for Natural Disaster Reduction, consisting of 20 to 25 scientific and technical experts selected in consultation with their Governments on the basis of their personal capacities and qualifications and including experts from the organs, organizations and bodies of the United Nations system.

13. The role of the Committee is to develop overall programmes to be taken into account in bilateral and multilateral co-operation for the Decade, paying attention to priorities and gaps in technical knowledge identified at the national level, in particular by national committees; to assess and evaluate the activities carried out in the course of the Decade; and to make recommendations on the overall programmes in an annual report to the Secretary-General.

3. Secretariat

14. The Secretary-General is requested to establish a small secretariat, to be funded by extrabudgetary resources, as follows:

(a) The secretariat shall be established at the United Nations Office at Geneva, in close association with the Office of the United Nations Disaster Relief Co-ordinator, with its members drawn, as appropriate, from the international community of disaster reduction experts and other relevant experts, *inter alia*, seconded from competent United Nations organizations, Governments and non-governmental organizations;

(b) The secretariat shall be responsible for the day-to-day co-ordination of Decade activities and shall provide substantive and secretarial support to the Special High Level Council and the Committee, as well as for other related activities.

E. FINANCIAL ARRANGEMENTS

15. It is recommended that extrabudgetary resources be provided for implementation of the Decade and, therefore, that voluntary contributions from Governments, international organizations and other sources, including the private sector, be strongly encouraged. To this end, a trust fund shall be established by the Secretary General, who will be entrusted with its administration.

F. REVIEW

16. The Economic and Social Council will carry out a mid-term review of the implementation of the International Framework of Action during its second regular session of 1994 and report its findings to the General Assembly.

Co-sponsors of the Resolution:

Albania, Austria, Belgium, Bulgaria, Byelorussian Soviet Socialist Republic, Canada, China, Czechoslovakia, Finland, France, German Democratic Republic, Greece, Hungary, Iceland, Ireland, Italy, Japan, Malaysia*, New Zealand, Norway, Poland, Spain, Turkey, Ukrainian Soviet Socialist Republic, Union of Soviet Socialist Republics, and United States of America.

* *On behalf of the States Members of the United Nations that are members of the Group of 77.*

PTSD IN ISRAELI VETERANS OF THE LEBANON WAR

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One of the inevitable consequences of war--any war--is that there are not only physical injuries, but also psychiatric casualties. During and immediately after the Lebanon War, the Israeli Defense Forces had several hundred psychiatric casualties, who suffered from "combat stress reaction" (CSR). These psychiatric casualties constituted 23% of all the casualties in that war. In the years since the 1982 Lebanon War the actual number of casualties has doubled due to the emergence of delayed reactions. The Israeli Army, concerned with the well being of its soldiers, initiated an extensive multicohort longitudinal research project to examine many aspects of the disorder, ranging from its causes through its diagnosis, course, correlates, and treatment.

In this presentation I would like to share some of the highlights of this six year project. Our aims were to examine: (a) the long term consequences of combat stress reaction (CSR), (b) the effects of repeated exposure to combat, (c) reactivation of combat-related posttraumatic stress disorder, and (d) delayed-onset posttraumatic stress disorder.

The Long Term Consequences of Combat Stress Reaction

Two groups of subjects were selected for this investigation. The first, the CSR group, consisted of soldiers who were diagnosed and treated for CSR during the Lebanon War. CSR casualties participating in the first year of the study numbered 382, 285 the second year, and 213 the third. The second group of subjects, a control group, consisted of soldiers who fought in the same units as the CSR group but did not sustain a diagnosable psychiatric disorder. In the first year 334 control subjects participated, 198 in the second, and 116 in the third. Subjects in the two groups were matched for age, education, rank, and military assignment. Data for this project were gathered from three sources: a large battery of self-report questionnaires, clinical interviews, and computerized IDF data banks.

Our first research question related to the long term sequelae of CSR. Since the most common and conspicuous long term consequence of trauma is posttraumatic stress disorder, we first assessed the rates, type, and intensity of PTSD among CSR casualties and compared non-CSR controls. Among the identified CSR casualties, PTSD rates were quite high throughout all three years of the study: 59% one year after Lebanon, 56% two years later, and 43% three years later. In other words, nearly half of the soldiers who sustained a CSR on the battlefield were still suffering from pervasive diagnosable disturbances three years after their participation in battle. Clearly, for a large proportion of combatants, the war does not end when the shooting stops. For many of the CSR casualties of the Lebanon War, the wartime breakdown was not just a transient episode, but rather crystallized into chronic PTSD from which recovery, if it came at all, was slow.

The control group also showed substantial, if not nearly as dramatic, PTSD rates. Sixteen percent the first year after Lebanon, 19% the second, and 9% the third. It should be stressed that these are diagnosable disorders among men who did not seek help. These figures point to the detrimental

impact of war on men who weathered the immediate stress of combat without a visible breakdown. Undoubtedly, many were not aware that they had a definable disorder, or believed that their symptoms were a natural and inevitable outcome of their harrowing experiences on the front. Others were reluctant to seek help. Similar reluctance to seek treatment has been found among psychiatric casualties of Vietnam. It is all too likely that these silent PTSD veterans signify a much larger number of psychiatric war casualties whose distress is similarly unidentified and untreated.

Of course, we are well aware of the fact that PTSD is a disorder that often goes untreated. Nonetheless, in the current Israeli context the disinclination to seek treatment is surprising. Had these Israeli PTSD casualties sought help for their war related disturbances at any IDF mental health clinic, they would have averted the very real risk of being sent back to the front.

I can suggest two possible explanations. One has to do with the fact that the control group differs from the CSR group not only quantitatively, in terms of their PTSD rates, but also qualitatively. Our findings suggest that the PTSD in the control group was less severe and distressing than in the CSR group. Earlier studies have shown that seeking treatment for psychiatric disorders and adopting the sick role, are often related to symptom severity.

Another possible explanation is that veterans who did not identify themselves as PTSD casualties by seeking treatment were highly motivated to continue serving in the army and were not interested in obtaining the possible secondary gains of illness. In Israel, masculine identity is very strongly associated with army service. Identifying himself as ill may well entail a heavy price for the veteran both in self-esteem and social acceptance.

Getting back to the point at hand: if we accept the judgement that these PTSD rates are high, the question of <u>why they are high</u> naturally arises. Here, of course, we can only offer our speculation, which is that the high rates may well reflect the continuing threat of war in Israeli society. When our first and second measurements were carried out (summers of 1983 and 1984), the Lebanon War had not completely ended. Although the heavy fighting lasted only through several weeks of the summer of 1982, the cease-fire signed in August of that year did not put an end to all hostilities. Israeli soldiers were still stationed in Lebanon where periodic flare-ups continued to occur. All of our subjects, like other Israeli men aged between 22 and 45, still served in Israel's reserve forces and could have been recalled at any point for active duty in Lebanon. The soldiers who were traumatized in Lebanon, whether with immediate or latent manifestations, continued to be bombarded by threatening military stimuli. I believe that such exposure may well have impeded their recovery.

By the third year of the study, both the rates and intensity of PTSD decreased significantly in both groups. Time and circumstances seem to have combined in fostering healing. Similar improvements over time have been found in PTSD following other catastrophes. Moreover, just before the third wave of questionnaires was administered, Israel finally pulled most of its troops out of Lebanon. Hence, the very real threat of being sent back to the front was lifted and many PTSD veterans could breathe a sigh of relief and embark on the road to recovery. But these are the luckier ones: 43% of the CSR group and 10% of the controls continued to suffer.

The effects of repeated exposure to combat

Israel's many wars have compelled us to assess the impact of recurrent combat exposure. Since most countries are fortunate enough not to have to require the same soldiers to fight in repeated wars, there has been little research on this subject. The literature on adversity offers three alternative perspectives: (a) the vulnerability perspective considers repeated exposure to stressful events to be a risk factor, since it drains a person's coping resources; (b) the stress inoculation perspective holds that repeated stress serves as an "immunizer" in that it fosters the development of effective coping strategies and promotes adaptation; and (c) the stress resolution hypothesis postulates that what matters is not so much the fact that a person was exposed to a particular stress, but how he coped with it.

To assess the validity of these theories, we presented the subjects a list of seven Israeli wars and, for each, asked them to indicate whether or not they had participated in combat and whether or not they had sustained a combat stress reaction.

CSR rates in the Lebanon War were highest among soldiers who had sustained a prior stress reaction (66%), lowest among soldiers who had fought previously without a stress reaction (44%), and in between among soldiers with no prior war experiences (57%). These figures suggest that the successful resolution of previous stress indeed helps soldiers to cope with subsequent battle. But they also indicate that novice soldiers are better off than those who broke down in a previous war. Although not every soldier who sustains a CSR is doomed to a second breakdown under similar circumstances, it is clear that a CSR leaves most of the casualties more vulnerable the second time around.

The reactivation of posttraumatic stress disorder

As my colleagues and I were going through the files of the second time casualties in Lebanon, we found ourselves reading more and more about their experiences in the 1973 Yom Kippur War, when most of them had suffered their first CSR. Far from being fresh episodes, their second reactions seemed to echo the content of their Yom Kippur War experiences (nine years earlier). Reactivation of stress reaction is a well known phenomenon. Widows, rape victims, Holocaust survivors, and American war veterans all respond with reactivated symptomatology when reminded of their traumatic experiences. We delineated four types of reactions ranging in severity and functional disability.

1. Uncomplicated reactivation. These veterans (23% of the sample) seemed to have completely recovered from their Yom Kippur CSR. They were virtually symptom-free between the wars. The first indication that all was not well came with their breakdowns in the Lebanon War which were generally precipitated by a threatening incident directly reminiscent of their Yom Kippur experience.

The rest of the cases are more aptly termed exacerbated PTSD. Here the earlier CSR left more visible residuals, and veterans continued to suffer from PTSD symptoms. Moreover, these men were sufficiently vulnerable for their second reaction to be triggered by an incident unrelated to the earlier trauma and in many cases one that did not pose a direct or immediate danger. The exacerbated PTSD cases were subdivided into three groups.

2. The Specific Sensitivity group (51%) consisted of men who suffered from mild diffuse PTSD symptoms which did not interfere with their day to day functioning, and from heightened sensitivity to military stimuli. During reserve duty they tended to be tense and withdrawn and to have stress related symptoms, but so long as their tours of duty were uneventful, they functioned adequately. Their residual or subclinical PTSD developed into a full blown syndrome when they were exposed in Lebanon to a direct military threat, often similar to that which had provoked their Yom Kippur breakdown.

3. The veterans in the third group (9%) showed Moderate Generalized Sensitivity in both their civilian and military lives. They suffered from residual symptoms that sometimes impaired their functioning. To cope with their distress, a few resorted to alcohol or drugs; others developed phobic reactions. Some did everything in their power to avoid contact with weapons, even while they were in active reserve duty. During the Lebanon War, these men went to the front, but developed CSR in response to relatively minor military stimuli, and some were discharged even before they saw actual combat.

4. The fourth group, the Severe Generalized Sensitivity group (17%), consisted of the most seriously ill veterans who suffered from severe generalized sensitivity throughout the entire inter-war period. Their lives were dominated by their PTSD, and their behavior was so bizarre and phobic that their still being listed on the IDF's active roster could only be regarded as an oversight. For such veterans, the mere arrival of the call-up order to Lebanon brought on an immediate and severe stress reaction. Many of these men never saw combat before having their second breakdown.

It should be emphasized that all these casualties who had reactivated or exacerbated PTSD in Lebanon had put a great deal of effort into their functioning--especially in the military--in the nine years between the wars, and generally succeeded. Most of them married, started families, and worked. None were hospitalized. All continued to serve in the reserves, despite the fact that their symptoms were intensified in the presence of military stimuli. Many hid their symptoms from their friends, families and army commanders. Their second reaction revealed the psychological damage that the first breakdown had created and deepened it. In general, there were more symptoms following the second reaction than the first, and the symptoms were more intense and debilitating.

Delayed PTSD

The manifestations of trauma sometimes are, or seem to be, delayed. Delayed onset occurs when an individual at first appears to respond adaptively to traumatic stress but then develops psychopathology after an asymptomatic latency period. As I mentioned earlier, the number of psychiatric casualties stemming from the Lebanon war doubled in the years that followed it. This issue raised a considerable amount of interest. Delayed PTSD has been described among World War II veterans and survivors of the Holocaust. Yet it became a major issue after the Vietnam War. At the same time, the validity of this diagnosis was questioned as some clinicians claimed that malingering, fictitious symptoms, drug abuse, and precombat psychopathology were mistakenly diagnosed as delayed PTSD.

In order to study this issue, we examined 150 randomly selected files of veterans who sought treatment from six months up to five years after the end of the Lebanon War. Assessment of the files revealed five categories of combat related PTSD.

1. Delayed Onset PTSD. Only 10% of our sample consisted of soldiers who came through the Lebanon War with no apparent psychiatric disturbance and who were asymptomatic and functioned well during and for some time after the war. The latency period lasted from several months to several years. Then following exposure to stressful stimuli, their latent disturbance surfaced, and they applied for treatment.

2. Delayed Help seeking for Chronic PTSD. Forty percent of the sample were already suffering from chronic PTSD which DSM-III defines as PTSD having a six month or longer duration, when they sought psychiatric help. Unlike the soldiers in the previous group who had mild, subclinical symptoms throughout the so-called latency period, these subjects suffered from the full-blown syndrome right from around the time they fought in Lebanon. They sought help not when an external trigger exacerbated their symptoms, but when they could no longer bear their distress, usually during reserve duty. These soldiers put a great deal of effort into containing a relatively severe and disruptive disturbance before they finally gave up trying to cope with it on their own. Not infrequently, treatment was initiated by a family member who could no longer endure the pressure that the casualty's symptoms created.

3. Exacerbation of Subclinical PTSD. Thirty-three percent of the sample experienced exacerbation of subclinical PTSD. These individuals were traumatized on the front in 1982 and suffered uninterruptedly from mild residual PTSD symptoms until accumulated tensions or exposure to subsequent adversity, either military or civilian, resulted in a full blown PTSD syndrome. Reserve duty was the major military trigger. Other triggers included life events such as marriage and the birth of a child. The veterans in this group sought professional help when their subclinical symptoms were exacerbated.

4. Reactivation. Thirteen percent of the sample showed reactivation of an earlier CSR episode. These veterans were also asymptomatic for a certain period following their participation in the Lebanon War. Most of them experienced a reawakening of their earlier trauma in connection with threatening military stimuli, such as a call-up to reserves or a change in military unit. In other cases there was no single trigger, but rather the accumulated stress of repeated military exposure to both actual warfare and periodic reserve duty.

5. Other Psychiatric Disorders. Four percent of the soldiers had mild, transient prewar psychiatric disturbances. They sought help for underlying problems which were either triggered or colored by their war experiences, but which were not originally induced by military events.

In general, our results show that the genuinely delayed onset of PTSD was quite rare in our sample. By far the most prevalent phenomenon was delayed help seeking for ongoing combat-induced disorders of various degrees of severity. The relatively low rates of delayed PTSD might be due to the relatively short follow-up period. A longer follow-up of our sample may reveal a higher rate of delayed PTSD following a longer latency period and with aging.

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THE NATIONAL CONTINGENCY DISASTER MEDICAL CARE PROGRAM

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Experience in the management of mass casualties, following a disaster or major trauma is relatively sparse. The paper examines the process of medical care needs, leading to a plan of community or a National Disaster Medical Care System. We describe the national Israeli plan that is based on complete Military Civilian Contingency, general guidelines are stressed that may be helpful to those involved in similar projects on hospital, community, and national levels.

Man-made or nature-induced disasters have determined that mass casualties are an integral part of modern life. Disaster medicine is the tool whose purpose it is to provide rapid and efficient primary emergency medical services for the stricken population on a large scale to ensure survival. A major concern of disaster planners is to design a medical response system that responds in timely, appropriate and quality fashion. Such a system designed for disaster situations must be exercised.

Generally, two types of operations succeed each other rapidly: survey of the affected area and provision of immediate medical help. In further stages of treatment to the injured community, damage and relief evaluation, social care and psychological help are introduced. The planning and organization of the general hospital are an integral part of the community primary field medical treatment plan, transportation, evacuation and the provision of secondary and tertiary medical care.

Although during its 40 years of existence Israel has experienced six wars, most casualties are due to civilian causes such as road and labor accidents (Table 1). Summary of 10 years of civilian casualties, on the national level, shows similar data (Table 2). The strategic medical plan in Israel is based on primary treatment on the site, before transportation, and ultimate treatment in the rear civilian hospitals (Danon, Nili, & Dolev, 1984; Maggan, 1975).

Since there are no military hospitals in Israel, during mass casualty/disaster (defined as one involving at least 20 injured people) any or all hospitals in the area may be placed under the command of the Surgeon General who is in charge of the evacuation and distribution of the wounded to different hospitals, in addition to primary treatment and triage on site of the event (Eisenberg & Danon, 1984). In order to implement this strategy all hospitals in Israel are required to organize a written emergency plan for disaster procedures (Danon & Haliel, 1985).

In our system, each hospital is tested once or twice yearly with mass casualty exercises in which, after 15 minutes warning, 20-100 mock wounded (depending on the size of the hospital) are sent to it within 60-90 minutes. From our experience with these exercises and the many actual mass casualty situations, it is clear that the task of evaluating the medical treatment in terms of peer review of the hospital plan requires a more detailed approach.

On the national level all health institutes of the country are organized in the Supreme Authority for Hospitalization (Table 3) which divides to Hospitalization and Regional Health Authority. All psychiatric institutes are part of the Regional Health Authority.

The Regional Health Authority has the following roles:

Regional Health Authority:

1. Preserving the continuous medical support for the civilian population by in- and out-patient clinics and community services;

2. coordination with "Red Star of David" towards the continuous services provided to civilian patients;

3. continuation of general health services, based on local community facilities.

The Authority of Hospitalization is involved with the planning and execution of contingency plans of the national institutes, medical centers and hospitals. The roles of the authorities are as follows:

Authority for hospitalization during emergency:

1. Expansion and deployment of hospitals detachment branches;

2. execution of detachment's plans;

3. execution of preplanned evacuation of hospitals;

4. controlling and coordinating the allocation of means.

The Supreme Authority for Hospitalization is run on complete contingency between the Medical Corps of IDF, the Ministry of Health and major insurers (HMOs). Its tasks are executed through a list of committees (Table 4). On the regional level the Surgeon of the Regional Military Command executes the plan of the authority.

In Israel the ability of hospitals to handle mass casualty events is periodically evaluated by the Surgeon of the Regional Command. The objectives of such drills are to evaluate and assess the resources and the treatment capability of the hospital undergoing exercise. Once a year a regional community exercise is performed involving mobilized mental health platoons, hospital and community mental health and hospital-social workers staff that organizes treatment and information centers on the hospital and community level (Naggan, 1975).

In case of mass casualties, the initial primary treatment, triage, transportation, and communications should be properly designed and the goals attained. There should never be a situation where a hospital is overwhelmed with mass casualties. Instead there should be a proper distribution of casualties to predesignated-designated and prepared hospitals, the hospital exercise being an important ultimate phase of the planning and preparation of the community for disasters or war (Pfefferman, Rozin, Durst, & Marin, 1976).

The simulated casualties, as well as the exercised teams, all benefit from an educational drill with the real simulation of mass casualty situation.

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TABLE 1

ROAD ACCIDENT CASUALTIES IN ISRAEL 1980 - 1988

YEAR	ROAD ACCIDENTS				CASUALTIES			
	FATAL	MAJOR	MINOR	TOTAL	KILLED	SEVERELY INJURED	LIGHTLY INJURED	TOTAL
1980	389	2,624	9,820	12,833	433	3,281	114,280	17,994
1981	366	2,604	10,223	13,193	440	3,329	14,823	18,592
1982	339	2,434	9,963	12,736	686	3,138	14,937	18,761
1983	386	2,861	10,595	13,842	4[illegible]	3,578	15,934	19,948
1984	360	2,620	10,193	13,173	400	3,385	15,325	19,110
1985	326	2,422	10,029	12,777	387	3,122	15,201	18,710
1986	368	2,594	11,614	14,576	415	3,331	17,458	21,204
1987	440	2,934	11,544	14,918	497	3,772	17,964	22,233
1988	448	3,953	12,001	15,502	503	3,937	18,878	23,318
TOTAL	3,422	24,146	95,982	123,550	4,197	30,873	144,800	179,870

Total road-accident casualties 1980-1988 = 179,870

Total road-accidents 1980-1988 = 123,550

TABLE 2

CIVILIAN CASUALTIES IN ISRAEL 1970 - 1980

Source of Casualty	Type of Casualty		
	Death	Injuries	Total
Terrorism [a]	272	1.584	1.856
	(2.9%) [b]	(0.5%)	(0.55%)
Criminal Violence			
- Murder	449		449
- Manslaughter	549		549
- Assault	---	76.664	76.664
Total	998	76.664	77.662
	(10.6%)	(23.4%)	(23.0%)
Car accidents [c]	6.312	212.511	218.823
	(66.9%)	(64.8%)	(64.9%)
Labor accidents	1.842	37.013 [d]	38.855
	(19.6%)	(11.3%)	(11.55%)
T O T A L	9.424	327.772	337.196

Notes:

[a] Reference - Israel Defence Forces Spokesman;

[b] % of Total;

[c] References - Statistical Abstracts of Israel. Vol. 22-31 (1970-1981) Publisher: Central Bureau of Statistics, Jerusalem, Israel.

[d] Total disability only.

TABLE 3

NATIONAL AUTHORITY FOR HOSPITALIZATION

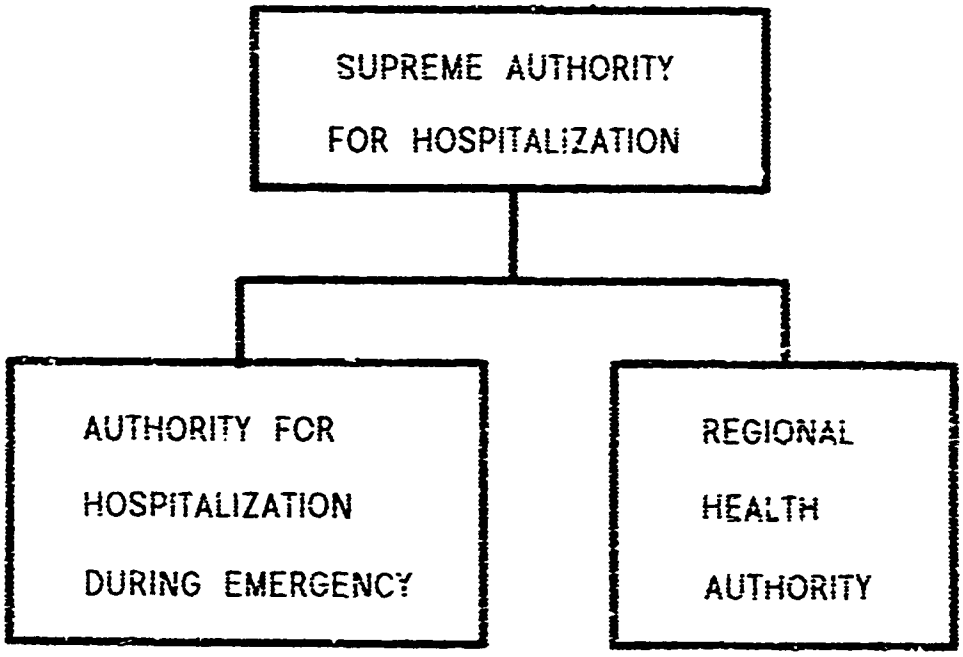
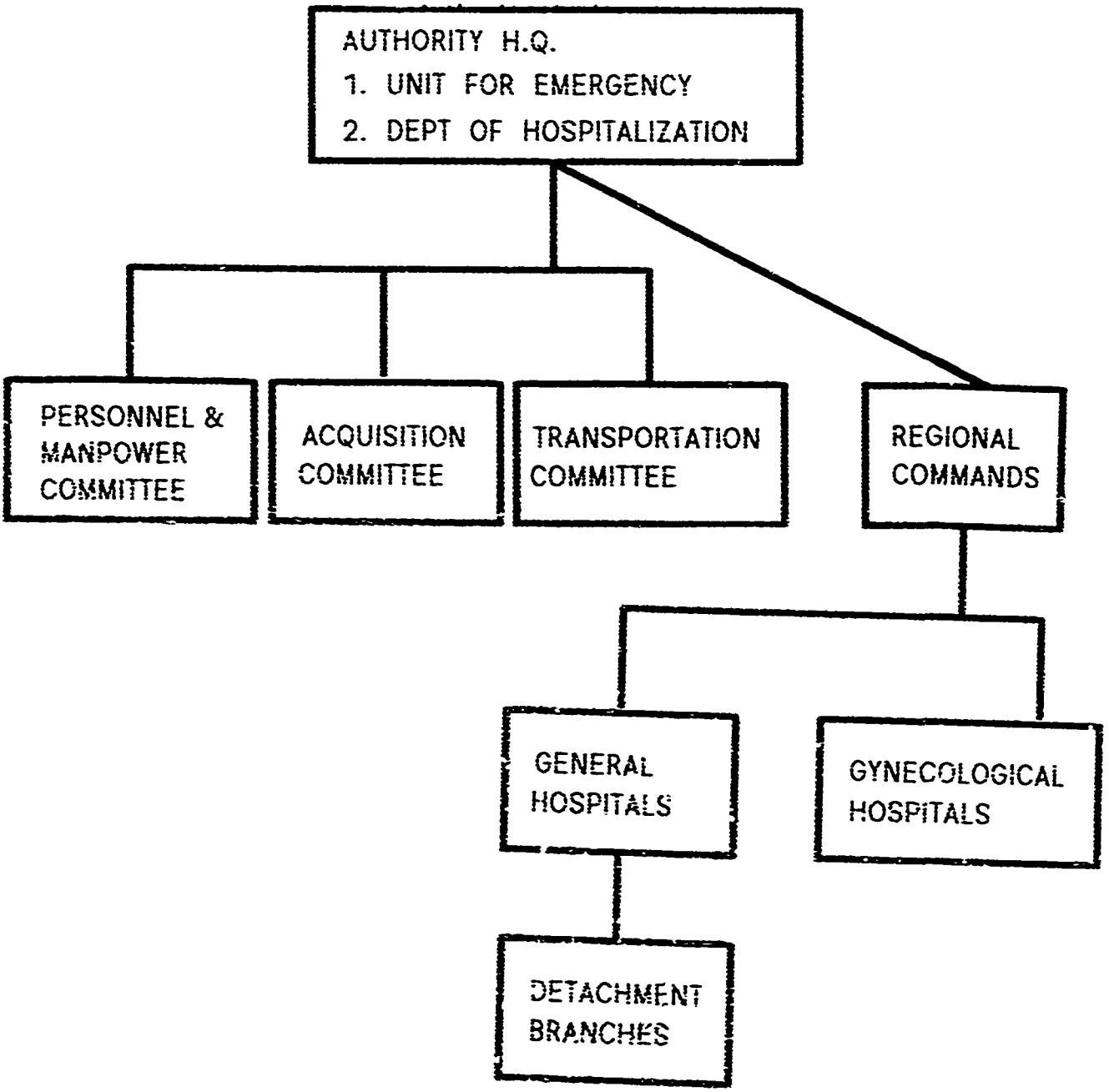


TABLE 4

THE SUPREME AUTHORITY FOR HOSPITALIZATION



RESCUE PERSONNEL AND THE TRAUMAS OF DISASTER

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When a major disaster strikes, many people will be traumatically affected at the same time and as an effect of the same event, usually under very dramatic circumstances. The psychological effects of threat and personal losses will not only be an addition of individual reactions.

In follow-up studies after major disasters, it has been shown that indirectly affected persons might develop PTSD-like reactions. Several studies on fire fighters, ambulance staff, police, etc. have been performed. These indirectly affected persons have sometimes gone through a systematic debriefing for their own emotional reactions.

A group of 144 rescue and health care personnel have been followed-up 10 years after a major fire disaster. Over 90% returned a questionnaire which focused on post traumatic stress reactions. Some of the findings will be presented and compared with psychological reactions among the Swedish rescue personnel (N=50) who were sent to Armenia in December 1989.

The traditional Swedish training programs for rescue and health care personnel will be presented as well as the need for further education and training.

What can we learn from training in military settings--similarities or differences?

The impact of the disaster event on rescue workers will depend on several factors. First it is necessary to consider the possibility of carrying through with effective rescue work. This depends among other things on the climate or weather; how far away from emergency care the accident has occurred; whether there are any survivors or not; whether the accident has occurred in the air, ashore, or at sea. It is also important to consider the distance between the "epicenter" of the disaster and the homes of survivors and relatives. The accident with no survivors and lots of more or less mutilated dead bodies will imply an extra strong psychological stress. Even when the dead bodies have been brought away, visiting the disaster area might give strong impact.

The Boras fire and its aftermath

On June 9, 1978, the spring term of all Swedish schools ended, and, around the country, thousands of young people between 18 and 22 were celebrating their graduation. This was also the case in Boras, a town of little more than 100,000 inhabitants in the centre of the textile industry area, 60 kilometers east of Gothenburg. This evening one of the main hotels in Boras, The City Hotel, had over 500 young guests in the two restaurants, the nightclub and the disco. In the early morning of June 10, at 2:35 A.M., during the last dance, a disastrous fire broke out. It started like an explosion on the first floor. Within a few minutes the whole place was like an inferno with black smoke, heat and chaos. When the fire started about 175 people were still in the restaurants. Twenty of them were killed.

The rescue and health care personnel (n=154) were surveyed with questionnaires and personal interviews 10 months after the disaster. The response rate to the questionnaires was high, 93.5% (n=144) (see Figure 1). This high rate of response was seen as evidence that such an investigation is of great interest to rescue workers and might perhaps meet a need. It was found that 50% had close contacts with the injured and about the same with relatives to the fire victims. Fifty-four persons were involved in transportation of the dead bodies and 17 in identification. It was possible to identify some reactions that might be associated with post traumatic stress disorder (see Table 2).

Eighty-three persons had had some education and training in disaster reactions, but most of these found their education inadequate. The psychological reactions started for around 50% of the rescue personnel in the early stage of the rescue operation--for some virtually as soon as they were confronted with the disaster.

Three types of reactions were found:

1. those with a profound initial experience of chaos and shock,
2. those with no such experiences but who described a gradually increasing awareness that this situation was a tragedy which caused various emotional reactions later during the acute phase,
3. a third small group described neither feelings of chaos nor any evident reactions later.

Some rescue workers developed a so-called "superman reaction," which means that they functioned effectively and without emotional reactions whilst wearing their uniforms. They developed symptoms and reactions later.

How to follow up disaster workers

Disasters are very different. It is therefore difficult to try to compile a standardized, fixed questionnaire, except for certain dependent variables. It is, however, important that specific areas are covered. Psychological and psychiatric effects can then be measured in a similar way across disasters.

Professionals versus nonprofessionals

In the most acute phase of a disaster, there will sometimes mainly be nonprofessional rescuers. The onlookers could be classified as "helpless helpers." It is of great importance to follow-up also nonprofessionals since these persons mostly present a lower degree of stress tolerance in combination with a high stress load.

METHODOLOGY

There will always be a shortage of time when planning the research design for a group of rescue workers. It is beneficial to start with a personal, close and accurate interview with the leaders of the rescue team. The rationale for this is to obtain a detailed description of the preparedness, the situation, the equipment and the individual efforts (Who did what?). It will then be possible to choose a more appropriate formulation for the questions.

1. It is highly desirable that the research project will be perceived as a "we-project," which probably will result in a low frequency of dropouts.
2. The next step will be to distribute a short and nonintrusive questionnaire (Moment 1) to all rescue workers (see Table 4). This should be part of the early debriefing activities. Ideally the questionnaire is also "therapeutical" in a way.
3. The first follow-up (Moment 2) will be the main questionnaire completed with self-rating scales and screening of risk groups.
4. In the follow-up survey (Moment 3) some questions will be repeated; the main purposes of the follow-up are to identify cases of PTSD, to confirm findings from the second survey and to get information that might provide improvements in selection, education and training.

The questionnaires should be completed with at least two open-ended questions:

1. What was the most stressing situation for you?
2. What was the most important factor that contributed to your ability to manage well?

Debriefing activities

Rescue workers, who have been under extreme psychological stress with traumatic experiences or an overwhelming personal threat, might develop post traumatic stress disorders. The experiences have to be psychologically worked through. It is important to talk about one's experiences--about what has been done as well as about feelings of insufficiency and guilt.

Systematic debriefing should be defined as a professional activity with the aim to facilitate or make possible an emotional working through of a traumatic experience among rescue workers. Debriefing must always be carried through as a "we-project"--see above.

The Armenian experience

On December 7, 1988, a disastrous earthquake hit southern Russia. It had its epicenter in the cities of Leninakan and Spitak in Armenia (Picture 4). An official request for help was sent out from the Soviet authorities to the western world. Two groups of rescue workers departed from Sweden in two flights on the 10th and the 12th. After four days of rescue work, almost 24-hour working days, and living in the center of the disaster area, the Swedish group went back home after a 24-hour stay and rest in Jerevan, arriving in Stockholm on December 17.

The members of the Swedish group had got 2 hours to consider whether they wanted to participate before departure to Armenia. Some of them knew each other in advance (some of the fire fighters had been trained together), but only very few had earlier experiences of really heavy disaster work. During the stay in the disaster area, the Swedish group (n=50) had their campus on one side of a main street--opposite a collapsed factory and a collection area for dead bodies and a stock of coffins. During the 4 days of rescue work in Leninakan, there were no possibilities to get in contact with their families at home. Almost all telephone wires were broken.

The group consisted of two subgroups: professional and nonprofessional rescue workers. Professionals are those who have been educated and trained for rescue work and who have experienced mass casualties or disasters. The fire fighters might have a long professional career, but ordinarily they have had little or no education in psychological effects of the trauma of disaster on different affected groups.

Before the Swedish rescue team returned from the mission in Armenia in December 1988, it was decided to realize a systematic debriefing. It was, however, difficult to plan this in detail since very little was known about what the rescue workers had gone through during the week in Leninakan. The debriefing of the Swedish group was performed as a joint activity between occupational health service and disaster psychiatry and together with leaders from the National Rescue Services Board which, by order of the government, organized the Swedish response team.

Debriefing performance

It was decided that no relatives should be at the airport to meet the rescue workers. Immediately after arrival, December 17 at 10:00 P.M., the whole group was brought to a special arrival hall apart from the public. The Minister of Defence made a short speech to the group on behalf of the government. Following this, the whole group was informed about normal reactions and symptoms under and after an extremely stressful situation. This information was focused on personal feelings and attitudes toward the environment. These two first parts of the "structural debriefing" lasted around 15 minutes and included a short leaflet with information about normal reactions and a very brief and nonintrusive questionnaire about the actual situation.

Due to practical reasons, it was then decided to have group sessions during the first week--everyone should have been debriefed before Christmas. Interventions, group sessions, meetings, and questionnaires are presented in Table 5.

The emotional debriefing was carried through with groups of people with the same occupational background. It would, however, probably have been better with debriefing of the "rescue teams" (i.e., those who had been working together: one or two dog handlers, two firemen and an interpreter).

The follow-up studies

The rescue work in Armenia was a very special experience for all groups of rescue workers. It was, therefore, considered to be of great importance to perform a systematic follow-up during the first year (see Table 5). The questionnaires were compiled following the guidelines in Raphael et al. (1989).

RESULTS

Only one person did not return any of the three questionnaires. The rescue workers were between 22 and 55 years of age, most of them 30 to 49. When analyzing the data with respect to background variables and variables of reaction, it was of interest to compare rescue workers who had experiences from earlier missions or work in a disaster area or rescuing victims of big accidents (professionals) with those who had no such experiences (nonprofessionals) (see Table 6).

In the 9-month follow-up questionnaire, there was a clear difference in frequency of returned questionnaires between professionals and nonprofessionals (Table 7). Both groups had experienced major personal losses (death of a close relative or divorce) during the last 3 years. It was interesting to note that both groups were unsatisfied with their education in disaster behaviour.

There was a marked and significant difference between professionals and nonprofessionals concerning unpleasant feelings both during the first week and in the long-term follow-up: professionals experienced unpleasant feelings to a significantly higher degree during the first week. After 9 months, the difference was opposite. This might be explained by a tendency among professionals to allow themselves to react in the acute phase and difficulties for nonprofessionals to work through their emotional feelings later during the first year.

Further training in rescue technique was judged as highly important for the training of disaster workers. Theoretical knowledge and practical skills in emergency care as well as disaster psychiatry was also judged as important.

Those who were well prepared to meet a disaster like this had during the first week after returning home as well as 9 months later a significantly better ($P<0.05$) feeling of having managed well. Professionals and nonprofessionals did not differ significantly in the GHQ-28 scoring 9 months later or in IES-15. There were no differences between professionals and nonprofessionals concerning depressive feelings, nightmares, or sleep disturbances.

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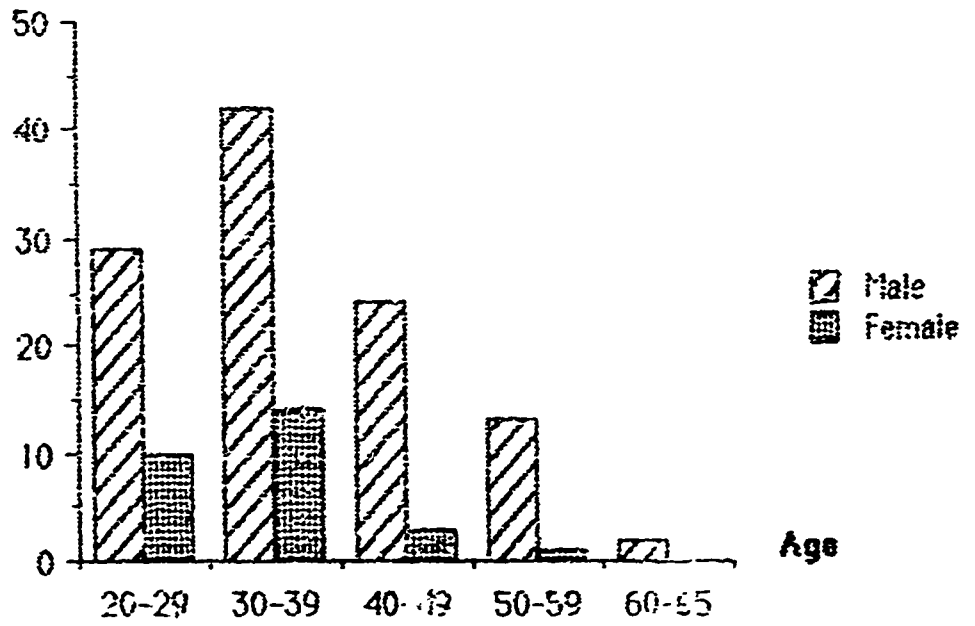


Figure 1 Rescue workers in Oslo 1978
Age and sex distribution

	Recurrent and intrusive thoughts	Repetetive night-mares	Sleep disturbances
Often	66%	3%	8%
Sometimes	30%	19%	28%
Seldom	4%	58%	64%

Table 2 PTSD-symptoms among rescue and health care personnel (N=144)

On duty	Reserve	Voluntary	Additional
fire-fighters police health-care ambulance staff	civil defence rescue center social services emergency telephone operators some groups of health care personnel	Red Cross dog handlers army	industrial civil defence press home defence military forces

Table 3 Groups of disaster workers in terms of appearance on the scene of the disaster.

	Moment 1	Moment 2	Moment 3
type of survey	primary survey	main survey	follow-up
when?	within the first week	after one month	between 6 & 12 months
content	a few relevant questions	complete questionnaire	repeated questions + follow-up
scales	IES-15	IES-15 GHQ-28 PTSS-10 Life-events	IES-15 GHQ-28

Table 4 Procedure chart for studying rescue personnel

1988		
Dec. 17	22.00	Information for the whole group
Dec. 18	08.30	Rescue teachers (N=4)
Dec. 18	10.00	Dog handlers, two parallell groups (2 x N=8)
Dec. 21	08.00	Rescue teachers (N=6)
	20.00	Interpretors (N=2)
Dec. 22	11.00	Fire-fighters (N=17)
Dec. 23		Two telephone-calls
1989		
Jan. 12		Second questionnaire (main survey)
Jan. 21	11.00 - 23.00	General meeting for the whole group (48 participants from the Swedish group)
Sept 22		Third questionnaire (follow-up)

Table 5 Interventions with the Swedish group of disaster workers in Armenia.

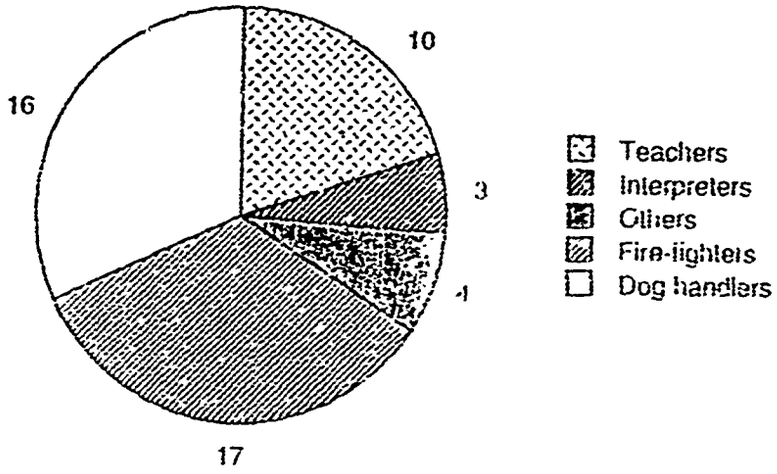
PROFESSIONALS (N=20)		
	Fire-fighters	(N=17)
	Teachers	(N=2)
	Surgeon ("Others")	(N=1)
NON-PROFESSIONALS (N=29)		
	Dog handlers	(N=16)
	Teachers	(N=7)
	Others	(N=3)
	Interpreters	(N=3)

Table 6 Subgroups of rescue workers in the three follow-ups after Armenia

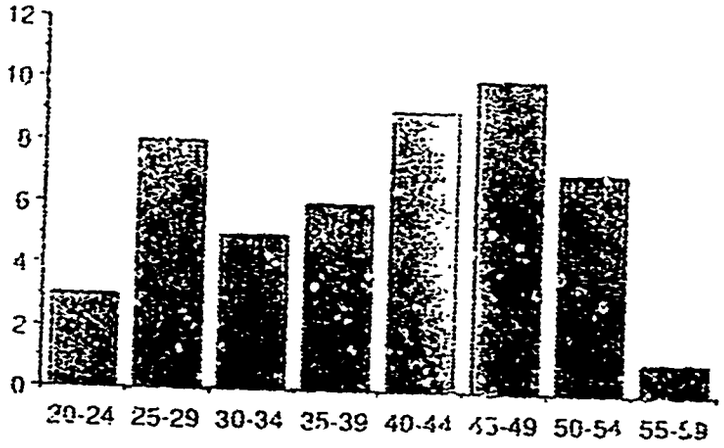
	Professionals (N=20)	Non-professionals (N=29)	Total (N=49)
Frequency of returned questionnaires			
1	80%	72%	76%
2	80%	86%	84%
3	95%	76%	84%
Major losses during the last three years	41%	59%	41%
Education in disaster behaviour	100%	52%	71%
Education judged as sufficient	27%	23%	25%

Table 7

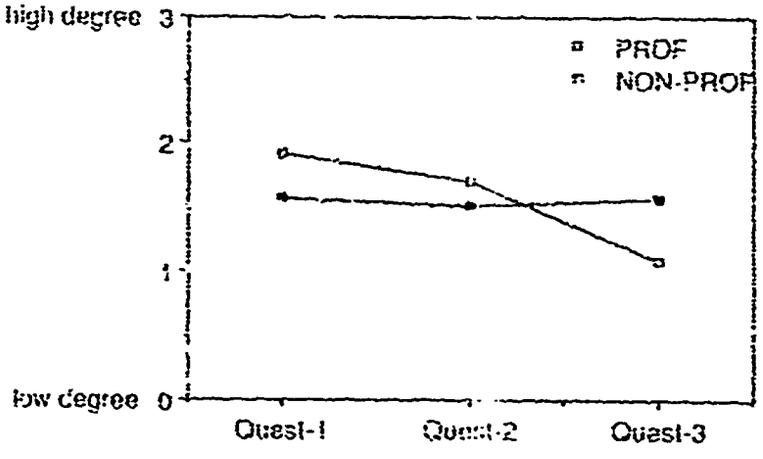
Rescue Workers, Distribution by Groups

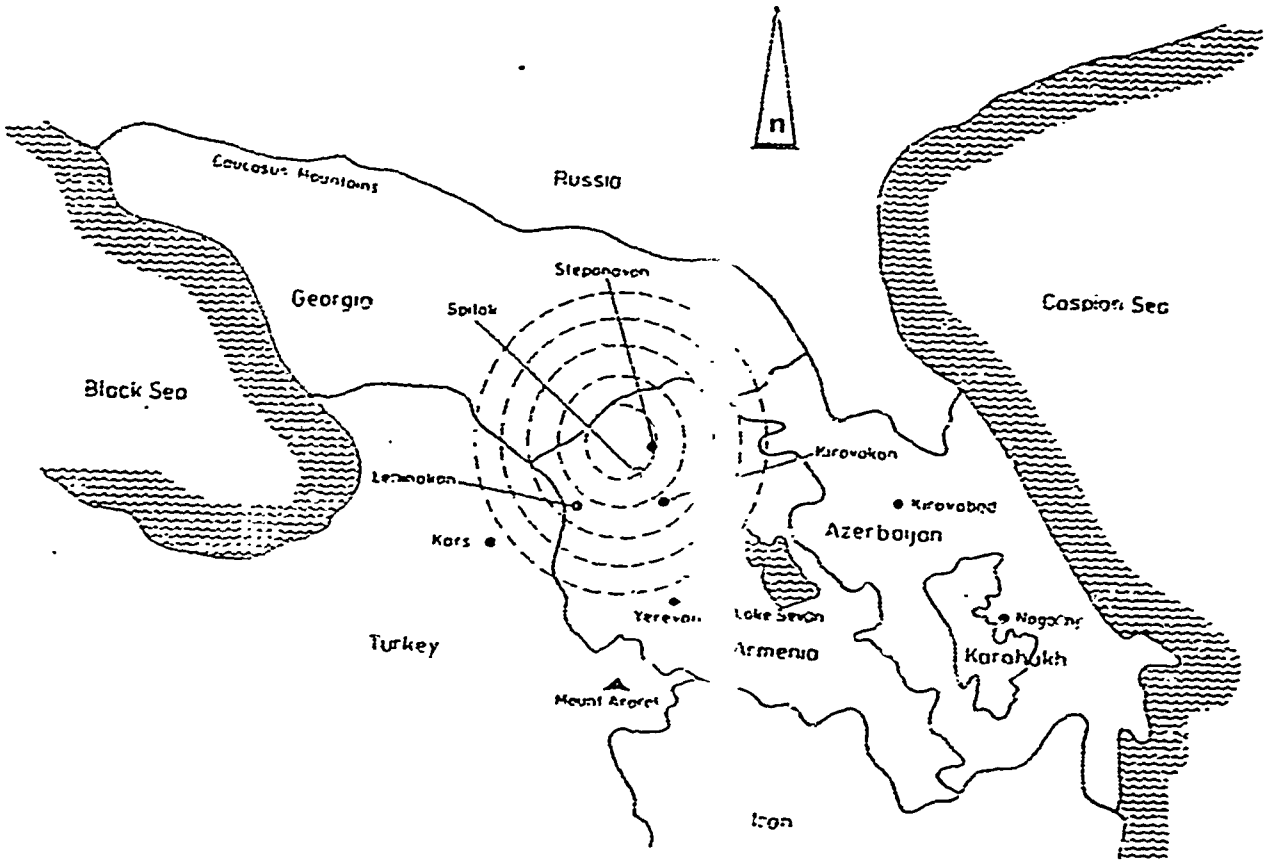


Rescue Workers, Distribution by Age



Unpleasant feelings

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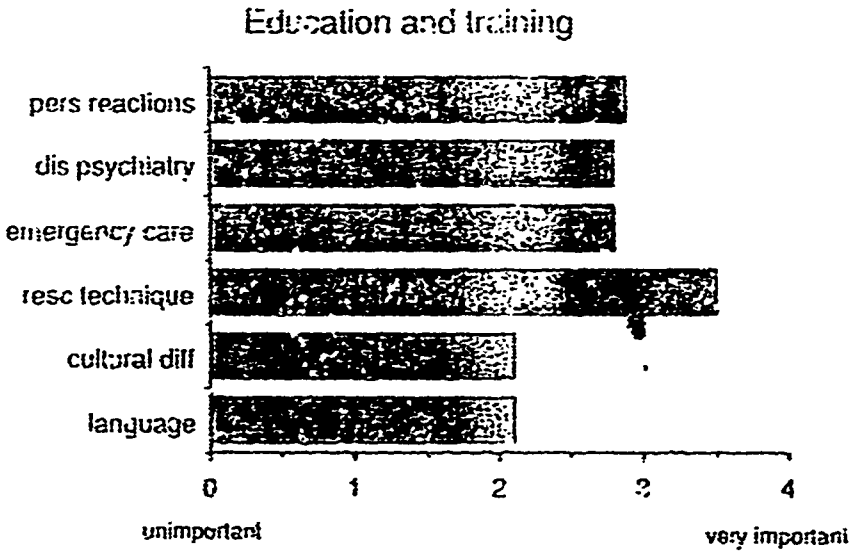
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COUNTRY OUTREACH PROGRAMME FOR AUSTRALIAN VIETNAM VETERANS: LIMITATIONS IN REACHING AND TREATING VETERANS WITH WAR RELATED PROBLEMS WITH A RATIONALE FOR EMPLOYMENT OF ROVING COUNSELLORS

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The Vietnam Veterans Counselling Service has recently implemented a Country Outreach Programme for Vietnam veterans modeled on American programmes. The programme is in its early stages and does not meet veterans' needs in a number of areas:

1. Veteran volunteers are not given adequate training in their function as point of contact for clients.
2. Contract counsellors in country areas in many cases are not trained and/or are not familiar with veteran needs and problems.
3. Inadequate staffing, limited budgets and geographic difficulties mean that some areas are serviced inadequately or not at all.
4. VVCS counsellors who have training in veteran problems spend too much time in clerical and administrative tasks concerned with the programme, rather than in training and counselling roles.
5. Political concerns between government and veteran organizations hamper networking by VVCS counsellors in reaching prospective clients.

To address these and other problems of the programme, the employment of roving counsellors is suggested and the concept outlined.

INTRODUCTION

Between 1962 and 1972, 50,000 Australian military personnel served in the Vietnam War. They comprised Army advisors to the South Vietnamese Army, field troops, logistics personnel, Air Force, Navy, and medical personnel.

The Australian forces were given tactical responsibility for Phuoc Tuy Province in the south. In the main this meant reconnaissance, patrol, ambush, fire support, and search and destroy. Because of their previous expertise in jungle/guerrilla warfare in Southeast Asia, the Australians did their jobs well, with forces comprising approximately 15,000 conscripts.

The Australian experience was similar to the American veteran experience in that all veterans faced the experience of a culture divided and hostile toward the Vietnam War; older generations of servicemen, families and friends who could not understand what the war was like; and a lack of reintegration and counselling services for veterans.

In response to veterans' lobbying and complaints that the existing Department of Veterans Affairs was not addressing or, indeed sympathetic to, the problems of Vietnam veterans, the Vietnam Veterans Counselling Service was set up to assist veterans and their families with their health and social problems by direct counselling and appropriate referrals to other government or community agencies. The agency is staffed by psychologists or social workers who, in some cases, have actually served in Vietnam.

On 3 October 1987, the veterans staged a national reunion and march and gained belated recognition for their services in Vietnam. The national reunion had the effect of unifying different veterans groups, educating both veterans and the public regarding the consequences of their war/return home experiences, and encouraging the government to increase and diversify services to veterans.

The Vietnam Veterans Counselling Service has recently implemented a Country Outreach Programme for country veterans modelled on American programmes to address the large population of veterans who choose to live in isolated areas. Although the programme is in its early stages, it does not meet veterans' needs in a number of areas:

1. Veteran volunteers are not given adequate training in their role as first point of contact for clients.
2. Contract counsellors in country areas, in many cases, are not familiar with or trained in veteran needs and problems.
3. Inadequate staffing, limited budgets, and geographic difficulties mean certain areas are serviced inadequately or not at all.
4. VVCS counsellors with experience and expertise in veteran problems spend too much time in clerical and administration tasks concerned with the programme rather than acting in training and counselling roles with the programme.
5. Many counsellors in the role of Area Coordinator are psychologists without knowledge, experience, or expertise of outreach/networking strategies.
6. Political concerns between government and veteran organizations hamper counsellors in reaching clients.

These and other problems of the programme are addressed in this paper, and the concept of a roving counsellor is suggested and outlined as well.

STRUCTURE OF PROGRAMME

Targeted areas were chosen on the basis of the number of veterans living in the area with the long term goal that all country areas in Australia would be covered by the programme. Each area has one VVCS counsellor assigned as Area Coordinator to outreach and administer the programme from the Counselling Service Centre situated in each state. The counsellor has the responsibility of selecting (together with the Director) and supervising paid contract counsellors and volunteer veteran area representatives. Each counsellor area coordinator also has the responsibility of networking veteran and other community agencies to gain support for the programme as well as referral purposes. Volunteer area representatives are the first point of contact for clients. They assess the client only. They are not involved in actual counselling but refer the client to the area coordinator. The area coordinator then refers the case to a contract counsellor in the area. Area coordinating counsellors also have the responsibility of carrying out all the administration tasks for their area and carrying a caseload of metropolitan clients attending their centres.

Veteran volunteers are selected for the position of Area Representative on the basis of their suitability for the position (motivation, time available to give to the programme, potential skills, etc.) as well as their acceptance by the local veteran community. The initial training given is not adequate for the purposes of acquainting volunteers with the complex range of problems they are likely to encounter, as the training programme is only approximately 20 hours in

duration. In that time they are expected to learn their role, responsibility, and accountability to the organization; elementary interviewing and counselling techniques; and the ethical considerations involved in their positions. Most veterans emerge from the training programme confused and under confident. Consequently, much time is spent on the telephone with the area coordinator, asking for advice and clarifying issues. As the city based counsellor is also occupied with other tasks, contact by the volunteer is often difficult and unsatisfactory. Also, much crisis intervention by volunteers is conducted after normal business hours, and area representatives are mostly not available.

Contract counsellors are ideally selected for their empathy with veterans and their knowledge of and experience with veteran problems as well as their acceptance by their local veteran community. Unfortunately, such trained practitioners in country areas are few and far between. Therefore, veterans in country areas still feel they are not getting service as good as veterans in city areas where VVCS counsellors are permanently situated. Sessional payment rates for contract counsellors also are well below private practice rates for psychologists and social workers; therefore, in areas where there may be a number of counsellors available, they are not attracted to the positions if they have other potential clients available who will pay the average fee rate.

Although the Australian government and Department of Veteran Affairs have given the Country Outreach Programme top priority for its implementation, extra staff positions have not been made available to the programme. Counselling and support staff who were already inadequate to meet former client demand cannot provide enough quality time to plan, administer, and provide the field service to their particular area and address their caseloads in the urban areas. Also, as additional support staff have not been employed to provide administrative backup support services to the counsellors, much time is taken up with clerical tasks that could be more efficiently done by clerical staff in both time and cost efficiency terms. A government instigated inquiry, entitled The After the March Report, recently recommended among other things that additional counselling and support staff be provided for the programme, but the report has been tabled in Parliament and not yet accepted.

Australia, with its huge geographic area, sometimes difficult terrain, small population concentrated in coastal cities, and its country population scattered in small groups across a vast area, poses some unusual problems for access to and delivery of service to client groups. States such as Western Australia cover an area approximately half the size of the USA and have a small scattered population. Counsellors can only reach their areas by "commuter airlines," using small aircraft with infrequent services. Costs of seats in such aircraft are high, and counsellors are exploring other avenues such as hitching rides on the Flying Doctor Service or mail services to minimize costs. In areas accessible by car, counsellors are finding driving long distances and networking in time-concentrated trips quite exhausting. In many areas public transport schedules are limited, and central place towns are not connected by either train or bus which makes travel by public transport nonviable. However, one counsellor who is blind and whose area is rugged, tropical, North Queensland manages to travel her area using Greyhound buses.

Because of limited staff numbers, some areas in each state are not serviced at all at this stage despite their relatively large veteran populations and lack of specialized local community services. For example, Victoria, the smallest of the Australian states, with 25% of the population of Australia and covering an

area of 225,600 square kilometres, has been divided into five areas but has only three full-time counsellors to service them. Political concerns between government parties and veterans' organizations also hamper networking by VVCS counsellors in reaching veteran clients. For example, there has been recently some concern by the Department of Veteran Affairs regarding counsellors holding information meetings to gain support for the programme and attract prospective veteran volunteers at Vietnam Veterans Association of Australia venues because the latter organization is the largest and most politically active of the Vietnam veteran organizations. Counsellors have found, however, that although many veterans are not, or choose not to be, affiliated with any veteran organization, they will come to information nights to hear about the programme, and that also, veteran organizations are attuned to veteran issues and have the confidence of many veterans. organizations are thus of immeasurable help in gaining support for the programme and therefore are widely used.

Despite these and other problems, the Vietnam Veterans Counselling Service enjoys, in the main, the confidence of veterans, and its services are well used by them and their families. However, the Outreach programme needs to make changes if it is to be both viable and meet veteran/counsellor needs. One solution is for a VVCS counsellor to be outposted in each area to address particular veteran issues of that community. For example:

Training programmes for volunteers could be ongoing.

Counsellors would be more accessible for supervision purposes of volunteers.

The counsellor would be part of the community and more in tune with the needs of the community.

The counsellor would be more able to be involved in local veteran activities and thus be more accepted by veterans in the area.

Local knowledge would facilitate the contact of more isolated and nonaffiliated veterans.

Local residence would allow time for education and information regarding veteran problems with community agencies to gain help and services for veterans and families as well as dispel negative stereotyping of veterans.

Valuable counsellor time would not be wasted with long distance travel to and from large city bases.

It is recognized, however, that some problems may be more difficult, even impossible, to solve (e.g., the problem of difficult geographic accessibility and expensive transport costs). Another problem would be that of counsellors working in isolation with minimal supervision and limited debriefing in a difficult and stressful job. However, if the programme is to meet the real needs of veterans and not be a window dressing response to veteran demands for outreach services, the above problems need to be addressed.

CONCLUSION

Many Australian Vietnam veterans continue to need assistance for war related sequelae. Many veterans in isolated country localities are not able to gain the professional assistance they need for reasons outlined.

EUROPEAN COMMAND STRESS MANAGEMENT TEAM: U.S.S. STARK

Robert J. Sokol
Gregory C. Meyer
Calvin Neptune

History

The Beirut bombing of the U.S. Marine barracks in October 1983 spawned the development of several medical contingency teams at HQ, 7th MEDCOM. These developments were coordinated with USAFE for transport and other joint issues. The documented value of early mental health intervention resulted in the formation of the European Command (EUCOM) Stress Management Team (SMT). There is a HQ, 7th MEDCOM Operation Order that describes all aspects of the SMT (e.g., mission, leadership, personnel procedures, equipment, etc.).

Mission

The mission of the SMT varies in accordance with the event or situation (e.g., hostage retrieval, natural disaster, terrorist act, low intensity combat, etc.). This presentation focuses on the May 17 1987 bombing of the U.S.S. Stark in the Persian Gulf by an Iraqi warplane. In this case, the SMT mission was to support the early return to duty and continuation on duty of personnel involved on the scene and to preclude the current or eventual onset of post traumatic stress disorders (PTSD). The on site portion of this mission was accomplished through timely intervention (i.e., consultation with all levels of command, consultation with and training of local mental health/counselor resources, assisting/augmenting mental health resources, and regular SMT maintenance). Off-site SMT responsibilities of the greater mission, not the thrust of this presentation, included SMT command and control functions, concern for CONUS based family members, mortuary personnel, response to new missions, etc. Upon conclusion of the on-site mission, the SMT developed an after action report and kept itself in a ready/travel state.

The deployed on-site SMT composition was tailored by the 7th MEDCOM psychiatry consultant who served as Chief, SMT in accordance with the needs of the mission. The SMT was comprised of psychiatry, psychology, social work, psychiatric nursing, chaplain, enlisted behavioral science, and other military personnel. Factors such as age, gender, military and mental health experience, language skills, ethnic background, etc. were considered in selecting team members for specific missions.

The U.S.S. Stark

Shortly after the bombing of the U.S.S. Stark, the SMT (two members), augmented by five U.S. Navy personnel arrived in Bahrain where the U.S.S. Stark was anchored offshore. It was tied to the Persian Gulf Task Force mother ship, the U.S.S. LaSalle, with a barge in between. The task force was supported by an 11 acre landlocked Administrative Support Unit (ASU). This presentation will focus on the personnel on board the U.S.S. Stark.

Reactions to the Bombing

The commander and the command structure of the U.S.S. Stark were experienced and impressive. The crew was highly disciplined and well trained. Leadership, training, and heroism resulted in the containment of the fires caused by the bombing.

Upon their arrival almost two days after the attack, members of the SMT observed normal reactions to the event.

Physical reactions included fatigue, sweats, tremors, nausea, and real pain associated with physical injuries (e.g., burns). These men needed rest, nourishment, and some medical attention.

Behavioral reactions related to difficulty sleeping, eating, and relating to others. A few men were having startle responses, intrusive dreams, mild inward and outward explosive expressions and varying degrees of despondency.

Virtually the entire range of emotional reactions was present (e.g., shock, anger, anxiety, guilt, blame, distrust, doubts, grief, fear, agitation, denial, sensitivity, intrusive flashbacks, magical thoughts, distorted view of self and others, etc.). It was clear that the crew members were going through the normal processes associated with such a tragic event.

Observations

Evidence of the strength and resilience of the human spirit was widespread. Some men appeared to handle their feelings and reactions better than others. However, none were recommended for "psychiatric evacuation." It appeared all were coping with the event in an effective manner. The grieving process was real, and personnel were in varying stages of the process. The SMT talked informally with many personnel and somewhat informally with personnel referred by a friend or senior. The SMT followed and taught the principles of "combat psychiatry" (i.e., proximity, immediacy, and expectancy). The SMT work was kept as simple as possible. These principles were extremely effective, and it was exciting to watch the personnel reconstitute very quickly. In many respects, the crew members were like family to each other. They truly cared about each other. It appeared that they would be able to put this experience into perspective and, in fact, grow from it.

Predictors of Need/Recovery and SMT Skills

In terms of prevention, predictors seemed to relate to the personal intensity of the event and personal sense of threat. Also, self-concept, support systems, past history, physical health, plans and expectations were very important.

The SMT practiced PIE (i.e., to facilitate a respite and a processing or debriefing for the crew). Listening skills were employed regarding the event, history, and future. Rapport, trust, and acceptance were vital.

Judgments were made slowly, if at all. Attempts were made to identify feelings, to expect and understand responses in self and others, and above all to foster a sense of control. Individual, group and consultation skills were employed with leaders and with sailors. also, it was vital for SMT members to debrief each other on both an informal and on a regularly scheduled basis.

The main SMT departed after five days; two members stayed behind to work with personnel from the ASU, other ships and local mental health personnel. Initially, practical help, information, and support were paramount. Eventually, reality testing and follow-up were suggested to insure completion of the process of dealing with the event.

Conclusion and recommendation

PTSD is real, but it can be prevented. Violent events, small and large scale, occur daily. A group of coordinated, full time personnel should be established in all communities/regions/population centers to respond quickly, appropriately, and adequately to violent eventualities in order to assist, train others, and participate in the prevention of PTSD. These personnel should also be involved in training, literature development, documentation, and research on interventions and sharing networks with other SMIs. Virtually all organizations/communities should have some type of competent, comprehensive systems oriented stress management resource readily available.

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PSYCHOREGULATIVE TRAINING PROCEDURES TO IMPROVE PSYCHOLOGICAL FITNESS

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Background

Military investigations of the effects of stress have increased during the last 15 years. Especially the question of battle stress breakdowns has evoked major attention due to the experiences of the Israeli Defense Forces (IDF) in the Lebanon War and by the British Army in the Falkland Crisis. Battle stress reaction refers to the breakdown of a soldier as a result of battle stress. The percentages referring to these facts are well known. According to these numbers the US-Army in Okinawa had 48% and in Italy 54% failures in WW II. The number of psychological breakdowns in the Israeli Forces was astonishing. There were just 15-20% casualties during the Yom Kippur War (1973). This rate increased in the Lebanon War up to 23%. Based on these experiences it is expected that 20-25% of the total number of casualties are caused by stress.

Our methods are based on the following hypothesis:
- decreasing of the stress level in live competitions,
- diminishing or prevention of a proficiency drop,
- self- and buddy-aid method.

The psychological task

The Northern European Command Infantry Competition (NECIC) was instituted in 1969. These "Olympic Games of the Infantry" are one the toughest infantry contests. Six nations (Norway, Denmark, Netherlands, Canada, Great-Britain and West-Germany) are represented by 10 teams.

The competitions consist of four phases:
- skill circus (including machine gun firing),
- live firing by night,
- cross country march,
- live firing by day.

Participants are tested as individuals and in squads in the following areas:
- Individual leadership: initiative, team-work, problemsolving,
- physical fitness,
- use of map and compass,
- terrain evaluation,
- observation and reporting,
- cross country movement,
- hand grenade throwing,
- obstacle crossing,
- range estimation,
- live firing by night and day,
- elementary first aid,
- NBC drills,
- armoured vehicle and helicopter recognition (NATO/WP),
- anti-tank firing.

The aim of the NECIC is to demonstrate the national standard of infantry proficiency through friendly competition and to foster mutual understanding between nations. The psychological support should cause a higher level of proficiency and should prevent the participant from psychological drops as well as to defend them from outside influences.

Personnel Selection

On the basis of our previous experiences, each one of the fourth term recruits had to undergo a fitness test during his first four weeks of service. For subsequent preselection, the following criteria were used:

- good sportsman, good results in the fitness test,
- good result in marching over a distance of 15 km (max. 120 min.)
- good firing results,
- volunteer.

Psychological Selection Methods

Psychological selection was based on the personal records of the soldiers, their results in the Occupational Aptitude Test (EVP) and their sports and firing results. The following additional tests were carried out:

- test "d 2" (test of vigilance and concentration),
- the modified self-condition scale (Nitsch/Apenburg),
- exploration of motivation.

The soldiers are ranked according to their test results. Of the 32 soldiers in the selection process, 24 were classified as fully qualified, 3 as limited and 5 as not qualified. Of the 27 qualified soldiers one was later excluded because he had been convicted of a crime and was performing poorly (Intelligence score 5,6), two others because of sports injuries. All remaining soldiers took part in the final competition.

Test Procedure

Of the achievement of the EVP, above all the intelligence score, as well as score in the Technical Ability Test, Figure Reasoning Test and Reaction Test were used. Biographical data were also taken into account, if necessary. For further information, results of the "d 2" test and the self-condition scale by N/A were examined. The "d 2" test was mainly used to measure characteristics of working behavior, concentration under time stress, alterations in execution in the course of working and accuracy of perception.

The modified version of the scale including 36 items meant to measure characteristics of strain/stress and fatigue was used. This explorative scale serves test the actual self-condition as viewed by the person himself, and consists of 8 subscales with 36 unipolar items.

The self-condition scale was completed by the soldiers at the beginning of their training and then in June 1987, after they had already obtained good results in sports and military training.

Pre-and post measurements were rated on a six-grade scale. Experience shows that changes in the individual state are best represented by the following subscales:

- readiness of exertion/strain
- readiness of contact
- self-confidence and drowsiness.

The results of the pre- and post measurements for the 8 subscales (N=27 soldiers) are presented in Table 1.

The general results of the self-condition scale which were applied experimentally, coincide with our own observations of changes in individual conditions of soldiers and allow the following interpretation:

Under the condition that all soldiers were subject to identical stresses and strains, alterations in self-condition are to be looked upon as effects of stress. Essentially the results show

- fatigue and other states of deficiency as an alteration of self-condition on account of stress,
- a certain tendency of self-display: dependent on personal attitude as well as situative conditions, soldiers may find it useful to present their self-condition and its change rather positive or negative.

The subscales of contact and "social acknowledgment" only showed slight and insignificant variations, they were, therefore, not taken into consideration in the interpretation. It should be noted that the characteristics "readiness of exertion," self-reliance," and "recoveredness" significantly changed to the same degree as training took effect.

The Model

For support of the competition team, a model was set up according to the principles of behavior modification. The model is shown in Figure 1.

Training Methods

In principle, the following methods were applied:

- method of progressive relaxation
- concentration practices
- mental training
- auto-suggestion/positive way of thinking

Conduct of training

The theoretical approach of muscle relaxation/contraction of Jakobsen has been revised by Wolpe and especially inserted for anticonditioning of distress reactions. Thanks to this method, it is possible to shorten the extensive learning process of the Jakobsen training considerably. Relaxation training according to Wolpe is often used in the sport-psychological field and is, for the following reasons, an efficient method:

- it contains a wide indication area
- it can be used as a group method
- it can be learned in a short time
- there is continuous improvement in the learning process
- it can be combined with other methods of intervention (for instance concentration practices, auto-suggestion).

Altogether the insertion of the psychoregulative training has been proved to the best method of intervention.

In this case, like in the case of Biathlon competitions (for example), the soldiers are to reduce too high a level of nervousness by using relaxation techniques during the competition if there are negative tensions. The described procedure has another advantage, i.e. after the learning process with the psychological coach, before and during the competition it can also be practiced without an instructor in the form of self-application. Also the form conditioned relaxation has stood the test in this phase. In this case the relaxation process was supported by connection to a signal work "still and relaxed," "concentrated and still," "calm and concentrated " etc. This permits a coupling with the concentration exercises and support of the self motivated concentration. Altogether the method according to Wolpe demonstrates practicability and efficiency also in the Army field.

System of Distress-Desensibilisation

During the coaching of the NECIC competition teams it did not prove to be suitable or necessary to establish a "system of distress" essentially because the well trained soldiers dispose of a high degree of self-confidence, which is assured and confirmed by the objective and continuous returns of performance-control.

Another aspect is that the NECIC-teams are not subjected to complicated technical equipment as it is the case, for instance in the CAT-competition.

The infantrymen were only concerned about injuries before the competition.

Therefore the team had been taught verbal desensibilisation in the form of group discussions referring to this aspect.

Other concerns the soldiers had, in order of decreasing priority, were
- fear of personal failure or that of a member of the squad
- fear of technical failure of the weapon
- misunderstanding within the group (also of a verbal kind) and irritation caused thereby

Results and recognitions

All three squads and their leaders took part in the psychological training of progressive relaxation. Nevertheless, at the end of training only the competing groups with their replacements and two leaders (corporals) were left. At the end of the psychoregulative training 11 soldiers (out of 17) were able to experience the state of relaxation intensively and to support it mentally by contraction and decontraction of their muscles. After personal statements only four soldiers were able to bring the reaction to relaxation independent of the situative condition, for example sitting, standing, etc. Three of them had been active sportsmen before they were drafted and had practical experiences with autogenous training. It was possible for all competitors, infantrymen to avoid too high a level of activation of nervousness, during the competition. A performance test of the soldiers after the competition was not possible because of permanent changes of station (PCS) and temporary duty (TDY) assignments, therefore, after the competition it was difficult to questions the persons concerned. Based on experience, only two or three of the competitors continue to apply relaxation techniques after the competition

Conclusions

After two years of NECIC experience the following recognitions are deemed to be valid:

- psychoregulative training is more often accepted by soldiers who have been sportsmen in their civilian lives
- the training must be organized as teamwork
- the combination of these techniques depends on the engagement of the immediate supervisor
- the combination of relaxation training after Wolpe with techniques of conditioned, auto-suggestion proved to be rather efficient and can be relatively quickly learned
- relaxation exercises supplemented by isometric elements support the fitness training
- common session of the squad enhance to coherence of the group
- the individual differences in the ability to relax increase with advancing practice
- soft meditative music (classical kind) supports the relaxation practice; it is well received by the soldiers and has a positive effect on the general situation

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