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INTERNATIONAL JOURNAL OF EMERGENCY MENTAL HEALTH

International Journal of Emergency Mental Health (ISSN 1522-4821) is published quarterly by Chevron Publishing Corporation, Inc., 5018 Dorsey Hall Drive, Suite 104, Ellicott City, MD 21042 USA. Fourth class postage rates paid at Ellicott City, Maryland.

- SUBSCRIPTION PRICES: 2008 (four issues): Institutions: $390.00 (Foreign: $485.00); Individuals $82.00 (Foreign: $128.00) payable in U.S. funds through a U.S. bank. Credit card orders may be placed by calling (410) 740-0065.
- SINGLE ISSUES: Available from the publisher for $25.00 per issue.
- CHANGE OF ADDRESS: Please inform the publisher at least six weeks prior to any change. If possible, include old mailing label.

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INTERNATIONAL JOURNAL OF
EMERGENCY MENTAL HEALTH

Volume 9 • Number 3 • Summer 2008

ORIGINAL ARTICLES

EMERGENCY MENTAL HEALTH UPDATES - Jeffrey M. Lating, Associate Editor

MEDIA REVIEWS - Daniel Clark, Media Review Editor

International Journal of Emergency Mental Health, Vol. 9, No. 3, pp. 171-180 © 2008 Chevron Publishing ISSN 1522-4821

The Tower of Ivory Meets the House of Worship: Psychological First Aid Training for the Faith Community

O. Lee McCabe
Department of Mental Health and Center for Public Health Preparedness
The Johns Hopkins Bloomberg School of Public Health
and
Department of Psychiatry and Behavioral Sciences
The Johns Hopkins School of Medicine

Adrian M. Mosley
The Johns Hopkins Health System

Howard S. Gwon
The Office of Emergency Management,
Johns Hopkins Hospital

George S. Everly Jr.
Center for Public Health Preparedness
The Johns Hopkins Bloomberg School of Public Health

Jeffrey M. Lating
Loyola College in Maryland

Jonathan M. Links
Center for Public Health Preparedness
The Johns Hopkins Bloomberg School of Public Health

Michael J. Kaminsky
Department of Psychiatry and Behavioral Sciences
The Johns Hopkins School of Medicine

Abstract: *Clergy and laity have been a traditional source of support for people striving to cope with everyday tragedies, but not all faith leaders have the specialized knowledge required for the challenges of mental health ministry in the aftermath of widespread trauma and mass casualty events. On the other hand, some mental health professionals have acquired high levels of expertise in the field of disaster mental health but, because of their limited numbers, cannot be of direct help to large numbers of disaster survivors when such events are broad in scale. The authors have addressed the problem of scalability of post-disaster, crisis mental health services by establishing an academic/faith partnership for psychological first aid training. The curriculum was piloted with 500 members of the faith community in Baltimore City and other areas of Maryland. The training program is seen as a prototype of specialized first-responder training that can be built upon to enhance and extend the roles of spiritual communities in public health emergencies, and thereby augment the continuum of deployable resources available to local and state health departments. [International Journal of Emergency Mental Health, 2008, 9(3), pp. 171-180].*

Key words: *Terrorism; disaster mental health; psychological first aid; faith community; faith and disaster, spiritual caregiver; religion and health; public health preparedness.*

The authors wish to express special thanks to: the Maryland Department of Health and Mental Hygiene, especially Al Romanosky, MD, PhD (Office of Preparedness and Response) and Frank Monius (Maryland Hospital Association), for the generous support of this project by a Special Projects grant from the National Bioterrorism Hospital Preparedness Program of the Health Resources and Services Administration (HRSA); the members of the Partnership Steering Committee representing the faith-based and academic organizations, Maria Johnson, MA (Hispanic Ministry, Archdiocese of Baltimore), Marshall F. Prentice, M.Div, DD (CURE), Michael Torres, MD (Institute for Mental Health Ministry, Inc), and Robert White, LCSW (University of Maryland School of Medicine); Paula J. Teague, D.Min., Clinical Pastoral Education, Johns Hopkins Hospital; and to the dozens of other individual members of the academic/faith community partnership whose time, effort, and ingenuity made this project so gratifying; and, finally, to the hundreds of faith trainees whose enthusiasm for the program augurs well for broader application and acceptance. *Correspondence concerning this article should be sent to O. Lee McCabe, PhD, Department of Mental Health, The Johns Hopkins Bloomberg School of Public Health, Hampton House, Room 896, 624 North Broadway, Baltimore, MD 21205; email to: lmccabe@jhsph.edu*

The Problem: Disaster-Induced Demand for Behavioral Health Services

There is increasing recognition that surges in demand for medical services in the immediate aftermath of disasters and large-scale public catastrophes can rapidly overwhelm health care resources. An important dimension to this problem is the volume of individuals presenting to hospital emergency departments and other health care settings who are more psychologically affected than physically injured. For example, disproportionate rates of acute and chronic psychological (vs. somatic) post-trauma sequelae have been documented following a broad range of terrorist incidents, including the SCUD missile attacks in Israel (Golan, Arad, Atsmon, Shemer, & Nehema, 1992), Sarin gas release in Tokyo (Ohbu et al., 1997), bombing of the Murrah federal office building in Oklahoma City (North et al., 1999), the September 11 attacks on the World Trade Center and Pentagon (Schlenger et al., 2002) and the release of Anthrax in the District of Columbia (Dougall, Hayward, & Baum, 2005). Compounding the concerns about meeting disaster-driven medical and behavioral health surge demands is the reported reluctance of many health personnel to report to duty under certain emergency scenarios; for example, although there were moderators linked to specific job responsibilities, nearly half of workers in a local health department indicated that they were unlikely to report to work during an influenza epidemic (Balicer, Omer, Barnett, & Everly, 2006).

Accompanying the evidence of the need for disaster-related services for acute psychological crises, there are also reports documenting the necessity of managing the longer-term psychological consequences of traumatic events, especially terrorist incidents (Galea et al., 2001; Kawana, Ishimatsu, & Kanda, 2001; Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). Although post-incident effects are a function of multiple mediating factors, including *proximity to* (Foy, 1992), *extent of fear during* (Tucker, Pfefferbaum, Vincent, Boehler, & Nixon, 1998), *perceived ability to exert control over* (Slovic, 1987), and *level of media exposure following* (Pfefferbaum et al., 2001) such events, exposure to disasters and other trauma can have a lasting impact on child and adolescent development (Nader & Pynoos, 1992; Pynoos & Nader, 1993; Shaw, 1996). Other populations demonstrated to be at greater risk for development of acute and chronic post-trauma problems are first-responder rescue workers (Weiss, Marmor, Metzler, & Ronfeldt, 1995) and urban minorities (Norris, Friedman, & Watson, 2002), especially those of Hispanic ethnicity (Galea et al., 2002).

Toward a Solution: Specially Prepared Faith Communities

The underlying construct of the program to be described is that faith-based organizations (FBOs) — both their clergy and laity — have a significant, but not fully actualized, potential for meeting acute, disaster-driven, behavioral health surge demands on care delivery systems, and for providing longer-term psychological support of individuals affected by traumatic events.

Rationale: It is well known that FBOs routinely respond to community disasters with vital material resources, such as food, clothing, shelter, equipment, and supplies, and with important human services, such as death notification, prayer/worship leadership, communication with families of victims, and general fellowship (Koenig, 2006). This work is often performed shoulder-to-shoulder with disaster relief workers from government and private social service agencies. The premise of this project is that, in addition to providing such tangible services and resources, FBOs have extraordinary potential for delivering crisis intervention services to survivors of disasters—naturally-occurring and intentionally-provoked. The scale of the populace's impulse to seek spiritual and pastoral support under conditions of exceptional stress is highlighted by a survey noting that 90% of respondents reported turning to religion for help coping with stress associated with the terrorist attacks of September 11 (Schuster et al., 2001). Other studies not only confirm that FBOs can play a significant role in responding to the psychological needs of disaster survivors (Bradfield, Wylie, & Echterling, 1989) but that clergy and lay leaders of faith congregations are routinely sought out for counsel with personal problems (Verhoff, Kulka, & Couvan, 1981), particularly in African-American and Hispanic communities (Galea et al., 2002). The severity of these problems for which help is sought is purportedly equivalent to the disorders treated by mental health professionals (Larson et al., 1988).

The specific pathways through which faith-related benefits accrue to victims of disasters would seem to be two-fold, institutional and personal; the former presumably through the framework of comforting theology, ceremony, ritual, sacraments, images, and other ecclesiastical forms and functions; and the latter through face-to-face ministry by clergy whose use of relevant scripture, empathic listening, or physical presence alone may bring considerable consolation to those in crisis. Harold Koenig, noted researcher of the relationship between faith and health, has offered no fewer

than ten reasons that religion and spiritual caregivers can benefit people trying to cope with crises. These salutary effects of religious and spiritual activities on personal stress revolve around positive worldview; meaning and purpose; psychological integration; hope and motivation; personal empowerment; sense of control; role models for suffering; guidance for decision making; answers to ultimate questions; and social support (Koenig, 2006).

A report issued several years ago by the Institute of Medicine (IOM) offers general support for an expanded role in disaster response for the faith community but with a noteworthy proviso:

> "A broad spectrum of professional responders is necessary to meet [terrorism-related] psychological needs effectively. Those outside the mental health professions, who may regularly interface with the public, can contribute substantially to community healing. These professionals include...faith-based and other community leaders. *However, these professionals will require knowledge and training in order to provide effective support*" (IOM, 2003, p. 15).

Certainly, if spiritual caregivers are to become optimally prepared to engage as active partners in disaster mental health response and to fit formally into local, state, and federal emergency response systems, numerous preparatory tasks must be successfully addressed. These tasks include the creation of alliances through which expert training in the requisite knowledge, skills, and abilities (KSAs) may be delivered; the development of databases of qualified trainees that can serve as registries of potential responders; and the establishment of practical government/community interface mechanisms to facilitate efficient system activation (rapid call-up, targeted deployment, etc).

Psychological First Aid (PFA): A Promising Intervention for Pastoral Application

A conceptual framework for PFA training of public health professionals functioning outside the formal mental health workforce has been developed at the Johns Hopkins Center for Public Health Preparedness (CPHP; Everly & Flynn, 2006; Parker, Barnett, Everly, & Links, 2006). The model assumes that training in basic, crisis-oriented, mental health interventions can enhance the effectiveness of (presumably otherwise adept) non-mental health personnel providing direct interventions to affected populations in a disaster and/or to facilitate their connection with needed care. The authors adapted an earlier form of this crisis-interventionist/gatekeeper model for application to the immediate project.

To accomplish a practicable adaptation of the PFA model to the faith community, there were three fundamental questions to answer.

- Can an academic health center (AHC) and local faith leaders collaborate to develop a training curriculum for spiritual caregivers that successfully integrates technical disaster/mental health content (psychological first aid principles and practices) with spiritual health values and perspectives?
- If so, can such an integrated curriculum be tailored to fit the spiritual and cultural characteristics, learning styles, and overall needs of populations in an urban area comprised of African-American and Latino residents predominantly of the Christian faith?
- Can the training experience measurably enhance the participants' sense of preparedness and self-efficacy in key competency domains intrinsic to disaster ministry in general, and to PFA in particular?

An opportunity for answering these questions was afforded the authors in the form of a competitive "Special Projects" grant from the state of Maryland's Bio-Terrorism Hospital Preparedness Program funded by the U.S. Health Resources and Services Administration (HRSA; Romanosky, 2005). This grant program encouraged applicant institutions to collaborate with other organizations and community-based preparedness resources in the state, and to develop projects that were innovative and potentially portable to other geographic regions.

The Program

The key elements of the program were the following.

Partners and Management Structures

The AHC partners were The Johns Hopkins University School of Medicine [Department of Psychiatry and Behavioral Sciences] acting on behalf of the Johns Hopkins Hospital, the Johns Hopkins Bloomberg School of Public Health [the Center for Public Health Preparedness (CPHP)], and the University of Maryland School of Medicine [Department of Psychiatry and Behavioral Sciences]. The FBO partners

were the Archdiocese of Baltimore - Office of Hispanic Ministry, the Clergy United for Renewal in East Baltimore (CURE), and the Institute for Mental Health Ministry, Inc.

Three principal mechanisms for project implementation were established: a Partnership Steering Committee that initially met monthly and subsequently bi-monthly; a Community Advisory Board, responsible for recruiting clergy to participate in scheduled training, which met on a monthly schedule; and a Curriculum Development Committee, composed of at least one representative from all partnering organizations, which met on a weekly schedule and designed the content of the Microsoft PowerPoint (PPT) slide presentation.

Goals and Objectives

The long-term goal of the program is to have a public health infrastructure in Maryland that formally recognizes specially-trained faith congregations as a vital component of its continuum of disaster workforce responders. The purpose of the project was to determine the feasibility of a relatively brief training experience enhancing spiritual caregivers' perceived self-efficacy (Bandura, 1997) in responding to members of their communities who might need (psychological) trauma-related support following disasters. The primary project objectives were to design the curriculum and conduct the training sessions with a minimum of 240 members of the clergy.

Philosophy and Values

In order to create an enduring AHC/FBO alliance, an explicit "partnership philosophy" was articulated that recognized the following principles.

- Participants function in distinct cultures, and thus need to be committed to developing a working alliance that is mutually supportive of other partner needs.
- The principles of trust, respect, communication, flexibility, and mutual benefit are critical to the success of the partnership.
- Collaborators are committed to sharing resources, and to developing compatible goals, realistic plans, clear objectives, specified tasks, and shared credit among partners.

An effort was made to avoid creating a top-down program of "academics training clergy," and, in acknowledgment of the crucial spiritual values, knowledge base, and skill set that the faith community would bring to the project, the authors developed the training curriculum **with** the faith partners. The intent was to have a program that would be a unique integration of spiritual and disaster mental health content — a jointly-developed, bi-cultural curriculum that could impart principles of what one of the authors (JML) termed, "therapeutic spirituality." Specifically, the goal was to create an overarching model of trauma response that would transcend more secular approaches to crisis intervention. This would require not only a pointed effort to braid technical and spiritual content together, but also the development of a curriculum that consistently emphasized the special value of transcendent spiritual perspectives to provide succor to survivors of catastrophic events. To be true to this philosophy, curriculum content was designed to be transmitted through the vehicle of two-person teams [see 'Trainers ...' next page], composed of an AHC-based disaster mental health expert and an FBO-based spiritual caregiver. Moreover, as part of the commitment to promote a customized, personalized curriculum with which the clergy could identify, faith leaders were given an opportunity to incorporate into the PPT slides personally-chosen, disaster-relevant, scriptural passages and prayers, as well as their preferred religious images, local church photographs, etc. To assure optimal value of the program for the Latino community, Spanish-language translations of the 200-slide PPT program and of the program evaluation forms were created.

Curriculum Training Modules: Organization and Content

The broad topics covered in the four training modules, listed in the sequence in which they were presented during the seven-hour training day, were as follows:

- Stress Reactions of Mind, Body & Spirit: a) Acute Stress; b) Chronic/Cumulative Stress & Burnout; c) PTSD
- Psychological First Aid and Crisis Intervention: a) Incident Command System; b) Individual Psychological First Aid; c) Large Group Psychological First Aid and Congregational Communications

- Pastoral Care and Disaster Ministry: a) Fundamental Aspects of Disaster Ministry; b) Differentiating Traditional Pastoral Care and Disaster Pastoral Care; c) Responses: Pastoral and Prophetic
- Self Care and Practical Resources for Spiritual Caregivers: a) Recognizing and Preventing Burnout in Oneself; b) Self-Help Strategies; c) Disaster Planning and Resources for Families: Yours and Theirs.

Topics subsumed under "Individual PFA" were: differentiating between normal and severe signs/symptoms of stress; making appropriate triage/referral decisions; providing effective emotional support, spiritual guidance, and crisis communication; accessing available psychosocial and psychiatric resources; and understanding the importance of self-care strategies for caregivers.

Real world applicability: To enhance the likelihood that training would lead to the acquisition of viable competencies transferable to actual disaster settings, the lecture format was complemented by knowledge-application and skill-building exercises. Among these were: descriptions of personal accounts by the trainers of actual, field experiences providing PFA to victims at disaster sites; formal case studies; table-top exercises; and participation in role-playing scenarios.

Educational Materials and Resources

To assure participants had tangible materials to retain and share with their parishes, family, and friends, a disaster "Tool Kit" was assembled that incorporated a comprehensive collection of practical resources, including: hard copies of the PPT slides from the training program; a bibliography of generic disaster mental health literature references; lists of "all-hazards" preparedness educational materials, including videos, posters and brochures [that addressed preparedness activities for fires, chemical emergencies, hurricanes, floods, heat waves, winter storms, etc]; protocols for family disaster planning, including recommendations for assembling survival kits, i.e., 'Go-Packs'; copies of journal articles on pastoral crisis intervention; and guidelines on loss-, grief-, and bereavement support.

Trainers and Training Sessions

Trainers: A total of eight trainers were used in the two-person teams, viz., two doctoral-level disaster mental health experts and six members of the clergy, one of whom was an ordained minister and board-certified psychiatrist.

Training sessions - format, venues, etc: Training sessions were conducted using a professional CME/CEU format, i.e., one-day in length [9 a.m. through 4 p.m.] with morning, lunch, and afternoon refreshment breaks. Each session opened and closed with a prayer. Program evaluations were completed at the end of the day, following which a "commissioning" of participants was performed by distributing certificates of attendance.

Assessments and Data Analysis

Interpretations of the success in meeting the objectives of the program were inferred from *process data* (number of persons trained, number of congregations represented, etc.) and *outcome data*, the latter derived from trainee responses to questions in a structured evaluation form administered immediately after each training session. The scope of the evaluation approach spanned perceptions of the success of the program in meeting specific PFA learning objectives [8 items], and overall program quality [10 items]. These 18 variables were measured using a 5-point Likert scale. Additionally, there were structured opportunities to provide open-ended responses to specific queries, e.g., "What were the most effective and least effective aspects of the training? [2 items]; Which elements of the program deserved more coverage and less coverage?" [2 items], and others.

Evaluation: Data And Discussion

Feasibility of the Model

Two important questions the project sought to answer were the fundamental ones of whether an academic/faith partnership could work together with sufficient effectiveness to craft a disaster mental/spiritual health training curriculum that fit the cultural characteristics of the targeted communities, and whether such a training program could be delivered to a sufficient number of clergy members to assure an adequate scale of community impact. Essentially, these are questions of feasibility best answered with the data in Table 1.

Table 1.
Process Evaluation and Feasibility Data Related to Program Training

Program Process Items	N
Number of training sessions	9
Number of trainers	8
Number of Clergy trained	500*
Mean number of attendees at training sessions [*SD* = 28]	55
Number of clergy trainees in Baltimore City	294
Number of clergy trainees elsewhere in Maryland	206
Number of participants receiving English-language trainings	423
Number of participants receiving Spanish-language trainings	73
Total number of Churches & Parishes represented	100+

***Note**: Four (4) of the clergy trainees also functioned as members of the trainings teams.*

That there was a desire for such training lies in the observation that more than double [500] the number of anticipated participants [240] volunteered for training, and that more than 100 church and congregational affiliations were represented in that population. Mean attendance at the nine training sessions was 55.1 participants [Standard Deviation = 28.1]. One Spanish-language training was delivered to 73 priests and laity from the local Hispanic community. Training sessions were delivered in diverse venues ranging from auditoria of academic medical centers with state-of-the-technology A/V equipment to small community churches where attendees sat in pews and trainers presented their slides on a small projection screen positioned in front of the altar.

Effectiveness of the Model

Two outcome questions of interest were whether the training program could be delivered with sufficient effectiveness by the trainer-dyads to enhance recipients' perceived self-efficacy in administering the PFA in future emergency contexts, and whether the trainers could create in trainees the general and hopefully demonstrable belief that they had participated in a program of estimable quality and future usefulness.

Self-efficacy in applying PFA principles. Table 2 provides a summary of data on 384 participants who submitted fully-completed program evaluation forms. The results speak to the program's effectiveness in enhancing trainees' perceived self-efficacy performing the component-activities of PFA with persons in crisis.

Table 2.
Percent of Respondents Rating Program as 4 ['Very Good'] or 5 ['Excellent'] for Enhancing Trainees' Perceived Self-Efficacy with PFA-Related Competencies [*N* = 384]

Competency Items Specific to PFA and Disaster Ministry	Percent
Recognizing signs and symptoms of stress and acute stress disorder	90.6
Recognizing the essential characteristics of posttraumatic stress syndrome	91.5
Understanding the relationship between trauma and substance use conditions	82.7
Understanding the principles of providing Individual Psychological First Aid	85.5
Understanding the principles of providing group/Congregational Psychological First Aid	81.5
Awareness of key features of Disaster Ministry	85.9
Accessing psychosocial and psychiatric resources	77.1
Planning and self-care strategies for the Spiritual Care Giver	89.6

Except for one item, the frequency with which trainees provided ratings of either 4 ('Very Good') or 5 ('Excellent') regarding the program's success in achieving its PFA-related learning objectives ranged from 81.5% ('Understanding principles of group PFA') to 91.5 % ('Recognizing the essential characteristics of post-traumatic stress syndrome'). The lowest rating, 77.1%, was given to the program's success in imparting information on "How to access psychosocial and psychiatric resources." In retrospect, given the relatively limited time devoted to this topic, it is understandable that respondents' assessment of that item was lower than others.

Overall impressions of the program. A summary of the data on trainee perceptions of the overall quality of program is provided in Table 3.

Table 3.
Percent of Respondents Rating Program as 4 ("Very Good") or 5 ("Excellent") in Effectiveness Meeting Overall Quality Standards and Practical Usefulness [N=384]

General Criteria Items for Program Quality and Usefulness	Percent
Program organization	85.9
Program content	85.4
Likely usefulness in the event of a disaster or large-scale critical incident	84.3
Likely usefulness in the event of a Congregational or neighborhood crisis	82.3
Quality of presentations: Disaster mental health experts	91.8
Quality of presentations: Clergy members	73.6*
Success integrating mental health and spiritual perspectives	78.9
Quality of PPT slides	79.2
Quality and usefulness of Tool Kit	90.6
Overall program	89.1

***Note**: See discussion immediately below.*

The data indicate that the majority of participants considered the training either very good ['4'] or excellent ['5'] in overall quality and in accomplishing its learning objectives. The evaluation item receiving the lowest score, 73.6, was "Quality of trainers: Clergy members." In large measure, this was due to the relatively poor rating of *one* trainer's performance on *one* training day. In the interest of safeguarding the identity of the trainer, the message to be taken away is that "the Christian faith community" is not such a homogeneous population that the "goodness-of-fit" between the cultural backgrounds and teaching/learning styles of trainers/trainees can be ignored.

The evaluation process ended with two questions: Have you acquired any important information that you see being of help to you in the future as a leader in the clergy community? The percent of participants responding "Yes" was 98.4. The final question, 'Have you acquired any important information that you see being of help to you in the future as a leader in the clergy community?' yielded a 98.4 % "Yes" response rate.

Summary And Conclusions

Through a grant made possible by the Maryland/HRSA Bio-Terrorism Hospital Preparedness Program, members of an academic/faith partnership developed a training program in disaster mental health for spiritual caregivers. Participants' self-report data on curriculum content and implementation indicated that the majority of trainees perceived the program as having significantly enhanced their knowledge of a model of crisis intervention known as *Psychological First Aid*, and increased their confidence in disaster ministry with their congregations and others persons who might be future victims of trauma. While the project had its limitations [see below], the unanimous opinion of the partners is that the project demonstrated that AHCs and FBOs can enter into mutually-gratifying collaborations for the public good.

Keys to Effective Partnering

Obviously, the buy-in of religious leadership in the community is crucial to the success of such an enterprise. On the academic side, a key element for efficiencies in achieving project objectives was the availability of a person within the institution who had pre-existing relationships with key leaders in the spiritual community. Having someone with knowledge of *both* the academic and faith community cultures is ideal, as that person can support partnership development and strive for a mutually gratifying alliance. This role was served by one of the authors [AMM].

Knowing to whom in the community to reach out and managing to get collaborators in the same room are necessary but insufficient ingredients for success. Any success the program enjoyed in meeting its objectives was made possible only through a process of cross-cultural socialization between participating AHC and FBO collaborators. The partnership evolved through stages of mutual-learning — from an "us and them" to a "we" culture. To fully actualize what became a workable partnership, all participants engaged in give and take. For example, faculty members acceded to the preference of faith leaders to have meetings of the Community Advisory Board in the evenings; however, faith members met on Hopkins time when the Partnership Steering and Curriculum Development committees assembled. Other examples of between-group osmotic influences of customs and values were seen to occur over time, e.g., faculty members honored the wish of the clergy to begin and end all joint meetings with prayer, as partners prayed for the success of the project. Correspondingly, faith partners gradually appreciated the importance of, and accommodated to, the faculty's sensitivity to the fixed (seven-month) timetable for meeting grant deliverables and reporting deadlines.

Clergy Outreach and Trainee Recruitment

Although the project originally was designed for members of disadvantaged, urban minority populations, members of other spiritual communities throughout the state learned of, requested, and were granted opportunities for training. Such groups included two academically accredited pastoral counseling programs and a professional association for parish nurses. Because of the eager response from the faith community, little effort was required to recruit trainees after the initial program promotion efforts. The numbers of faith communities responding for training represented a wide spectrum of religious denominations and affiliations.

Curriculum Customization Issues

Because members of the Christian faith were over-represented in the targeted geographic area surrounding the Johns Hopkins Hospital, efforts to embed the disaster mental health content in a spiritual context incorporated the use of only Christian scripture and images into the PowerPoint slides and Tool Kit content. On those occasions when members of other faiths participated in the training sessions, the level of satisfaction with the training was compromised — despite considerable effort devoted immediately before mixed-faith training sessions to explain the single-faith emphasis by describing the original rationale for focusing on Christianity. Thus, prospective designers of similar programs elsewhere have three basic options for avoiding such problems: use professional experts to conduct "pure" (without spiritual content) disaster mental health trainings; create customized trainings with faith-/denomination-specific content; or develop a chaplaincy model of training – an approach that could be experienced as too spiritually diluted, generic, etc.

Caregiver Appreciation for "Mini-Disaster" Crisis-Management Skills

Participants were effusive in their expressions of interest in and gratitude for the kind of information conveyed in the trainings. Especially appreciated were the efforts to *integrate* the technical disaster mental health content with the spiritual. Interestingly, despite all trainees being acutely aware of terrorist events on American soil within recent years, as well as major weather events that affected many citizens of our country (particularly Hurricane Isabel, locally), most participants valued the learning experience as much for application to their immediate, concrete needs in pastoral ministries (or, as one trainee offered, for 'my everyday *mini-disasters*') as for its value in true public disaster contexts which, no doubt, seemed more remote and abstract.

Program Limitations and Future Directions

The open-ended questions in the evaluation form, as well as direct conversations with participants following the training sessions, yielded information that disclosed unmet needs and guidelines for future work with the faith community. This input emphasized the wish for: opportunities for more advanced training in PFA; specialized training in loss/grief/bereavement support; guidance in developing concrete, practical, community disaster plans (and for community empowerment in general); and clarification of specific respondent roles under various disaster and activation/deployment scenarios.

In conclusion, the above-described program seems to be a practical and eminently portable model for actualizing the latent but typically unrealized potential for disaster services inherent in the already established relationship between vulnerable urban populations and faith leaders (and probably rural residents for whom access to disaster mental health experts is limited). By advancing and implementing this model of training on a broader scale, the faith community may be able to realize its full potential of being an indigenous, effective, and durable resource for victims of large-scale disasters, with benefits accruing both to individual recipients of direct psycho-spiritual services and to leaders of health care facilities who are struggling with the problem of how to cope with disaster-driven surges in service demand under various hazard circumstances, particularly when front-line clinical staffing may be significantly reduced.

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Manuscript received June 4, 2007

Accepted August 27, 2007

International Journal of Emergency Mental Health, Vol. 9, No. 3, pp. 181-192 © 2008 Chevron Publishing ISSN 1522-4821

Psychological First Aid Training for the Faith Community: A Model Curriculum

O. Lee McCabe
Department of Mental Health and Center for Public Health Preparedness
The Johns Hopkins Bloomberg School of Public Health
and
Department of Psychiatry and Behavioral Sciences
The Johns Hopkins School of Medicine

Jeffrey M. Lating
Loyola College in Maryland

George S. Everly, Jr.
Center for Public Health Preparedness
The Johns Hopkins Bloomberg School of Public Health

Adrian M. Mosley
The Johns Hopkins Health System

Paula J. Teague
The Johns Hopkins Health System

Jonathan M. Links
Department of Environmental Health Sciences and
Center for Public Health Preparedness
The Johns Hopkins Bloomberg School of Public Health

Michael J. Kaminsky
Department of Psychiatry and Behavioral Sciences
The Johns Hopkins School of Medicine

Abstract: *Traditionally, faith communities have served important roles in helping survivors cope in the aftermath of public health disasters. However, the provision of optimally effective crisis intervention services for persons experiencing acute or prolonged emotional trauma following such incidents requires specialized knowledge, skills, and abilities. Supported by a federally-funded grant, several academic health centers and faith-based organizations collaborated to develop a training program in Psychological First Aid (PFA) and disaster ministry for members of the clergy serving urban minorities and Latino immigrants in Baltimore, Maryland. This article describes the one-day training curriculum composed of four content modules: Stress Reactions of Mind-Body-Spirit, Psychological First Aid and Crisis Intervention, Pastoral Care and Disaster Ministry, and Practical Resources and Self Care for the Spiritual Caregiver. Detailed descriptions of each module are provided, including its purpose; rationale and background literature; learning objectives; topics and sub-topics; and educational methods, materials and resources. The strengths, weaknesses, and future applications of the training template are discussed from the vantage points of participants' subjective reactions to the training. [International Journal of Emergency Mental Health, 2008, 9(3), pp. 181-192].*

Key words: *Psychological first aid; disaster ministry; disaster mental health; disaster training curriculum; faith community; spiritual caregiver; public health preparedness.*

The authors are indebted to the Maryland Department of Health and Mental Hygiene, especially Al Romanosky, MD, PhD (Office of Preparedness and Response) and Frank Monius (Maryland Hospital Association), for the generous support of this project by a Special Projects grant from the National Bioterrorism Hospital Preparedness Program of the Health Resources and Services Administration (HRSA)." Sincere thanks and appreciation are extended to the members of the Curriculum Development Committee and Workgroups for their creative contributions to the curriculum, especially Ayanna Fews, MBA, Fr Richard Gray, Howard S. Gwon, MS, Connie Noll, MA, RN-C, Cindy Parker, MD, MPH, Marshall F. Prentice, M.Div, DD, and Michael Torres, MD. Finally, gratitude is owed Maria Johnson, MA, of the Hispanic Ministry, Archdiocese of Baltimore, for her lead role in the English-to-Spanish language translation of the curriculum.
Correspondence concerning this article should be sent to O. Lee McCabe, PhD, Department of Mental Health, The Johns Hopkins Bloomberg School of Public Health, Hampton House, Room 896, 624 North Broadway, Baltimore, MD 21205; email to: lmccabe@jhsph.edu

Whether caused by natural forces, accidental events, or intentional acts, public health disasters and mass casualty incidents can have a profound impact on the physical, psychological, and spiritual life of human beings. Witness the effects of the tsunami on the people of Indonesia, Sri Lanka, South India, and Thailand in December of 2004, and of hurricane Katrina on the residents of Louisiana, Mississippi, and Alabama in August of 2005. Recall the shock of terrorist attacks on the United States in September, 2001, Madrid in March, 2004, and London in July, 2005. Through graphic images conveyed by daily media-coverage (Barringer & Fabricant, 2001) and their impact sustained and spread by a form of psychological contagion (Lating, Sherman, Lowry, Everly, & Pergine, 2004), these events, places, and dates are enduringly etched in the collective memory of this generation.

Experience in the United States and other countries has shown repeatedly that following such disasters, particularly those occasioned by terrorist attacks, there is a surge of demand for health services and resources to meet the emotional and spiritual needs of victims (Bowler, Murai, & True, 2001; DeMartino, 2002; Galea, Ahern, Resnick, Kilpatrick, Bucuvalas, et al., 2002; North, Nixon, Shariat, Malonee, McMillen, et al., 1999; Schlenger, Caddell, Ebert, Jordan, Rourke, et al., 2002; Shalev & Solomon, 1996; Ursano, Norwood, Fullerton, Holloway, & Hall, 2003; Watts, 1999). These reports have revealed that (post-incident) psychological symptoms are more prevalent than physical injuries, and that certain populations are more vulnerable than others for the development of both acute and chronic post-trauma sequelae. Among the subgroups observed to be at special risk for such difficulties are urban minorities of low socioeconomic status who possess a disproportionate share of chronic medical problems and severe (often inadequately treated) mental illness and substance abuse conditions (IOM, 2003; Lima, Pai, Santacruz, & Lozano, 1991; Pole, Best, Metzler, & Marmar, 2005).

The Role of the Spiritual Caregiver in Community Trauma

Experience has also shown that people often gather at houses of worship or seek out spiritual or religious leaders for psychological support in times of major and more commonplace personal crises (Koenig, 2006; Schuster, Stein, Jaycox, Collins, Marshall, et al., 2001; Wang, Berglund, & Kessler, 2003). However, irrefutable objective data affirming the effectiveness of pastoral crisis interventions are lacking. While one may argue that the popularity of a service is a proxy for its effectiveness, true science cannot advance on such premises, and the maxim, *the plural of anecdote is not data,* seems especially relevant here. Data do exist suggesting that: a) significant deficiencies exist in the mental health expertise of many religious leaders (Domino, 1990); b) there is considerable variation in their training (Koenig, 1998); and c) clergy members, themselves, acknowledge the need for, and have substantial interest in receiving, additional training (Weaver, Flannelly, Larson, Stapleton, & Koenig, 2002). Regrettably, from the standpoints of both individual professional growth and broader societal benefit, opportunities for specialized disaster training of spiritual caregivers and non-mental health audiences, in general, have not been plentiful; indeed, they tend to have been limited to public workforce members such as fire, police, and EMS personnel.

An exception to the historical pattern of excluding lay citizens and faith professionals from disaster mental health training was provided in the form of a 2005 federally-funded grant program administered by the Maryland Department of Mental Hygiene. The Johns Hopkins Department of Psychiatry and Behavioral Sciences, in partnership with other academic institutions and several faith-based organizations (FBOs), developed a program to train urban-based (Christian) faith leaders in disaster mental health concepts and competencies (McCabe, Mosley, Gwon, Kaminsky, 2007). The purpose of this article is to describe the unique curriculum that was developed for the training of these spiritual caregivers who represented more than 100 separate parishes and congregations.

Developing a Special Training Curriculum: An Academic/Faith Collaboration

With input from a Partnership Steering Committee and a Community Advisory Board, a Curriculum Development Committee composed of representatives from academic and faith cultures designed a one-day training program with four modules of 75-minutes each: Stress Reactions of Mind-Body-Spirit, Psychological First Aid and Crisis Intervention, Pastoral Care and Disaster Ministry, and Practical Resources and Self Care for the Spiritual Caregiver. The topical content was organized in a 200 (*Microsoft PowerPoint*) slide presentation. Although mental health disaster information provided

the core content of the curriculum, special effort was devoted to integrating religious and spiritual content into the training experience. This goal was accomplished in multiple ways; for example, photographs of churches and places of worship, along with quotations from New Testament scripture selected on the basis of their relevance to the module topic, were incorporated into the slides. Additionally, and perhaps most importantly, training sessions were conducted by *two-trainer teams* — one member an expert in disaster mental health (one of two clinical psychologists with extensive, real-world disaster experience) and the other a member of the clergy (one of six ordained ministers or priests). A given trainer in these two-person teams would either teach the entirety of a certain content module, or would function in tandem with the other trainer; the latter approach was most often used with Module III [see below]. For readers who might be interested in constructing their own training program for disaster ministry and pastoral crisis intervention, the following model is offered as a framework for consideration.

The Curriculum

The actual training curriculum is described below by detailing for each module its intended purpose; background and rationale for the content selected; learning objectives; topics and sub-topics covered; and educational methods, materials and resources used. Each module description ends with a comment designed to elaborate on an important feature associated with the teaching of that content.

Module I: Stress Reactions of Mind-Body-Spirit

Purpose

The purpose of this module was to raise awareness of the interrelationships among mind, body, and spirit, particularly as stress may be manifested in and resolved through those aspects of human nature.

Background and Rationale

This content was chosen because some of the physical, emotional, cognitive, behavioral, and spiritual signs and symptoms of disaster-induced stress reactions, although not without adaptive functions serving survival, may leave people experiencing confusion, feeling uneasy, and lacking a sense of control. An overview of the basic anatomy and physiology of the human stress response, using the metaphor of *crisis as toxin*, allowed for the introduction of the principle that information is empowering, and that knowledge about reactions of the mind and body to crises may actually serve as an antidote in mitigating dysfunctional reactions (Everly & Mitchell, 2002). It was noted that unresolved stress reactions may accumulate and result in sustained disorders such as Posttraumatic Stress Disorder (PTSD), which can be accompanied by substance use conditions, refractory depression and, in some rare occurrences, suicide.

Stress has been conceptualized and defined from many different perspectives derived primarily from the seminal writings of Hans Selye (1956). For the purpose of this training, stress was conceptualized as a dynamic process in which the central nervous system and the peripheral nervous system (i.e., the autonomic nervous system and its accompanying sympathetic and parasympathetic branches) produce an integrated cognitive, affective, and physiological response that, if excessive enough, may lead to target-organ dysfunction or pathology (Guyton, 1992). There are several models that describe the hypothesized link between excessive arousal and manifestation of disease; however, Selye's master concept, termed the "general-adaptation-syndrome" (1956), which involves stages of alarm, resistance (adaptation), and exhaustion, is probably the most widely accepted.

In addition to this foundational anatomic and physiological overview, examples were shared of the growing body of literature that highlights a correlation between faith, religious practice, and health status (e.g., Levin, 1994; Strawbridge, Cohen, Shema, & Kaplan, 1997). While clear causative inferences between faith and health require additional scientific validation and explication, such findings provide a coherent rationale for understanding and ameliorating the stress response. The integrative bio-psycho-spiritual model (Torres, 2005), introduced as a theoretically compatible part of this training, hypothesizes that (ideally) the mind, body, and spirit operate in an interacting, integrative manner to produce optimal functioning within the socio-cultural environment.

From a pathological stress perspective, critical incidents may lead to a *crisis response* (an acute emotional reaction to a stimulus or demand; Everly & Mitchell, 1999) and have the potential to overwhelm the coping abilities of an individual or group. The adult lifetime prevalence for exposure to one or more traumatic events or critical incidents has been estimated to be approximately 90% in an urban community (Breslau,

Chilcoat, Kessler, & Davis, 1999). The estimated prevalence rate of PTSD for the general adult population has been estimated to be approximately 8% (American Psychiatric Association, 1994); however, this estimate increases to approximately 34% in the case of mass disasters (North et al., 1999). Excessive use of legal and illegal chemical substances can be concomitant with symptoms of PTSD, and reports indicate that 30% to 80% of patients seeking treatment for PTSD have concurrent diagnoses of substance abuse or dependency (Branchey, Davis, & Lieber, 1984; Keane, Gerardi, Lyons, & Wolfe, 1988; Najavits, Weiss, & Shaw, 1997). Moreover, there have been anecdotal accounts of suicides of emergency service workers following a natural disaster (Mitchell, Schiller, Eyler, & Everly, 1999) and, in a recent nationally representative comorbidity survey of anxiety disorders and suicidality, PTSD was the only disorder significantly associated with both suicidal ideation and suicidal attempts (Sareen, Houlahan, Cox, & Asmundson, 2005).

Learning Objectives

- To have a greater understanding of the signs and symptoms of stress
- To become aware of the "bio-psycho-spiritual" model of analyzing the effects of stress on human functioning
- To be able to recognize suicidal risk factors
- To be able to describe posttraumatic stress disorders
- To better comprehend the relationship between trauma and certain substance use conditions

Content Topics and Sub-Topics

- Overview of basic stress response patterns
- Routine signs and symptoms of stress (autonomic nervous system reactions)
- Other common expected reactions to stress (e.g., anger, irritability)
- Disruptive latter-stage reactions (e.g., physical and mental breakdowns): Suicide: epidemiology, etc; Alcohol/substance use conditions
- Critical Incident Stress: Definitions of critical incident and crisis; Crisis response characteristics; Impairment factors
- Posttraumatic Stress Disorder: Essential elements; Key characteristics; & Trauma and substance abuse
- Recognition of how stress and fear may spread (e.g., 'psychological contagion')

Educational Methods, Materials and Resources

- *Methods*: Lecture using slides; brief Q&A under two conditions [see 'Comment']; personal accounts by mental health trainers of experiences providing direct help to disaster survivors of terrorist attacks of 9/11 and Oklahoma City.
- *Materials and Resources* [provided in a 'Tool Kit']: Besides hard copies of the overhead slides for this and all modules, participants were given a binder with copies of journal articles and other readings; Internet information and web site addresses; and a bibliography of disaster mental health literature, publications, and other resources (e.g., videos, brochures, fact sheets) related to all-hazards preparedness, response, and recovery.

Comment: An effort was made to begin the training day by evoking emotion that would create a felt need and affective receptivity for the information to follow. This was accomplished by initially presenting slides of photographs portraying actual disaster events, following which participants were asked to describe their emotional reactions to the events viewed; this exercise routinely elicited reports of dysphoric emotions (sadness, grief, anger, etc). The identical slide images were presented again but with accompanying, overlaid prayers or scriptural references, following which there was the same inquiry about emotional reactions; respondents uniformly indicated that the juxtapositioning of the religious/spiritual content with the previously disturbing images in the overheads had a calming, consoling effect.

The bio-psycho-spiritual model of understanding stress was a ready fit for the faith community's acceptance of man as Mind, Body, and Spirit. This culturally appropriate concept enabled participants not only to understand the interaction between the component-dimensions but also to introduce the concept of *disaster ministry*. The interactive theoretical approach of how the mind, body, and spirit functionally interact helped participants to more readily see their need for psychological first aid and crisis intervention skills training.

Module II: Psychological First Aid and Crisis Intervention

Purpose

This content area was meant to increase awareness in the faith-based community of the principles of psychological first aid and crisis intervention and, correspondingly, to enhance participants' confidence and perceived 'self-efficacy' (Bandura, 1997) in incorporating PFA principles into their repertoire of pastoral crisis intervention techniques in disaster contexts.

Background and Rationale

Considering the frequently observed surge in attendance at houses of worship following a disaster, it seems reasonable that members of the spiritual community should possess the essential foundations for helping those who are experiencing emotional difficulty either to cope more effectively, or the foundations for knowing when to refer to the next level of care.

According to the Institute of Medicine (2003),

> *"In the past decade, there has been a growing movement in the world to develop a concept similar to physical first aid for coping with stressful and traumatic events in life. This strategy has been known by a number of names but is most commonly referred to as psychological first aid (PFA). Essentially, PFA training is intended to provide individuals with the principles and practices that they can use in responding to psychological consequences of disasters in their own lives, as well as in the lives of family, friends, neighbors, and congregants. As a community-based initiative, PFA training can provide a well-organized program to increase skills, knowledge, and effectiveness in maximizing health and resiliency" (IOM, 2003, p. 4-7).*

Among the putative benefits associated with PFA effectively-administered to trauma survivors is the reduction of feelings of isolation, helplessness, and powerlessness (Menninger, 2002), presumably gained through meeting basic needs for information, communication, and interpersonal support (IOM, 2003; Raphael, 1986). Ideally, PFA is embedded in a multi-component intervention system and applied — either in individual or group format — at the earliest feasible point in time. The essential elements of PFA training covered in the instant program [see 'Comment' below] were: *assessment* of the initial need, *stabilization*, further assessment of psychological and behavioral status including *differentiating between distress and dysfunction*, *supportive and compassionate communication*, and *connecting* survivors with informal or formal support systems.

Learning Objectives

- To enhance participants' perceived self-efficacy in applying the principles of *individual psychological first aid*
- To enhance participants' perceived self-efficacy in applying the principles of *group [or 'congregational'] psychological first aid*

Topics and Sub-Topics

- Definitions and overview of crisis intervention and psychological first aid
- Overview of individual psychological first aid
- Acute psychological first aid for suicide intervention
- Large group psychological first aid and congregational briefing

Educational Methods, Materials and Resources

- *Methods:* Lecture; PPT slides; discussion; examples of experiences and personal accounts by mental health trainers of providing PFA to survivors of the Oklahoma City and 9/11 terrorist attacks.
- *Materials and Resources* [provided in 'Tool Kit']: Copies of downloaded information from the Internet including: "Disaster Counseling: Counseling Skills, Establishing Rapport, Active Listening, etc"; "Trauma and Your Mental Health: What is a Normal Response and When to Seek Help," and "Post-Traumatic Stress Disorder," from the National Mental Health Association [www.MHA.org]. [Note: On January 1, 2007, the name of the National Mental Health Association was changed to Mental Health America (MHA)].

Comment: The PFA model (Everly & Flynn, 2005; 2006) taught in this program has undergone revision since imple-

mentation of the project. The revised PFA model, developed by one of the authors (GSE) and Cindy L. Parker, MD, MPH at the Johns Hopkins Center for Public Health Preparedness (CPHP), is anchored to evidence-informed core competencies (Parker, Barnett , Everly, & Links, 2006). The component-interventions are organized under the acronym "RAPID," (Everly, 2007) as follows: Reflective listening; Assessment; Prioritization (of needs); Intervention (to manage stress and instill hope); and Disposition.

Module III: Pastoral Care and Disaster Ministry

Purpose

The purpose of this content area was to provide an overview of pastoral care in the context of disasters and public health crises, along with a description of the spiritual/religious dimensions of a disaster.

Background and Rationale

Although pastoral counseling services have often been used in the wake of community crises and disasters, they are not by definition crisis intervention services (Everly, 2000b). Given the value that faith-based resources may have in the aftermath of crises, pastoral care and disaster ministry entail the functional integration of pastoral activities with traditional crisis intervention services. According to Sinclair (1993), and contrary to some often held pastoral beliefs, not all crises are viewed from the perspective of spirituality or theology. Crises may also manifest themselves in more mundane concerns related to personal safety, security, and welfare (Everly & Lating, 2004; Lerner, 1980).

Pastoral care as a discipline is relatively new and it has typically been viewed separately from the field of crisis intervention and psychological first aid. Considering that crisis intervention is intrinsically a multi-component intervention applied on a phase-specific continuum of temporal care, the infrequency of formally-organized pastoral crisis intervention services in disaster venues is notable. As defined by Everly (2000a), "pastoral crisis intervention is the functional integration of any and all religious, spiritual, and pastoral resources with the assessment and intervention technologies germane to the practice of emergency mental health" (p. 70). Thus, pastoral crisis intervention includes mechanisms of non-pastoral crisis intervention such as social support, cognitive reinterpretation, education, and problem solving (Everly & Mitchell, 1999). In addition, pastoral crisis interventionists may benefit from theological or divine credibility, and may tactfully employ, where appropriate, scriptural education and reinterpretation (Brende, 1991), prayer (including intercessory prayer), or forms of confession and forgiveness in a uniquely confidential and privileged exchange (Everly, 2000b). As later noted by Everly (2004) and emphasized in the training, in order to mitigate iatrogenic risks, pastoral crisis interventionists should be cautious about using certain tactics. These potentially problematic approaches include (unwanted) preaching, attempting to convert the person in distress to a new religion, employing guilt or shame as a motivation for change, entering into any form of theological debate, and minimizing the suffering or loss of someone in crisis as the "will of God."

Learning Objectives

- To define and differentiate between pastoral care and disaster pastoral care/disaster ministry
- To describe practical ways to implement pastoral crisis intervention

Topics and Sub-Topics

- Definitions of pastoral care in the context of disaster
- Key features of disaster ministry
- Pastoral care versus disaster pastoral care
- Spiritual/religious dimensions in pastoral care responses
- Helpful pastoral responses
- Cautions in using pastoral care responses

Educational Methods, Materials and Resources

- *Methods:* Lecture and discussion using overhead slides
- *Materials and Resources:* Copies of journal articles: Everly, G. (2000). "The Role of Pastoral Crisis Intervention in Disasters, Terrorism, Violence, and Other Community Crises," and Everly, G. (2003). "Pastoral Crisis Intervention in Response to Terrorism," and McPherson, K.F. (2004). Pastoral Crisis Intervention with Children: Recognizing and Responding to the Spiritual Reaction of Children" — all from the *Inter-*

national Journal of Emergency Mental Health [see 'REFERENCES']. "Standards of Care for Disasters: Spiritual Care Ministries" and "Spiritual Care: Bringing God's Peace to Disasters" from the *Church World Service Emergency Response Program* [www.churchworldservice.org/resources.html].

Comment: During the teaching of this module, a concerted effort was made to emphasize that "disaster ministry" was a growing and specialized area of potential focus for clergy and lay leaders of congregations, with clear distinctions needing to be drawn between pastoral care and disaster pastoral care. More than with other modules, this content was delivered by both the mental health and clergy trainers in sequential or alternating formats. Greater variation of presentation styles was observed among the clergy-trainers than the mental health professionals, with their approaches ranging from traditional, one-direction lecture methods to highly interactive exchanges where statements by the faith trainer were punctuated by validating audience vocalizations such as "Amen," "Yes," "God willing," etc.

The variation in the trainers' styles indicated a need to match the trainer to the theological and religious practices of the participants in such a way that these aspects of diversity were integrated into the proposed interventions for disaster pastoral care. Further, the responses to trainers indicated that the spiritual care providers themselves also needed further training regarding diversity among faith traditions in the event that they might be called upon to respond to a disaster outside the bounds of the familiar faith tradition that they practiced.

Module IV: Practical Resources and Self Care

Purpose

The purpose of this content area was to increase clergy awareness of community resources, as well as to increase appreciation of the importance of personal self care to avoid burn-out.

Background and Rationale

In order to facilitate a collaborative relationship between the faith-based community and outside resources, including academic medical settings such as Johns Hopkins and the University of Maryland, it is important that faith-based professionals have an awareness of the governmental, institutional, organizational, and community resources and services supporting disaster mitigation. Moreover, given the demanding, affect-intensive nature of crisis intervention work, it is important that the faith community have an appreciation of the need for self care activities to avoid burnout and a corresponding diminution in their capabilities of helping others.

A key point offered in the previously-referenced report issued by the Institute of Medicine (IOM, 2003) was the conclusion that mental health systems in this country are not currently capable of meeting the population's needs for psychological services resulting from future disasters, particularly when provoked by terrorist events. In keeping with this assertion, it was emphasized that disaster planners at the federal, state, local, and community levels assure the comprehensiveness of disaster planning by considering the psychological dimension in formal preparedness plans. Consistent with such advice is the premise that the mental health component of organizational disaster plans requires its own strategic infrastructure. A fundamental approach to preparedness that has been described elsewhere (McCabe, Seigel, Everly, Heitt, & Kaminsky, 2004) is to assure that the following structures and functions (irrespective of titles, designations, etc) are in place: an *Emergency Operations Center (EOC)* staffed by leaders in the organization and serving as the key structural and decision-making entity; a *Field Incident Command Center (FICS)* representing the operational field extension of the *EOC;* and a *Communications System* using an alternative or back-up system. Rehearsing tactical responses for the various phases of a disaster (pre-incident, acute, sub-acute, and chronic) under pre-selected disaster scenarios is recommended in order to enhance decision-making and minimize adverse effects. The principles behind the above structural and functional considerations are relevant for both organizational and family disaster planning.

The need for awareness of the potential pitfalls of burnout and for problem-preventive self care are not new insights. Burnout may be considered the end result of an ongoing process in which highly motivated, committed individuals experience a dissipation of spirit leading to physical, emotional, and mental exhaustion (Freudenberger, 1980). Would-be helpers, in general, need to be mindful of the importance of self-care strategies and of the appropriateness of managing both external and internal stressors that can have a deleterious effect on personal wellbeing (Weiss, 2004). However, due to the potential effects of vicarious traumatization on

those working with victims of trauma, the need for effective self care may be even more vital (Bell, Kulkarni, & Dalton, 2003; Figley, 2002).

Learning Objectives

- To increase awareness of disaster resources and how to access them in the event of a local catastrophe
- To assure comprehension of the elements of practical disaster plans for families and congregations
- To appreciate the importance of self-care strategies for the spiritual caregiver

Topics and Sub-Topics

- Community resources in disasters
- Incident command systems
- Examples of local hospital emergency incident command structures [*particularly relevant for this project because of the close institution/community relationship that the training initiative was meant to recognize and reinforce*]
- Exercise to generate information on resources within and outside the spiritual community to assist congregation
- Examples and discussion of outside agencies
- "Compassion fatigue" and burnout: Signs of burnout; Elements of pastoral stress management and self care
- Family disaster plans: Checkpoints; Contact person(s); Evacuation & Supply kits.

Educational Methods, Materials and Resources

- *Methods:* Lecture using slides; exercise
- *Materials and Resources* [provided in 'Tool Kit']: Copies of information downloaded from the Internet, including: "Preparing Your Congregation for Disaster" from the *Evangelical Lutheran Church of America* [www.elca.org/disaster/resources]; "Your Family Disaster Plan" from the American Red Cross [www.arc.org]; and "The Youngest Victims: Disaster Preparedness to Meet Children's Needs" from the *American Academy of Pediatrics* [www.aap.org/terrorism]

Comment: The authors thought it was important to use this module to convey to faith community leadership not only the importance of generating lists of resources within their communities and of having a sense of key organizational infrastructures but also to provide an overview of external resources in the form of agencies whose missions relate to disaster preparedness, response, and/or recovery, such as the American Red Cross, Catholic Charities, International Critical Incident Stress Foundation (ICISF), National Organization for Victim Assistance, Salvation Army, as well as state and local government resources and the core functions of the supporting hospital emergency incident command system (HEICS) of Johns Hopkins Health System and of the University of Maryland Health System (UMHS).

Summary and Conclusions

The purpose of this project was to lay the foundation for strengthening current public health infrastructure and services in the state of Maryland by establishing a community-academic partnership to develop a disaster mental health training program for urban-based faith leaders. The curriculum was designed to reflect the culture and unique characteristics of inner-city clergy along with the vulnerable populations with whom they work. Among the topics covered were: stress reactions; principles of crisis- identification, management, and referral; pastoral care; disaster ministry; preparedness, response, and recovery resources; and self care. Participants reported that they viewed the training program as having successfully expanded their knowledge of the disaster mental health field, and having enhanced their self-confidence in applying psychological first aid in individual and congregational communication forums following major disasters, as well in the context of more limited community crises that occur with everyday frequency.

Although the amount of content presented for a one-day training was ambitious, the integrated, collaborative approach to disseminating training information using *both* mental health and clergy was especially well-received. Although PFA skill-building exercises were incorporated into the curriculum, one can envision how actual competency development in the use of psychological first aid could be enhanced with a multi-day program and more pointed em-

phasis on facilitated training, practical exercises, and performance feedback.

Given the potential need for the participation of a wide-range of community organizations and agencies in the aftermath of a disaster, it would seem that the core mental health disaster content of the curriculum presented here not only can be applied to faith communities throughout the country, but also could serve as a foundational template for application to other lay communities and special populations. For example, after identifying appropriate partners, specialized applications could be directed to individuals whose age, socio-economic status, or medical/psychiatric conditions may confer to them greater vulnerabilities under severe emergency or disaster circumstances. Upon the generic core template on stress, crisis intervention, and psychological first aid, one could then customize a preparedness training curriculum to fit the specific needs of the given constituency.

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Manuscript received: June 4, 2007

Accepted: August 26, 2007

International Critical Incident Stress Foundation, Inc.

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International Journal of Emergency Mental Health, Vol. 9, No. 3, pp. 193-200 © 2008 Chevron Publishing ISSN 1522-4821

An Ongoing, Multi-Faceted Program for Victims of Terror Attacks and Their Families

Roni Gagin
Department of Social Work, Rambam Medical Center, Haifa, Israel

Miri Cohen
Department of Social Work, Rambam Medical Center, Haifa, Israel and School of Social Work, Faculty of Social Welfare and Health Studies, Haifa University

Maya Peled-Avram
Department of Social Work, Rambam Medical Center, Haifa, Israel

Yael Unger-Arnov
Department of Social Work, Rambam Medical Center, Haifa, Israel

Orit Adir
Department of Social Work, Rambam Medical Center, Haifa, Israel

Aviva Tessler
Operation Embrace

Abstract: *Victims of terror attacks, whether or not physically injured, sometimes suffer long-term posttraumatic symptoms, although the intensity of symptoms differs among individuals. Often, after discharge from the hospital, additional posttraumatic symptoms and emotional distress are evident, together with difficulty in readjusting to a normal life. This paper describes an ongoing multi-faceted program to empower victims and their families and assist them on the journey to recovery. The program is operated by the social work department in one of the main hospitals in Israel, in alliance with a voluntary non-profit organization in the U.S. One hundred seventeen victims of terror attacks who were previously hospitalized in the hospital for immediate care after attack were enrolled in the program, which is structured to offer comprehensive help in order to meet the psychological, material, and social needs of the participants and their families. Based on needs assessment, the participants are offered individual, family, and group therapies and community activities. Different elements of the project are described, and the need to further develop intervention models and to evaluate them is highlighted. [International Journal of Emergency Mental Health, 2008, 9(3), pp. 193-200].*

Key words: *victims, terror attaccks, families, empowerment program*

Roni Gagin, MSW, Miri Cohen, PhD, Maya Peled-Avram, PhD, Yael Unger-Arnov, BSW, Orit ADir, MSW, and Aviva Tessler, MA all serve with the Dept. of Social Work at Ramban Medical Center in Haifa Israel. Correspondence regarding this article may be sent to Dr. Miri Cohen at cohenm@research.haifa.ac.il

Since September, 2000 Israeli society has been confronted with a wave of terror attacks that have acquired the title "al-Aqsa Intifada." The upsurge of violence has been the most intensive in the history of the state of Israel. Civilians have been attacked in public places, including restaurants and buses. Between 2000 and 2005, more than 5,000

civilians were injured and more than 670 were killed in terrorist attacks throughout Israel (Israel Defense Forces, 2005).

Terrorism is defined here as violent attacks against civilians in order to achieve political means. This fight is aimed to strike at public morale by means of atrocities intended to cause as many casualties as possible by spreading fear through the entire population. One of the goals of terrorism is to influence the agenda of the public and political organizations on the national and international levels (North & Pfefferbaum, 2002).

Terror attacks are man-made disasters, which in contrast to natural disasters are initiated to create destruction, harm, and death (North & Pfefferbaum, 2002). Norris, Friedman, Watson, Byrne, and colleagues (2002) reviewed 160 studies on disaster victims, numbering 60,000 people in all. These investigators found that individuals who experienced mass violence, such as terror attacks, suffered more severe psychological reactions than victims of natural disasters.

Common psychological responses to disasters include depression, posttraumatic stress disorder (PTSD), generalized anxiety disorder, substance-abuse disorder, and somatization disorder (Austin & Godelski, 1999). Health problems, loss of resources, and impaired social and employment status are also commonly experienced (Armenian et al., 2000; Brewin, Andrews, & Valentine, 2000; Norris, 2002; Norris, Friedman, Watson, Byrne, et al., 2002; Norris, Friedman, & Watson, 2002). More severe exposure, ethnic minority status, secondary stressors, prior existing psychological problems, and weak psychosocial resources were most consistently associated with more adverse outcomes (Norris, Friedman, & Watson, 2002).

Psychological reactions to disasters are often described in three phases (NSW Institute of Psychiatry and Centre for Mental Health, 2000; Raphael, 1986, 1993): impact phase, characterized by acute and crisis reactions; immediate post-disaster phase, characterized by different levels of acute stress responses, confusion, anger, depression, and anxiety; and post-disaster phase, a prolonged period of adjustment efforts in which individuals try to achieve a new equilibrium (Raphael, 1986, 1993). Raphael described this last phase as a disillusionment period, during which formal and informal help often decreases meaningfully (Raphael, 1986). The victims are expected by their surroundings to return to pre-trauma routine life at a time when they are still overwhelmed by the realities of loss and change, and by bureaucratic constraints (Raphael, 1986).

Feelings of loneliness and distress often increase significantly, and PTSD symptoms are stabilized during the late phase (NSW Institute of Psychiatry and Centre for Mental Health, 2000; Raphael, 1993). The theory of *resource conservation* (Hobfoll, 1989) may be an appropriate framework for understanding the psychological, social, and functional effects of terror attacks on the victims and their families. This theory postulates that stress in reaction to adverse life events emerges when the individual experiences actual or threatened depletion of resources. Resources are objects (e.g., housing), personal characteristics (e.g., independence, self-esteem), conditions (e.g., employment, social status), and energies (e.g., economic resources, information). These resources serve as means to achieve one's aims, so their depletion or threat of depletion may cause psychological distress (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). Intensive use of existing resources, especially in coping with long-term stressful situations, results in their depletion. Individuals with low resources are the most vulnerable to additional losses and experience more adverse outcomes (Hobfoll, 1989).

Nevertheless, few victims of terror (Bleich, Gelkopf, & Solomon, 2003) or sufferers of other trauma (Jeavons, Greenwood, & Horne 1998; Bryant & Harvey, 1995) seek professional help, and even fewer state that they were helped by professional services (Austin & Godleski, 1999). Tuval-Mashiach and Shalev (2005) suggest that the low number of terror victims seeking help is indicative of low accessibility of professional services or of the stigma attached to approaching them. It has been suggested that new modes of intervention, better suited to victims' needs, should be established (Tuval-Mashiach & Shalev, 2005). In addition, this help should be initiated for and offered to victims at locations within their communities (Austin & Godleski, 1999). Intervention should be flexible, adjusted to the phase following the attack, to individual and family characteristics, to the extent of loss, and to the availability of resources (Austin & Godleski, 1999; Hobfoll, 1989; Norris et al., 2002a). Interventions should also aim at empowering individuals by reconstructing their personal and interpersonal resources (Gutierrez, Parsons, & Cox, 1998; Hobfoll, 1989). Norris, Friedman, and Watson (2002) stress that a holistic therapeutic approach which encompasses the individual victim and also the family and the community should be initiated.

In addition to individual therapy, family therapy, group therapy, and community activities are accordingly required (Austin & Godleski, 1999). Interventions on the community

and group levels should focus on increasing solidarity and a sense of shared fate, reducing feelings of loneliness and hopelessness, and fostering mutual work to create alternative resources (Austin & Godleski, 1999; Hobfoll, 1989). In addition, the group experience makes possible repeated exposure to the traumatic experience, its desensitization, and the formulation of an adjusted narrative (Foa, Molnal, & Kashman, 1995). On the family level, interventions are needed for strengthening the familial system, fostering mutual support, and promoting adjustment (Norris et al., 2002a).

This paper describes an "empowerment program" for treating victims of terror attacks through the phases of psychological reaction to them, based on a comprehensive and holistic approach. The program is grounded in the theoretical framework of resource conservation as well as the empowerment approach (Gutierrez et al., 1998; Hobfoll, 1989).

The Empowerment Program for Victims of Terror Attacks and Their Families

Program Background

Rambam Medical Center is the largest hospital in the north of Israel and serves as the region's main trauma center. It absorbs many of the severely injured in each mass casualty event. From 2000 to 2005, 369 severely injured individuals were treated at Rambam. Twenty-six of them were unidentified injured; 19 were unidentified injured who died on the way to the hospital.

Following a mass casualty event, the hospital's social work department operates an information center for the public (Gagin, Cohen, & Peled-Avram, 2005), and provides information on injured individuals received at Rambam and at other hospitals to the many people who come to look for their kin (Drory, Posen, Vilner, & Ginzburg, 1998; Gagin et al., 2005). At the same time, social workers give psychological first aid to people arriving at the hospital in search of their family members. This includes emotional support, help in answering urgent needs, and preparation for seeing the injured family member in the operating room, intensive care unit, or medical department. Psychological First Aid is likewise offered to families of deceased victims (Gagin et al., 2005).

The Rationale For The Empowerment Program

The first contact between the social worker and the wounded person at the hospital is made as soon as possible after his/her admission. It takes place in the emergency room or in the particular ward after the first medical treatment. Families are also contacted at the very first moment of their telephone call or arrival at the hospital to search for their kin. The relations forged in these critical minutes between the social workers and the wounded and their families are of high emotional intensity, replete with strong feelings of care and empathy. Indeed, the relationship often consolidates into a very special bond. Our clinical experience indicates that this bond is long remembered by patients and families, and it is only natural for them to stay in touch with the social workers with whom they already are acquainted and trust.

A second rationale for the project arises from the victims' circumstances after discharge, in the disillusionment phase (Raphael, 1986). While hospitalized they are usually surrounded and treated by professional personnel, friends, and others, and they receive support, care, and love. Discharge from the hospital is followed by a diminution of attention and support. Terror victims repeatedly say, "One day we are new headlines and the next day we are forgotten." In addition, on their discharge from the hospital the wounded are commonly expected to resume life as it was before the injury. Contrary to these expectations, the victims often have a growing need for emotional and material help and support. The lengthy travail of processing the traumatic experience is just beginning. Intervention in this phase is critical for patients' ability to adjust and return to reasonable life (NSW Institute of Psychiatry and Centre for Mental Health, 2000).

Formal services exist that treat the victims of terror attacks. The leading organization is the National Insurance Institute. It is responsible for rehabilitation plans, psychological aid, and answering material needs, in addition to paying allowances to the disabled as a result of their injury (National Insurance Institute of Israel, 2005). In addition, therapeutic centers specialize in working with individuals experiencing traumatic life events. However, the many and enormously complicated needs in the physical, psychological, social, and material spheres often cannot be fully met by the existing services.

Aims of the program

- To foster an ongoing recovery and healing process for the victims and their families.
- To help adjustment and coping of victims after discharge from the hospital, and in restoring their quality of life.

- To help in constructing and strengthening personal and family resources.
- To create self-help groups that will foster mutual support and a sense of solidarity, and that will become a resource for better coping.

Alliance with the Operation Embrace organization

The empowerment program is sponsored by the Operation Embrace (OE) organization. OE is a non-profit organization in the United States that cooperates with mental health professionals in Israel in assisting injured victims of terror throughout Israel. OE supports activities initiated by the services and provides individual help for victims, makes it possible for volunteers to maintain correspondence with victims, purchases medical equipment and/or therapy, and provides financial aid for needy victims. Its operatives remain with the injured and their families as needed. As its name indicates, the goal of OE is to embrace victims of terror and to hold them. While most people and organizations respond in an emergency, OE aims to supply a constant support system.

Participants

One hundred seventeen victims of terror who were physically injured or have PTSD symptoms were enrolled in the project. They include Jews and Arabs (Muslims, Christians, and Druze). Of the 117 participants, 50 were male and 67 female; mean age was 37 years (range: 20-58). The participants suffered a wide range of physical injuries and trauma reactions. A group of bereaved family members who lost their loved one in a terror attack have recently joined the program.

Intensity of participation in the program varies among the victims, according to their needs, wishes, severity of injury, or personal condition and time since injury.

The Empowerment Program

The program is based on the empowerment model and focuses on identifying and using existing strengths including the development of coping resources (Hobfoll, 1985; Rosenfeld, Lahad, & Cohen, 2001). Two social workers are responsible for the program, which is managed by the director of the social work service. The different components of the program are intended to strengthen or to promote the use of diverse cognitive, emotional, physical, and coping strategies (Rosenfeld et al., 2001; Lahad, 1997).

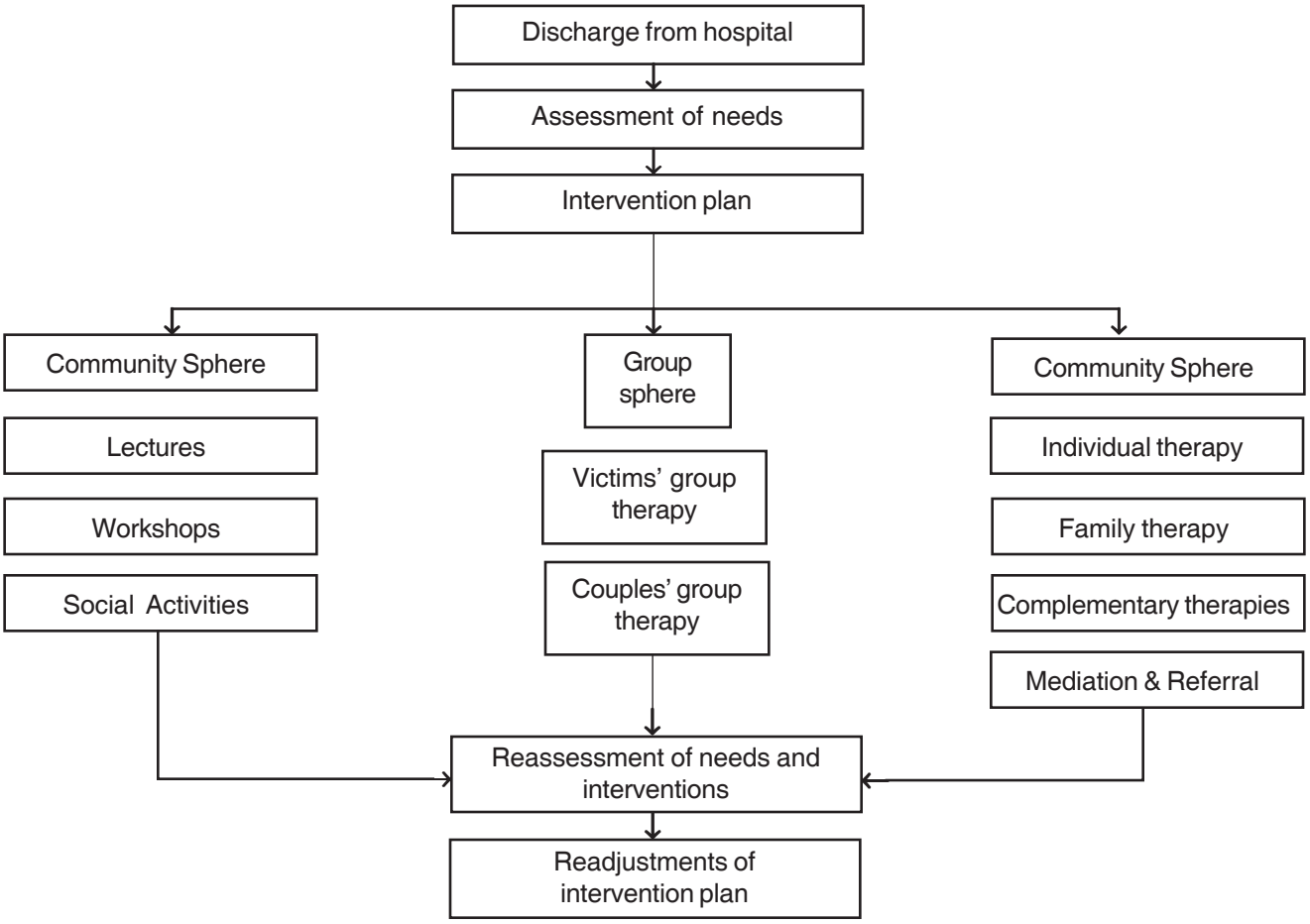
As stated, contact and building a bond with the terror victims start with admission to the hospital; with family members this occurs immediately on their arrival at the information center. Throughout the hospitalization, emotional support, crisis intervention, and mediation with community services are offered to the injured and their families. When the time for discharge approaches, the social worker helps the injured and the family to prepare emotionally for the subsequent psychological sequel, and helps in problem-solving processes and getting organized at home, providing information, and mediating with services in the community.

After discharge, needs are assessed (mostly through a home visit) and an intervention plan is tailored for each victim. Interventions on the individual, family, group, and community levels are offered (Figure 1); they are not mutually exclusive.

The individual intervention may include short- or long-term psychotherapeutic meetings. In addition, a new program, which we call "When words end…," is offered, applying complementary therapies such as hydrotherapy, dance therapy, massage therapy, Twina (Chinese massage), bibliotherapy, and psychodrama. These therapies are provided by various complementary therapists, organized and coordinated by the program's social worker and sponsored by OE. The social worker also mediates with and refers participants to community services, voluntary organizations, and psychiatric and medical consultations.

Family or spousal therapy is given when there is need, and is used to foster open communication, cohesion, resilience, and problem-solving abilities within the family (Patterson, 2002). Group therapy is also part of the program, offering terror victims a chance to join other individuals in similar situations. Two groups have been conducted so far. The first group was for the victims, injured emotionally or physically. This group aimed to help in the process of coping in the various spheres of life, promoting adjustment and psychological well being. It consisted of ten participants, six men and four women, ages 22 to 70, who were six months to three years post event. Eight sessions were held, in which the themes fluctuated between two sequences. One was the time sequence: before the traumatic event, the event itself, and after the traumatic event. The other was the interpersonal sequence: self, couple, family, and society. The sessions focused on sharing the traumatic experience and restructuring the trauma, improving present coping with the aftermath of the trauma and injury and the changes in self-

Figure 1. The Empowerment Program



perception and in the meanings attributed to different aspects of private life. By the end of the group intervention, level of distress and posttraumatic symptoms had evidently decreased. In addition, participants concluded that the group gave them a sense of belonging and the ability to see personal benefits and growth that emerged from the trauma, as well as normalization of their feelings and reactions.

The second group was for victims and their spouses. The aims were to improve communication and mutual understanding within couples, to ameliorate couples' coping, and to help with acceptance of the changes on the personal and family levels. Eight couples, ages 22 to 45, in each of which one partner had been physically or emotionally hurt in a terror attack, participated in the 10 group therapy sessions. The therapy focused on sharing the traumatic experiences of each of the partners, and dealing with the changes in spousal relationships, intimacy, role conflicts, communication problems, and acquiring efficient coping skills. The couples concluded that, as a result of the group therapy, intimacy and mutual acceptance improved, and the spousal contact was strengthened in the process. They found mutual learning had taken place among the couples, fostering a feeling that the spousal problems were common to all.

The victims and their families create a small community. Within this community they feel close to each other, they can openly express feelings and thoughts, and can feel accepted and understood. Activities on the community level are aimed at strengthening this small and unique community, and making it a source of empowerment and support (Bolton, 1999). However, the purpose of the activities is to infuse the participants with strength from the solidarity and familiarity in order that they may cope outside the group, not to become closed within it. Several activities take place each year, including lectures and workshops. For example, in winter 2004

a workshop titled "Balloons of Hope" was conducted; participants were asked to tell their personal stories and wishes for the future in words, drawings, and other means. Then as a symbolic act they attached their work to balloons which were released into the air. Another recent project is a walking group for bereaved women, led by a professional guide.

Case Examples

Case 1: A., a 40-year-old man, married with 3 children, was mildly injured in a terror attack in the North and experienced a severe posttraumatic reaction. He suffered serious sleeping disorders, was afraid to go out, reacted with severe anxiety when his wife or children did so, and restricted their movement. He was unable to drive, and as a bus driver he could not go back to work for a long period. A.'s wife is an invalid, whom he had cared for before the injury. A. was obsessed with his situation, experiencing high distress, especially anxiety and powerful feelings of helplessness. We started treatment on several levels. Individual sessions were arranged for A. to help him cope with the trauma and with his altered life circumstances. Therapy included significant emotional support, legitimatization of his feelings, and a psychoeducational approach (i.e., emotional reactions to trauma). The therapy focused on restoring a sense of control, reducing anxiety and avoidance. Graded exposure was used to encourage A. to confront feared thoughts and feeling, together with cognitive restructuring of anxiety-evoking thoughts, such as correlating the act of getting onto a bus with experiencing an explosion. A. and the therapist built a plan of gradually returning to work, first to office duties and then gradually going back to driving. Strategies of enhancing control in the driving situation were devised, such as asking to be assigned safe bus lines and checking the bus. We received funding for psychological treatment for the other family members. This focused on the anxiety reactions of the children, which were evident in deterioration in academic performance and behavioral problems in school and at home. A. participated in the group for victims, and together with his wife joined the group for victims and spouses, in addition to taking part in community activities. In the safe environment of the couples group, A. and his wife succeeded in creating an open dialogue, and they acquired better understanding of the each others' emotional reactions. A. was then able to resume caring for his wife and her needs, instead of concentrating on his own problems. The feelings of helplessness and psychological distress decreased and family functioning gradually improved. He returned to work.

Case 2: D.'s husband was mortally injured in a terror attack at a restaurant and died two weeks later in the hospital. D. was 45 years old with five children. The youngest daughter was to be married four days after the terror event. Intensive crisis intervention was conducted with D. and her family, with continuous support throughout the lengthy period following. The intervention with D. focused on grief work, allowing outlet and legitimization for feelings of anger and pain. The two-fold problem of being an Arab who was hurt by Arab terrorists emerged and had to be dealt with, together with her rage against the terrorists. D. had to assume roles and responsibilities previously handled entirely by her husband. She had to make decisions herself and learn how to manage money, pay bills, etc. As part of the Arab tradition, her married son insisted on shouldering all his father's roles as head of the family. Culturally-sensitive work was conducted with D. so that she could accept the son's help but retain her independence. She was now strong enough to decide to hold her daughter's wedding before the end of the year of mourning, which she felt was the right thing to do, considering her daughter's mental condition, although it was contrary to the cultural custom. Another aspect of the culture-sensitive intervention was helping D. resume a meaningful and enjoyable life, attending to herself and her needs, in contrast to the cultural concept of widowhood. D. also received alternative therapy through the project, from which she benefited. The family was also assisted financially, as the wedding expenses, which had been paid, left the family heavily in debt. The connection with the family still exists, several years after the event.

Discussion

This article describes a continuous and comprehensive, volunteer, non-profit program to assist terror victims in the long and emotionally laborious road back to pre-incident life. This program is unique in being comprehensive and open-ended, functioning throughout the different stages of psychological reactions to trauma as a result of terrorism. To the best of our knowledge, no other such programs are described in the literature or are operated in Israel or other countries.

The plan of the program, as outlined at the start, has evolved through the experience of learning the needs of the victims and getting acquainted with the problems and challenges they encounter. For example, at the start of the program the plan was to meet the needs of the injured and their families, but of late has been expanded to include bereaved

individuals as well. As a result, the advantage of tailoring the program to the changing needs of the patients has taken place, making the program dynamic and client-centered, and attuned to patients' changing needs during the coping process.

The program has several broader applications for working with different groups of PTSD patients, such as victims of the September 11, 2001 terror attack and veterans of the Gulf or Iraq wars. Most important is the realization that treatment of trauma victims can be long-term. Longitudinal programs should be designed and tailored to individual needs. Programs should be flexible and subject to change according to the passage of time and individual progress. Another implication is the advantage of a multi-faceted program that offers a variety of services on the individual, group, and community level. Each level offers different elements of help, while their integration is necessary to encompass the complexity of PTSD symptoms and effects.

In the United States, as in Israel, victims of terror attacks and war veterans who suffer from PTSD are often from divergent ethnic or cultural backgrounds. The program can be sensitively adapted to the different cultural codes and norms of coping with trauma, emotional expression, and the meaning ascribed to life situations.

The model of cooperation between a formal, professional organization and a volunteer organization has enriched the project and its participants, and we recommend its adoption for use with other groups of PTSD patients. A voluntary organization may add enthusiasm and warmth, and has the flexibility to provide solutions to specific problems and needs of the terror victims. From the present experience, the assistance of the voluntary organization for individuals should be based on needs assessment by mental health professionals such as psychologists or social workers and should be part of a comprehensive intervention plan. In the case of the OE organization, the warmth imparted to victims as well as their sincere concern are a source of support for the social workers as well.

The present program is provided in addition to the existing services that treat the victims of terror attacks. It is not intended to compete with the formal help given. It is meant to be complementary to the help received from those organizations. It is conducted in coordination with these services. Coordination between all services is essential. It facilitates the provision of a more comprehensive and cooperative intervention plan from which the participant can find additional benefits. As one of the victims said, "Your program fills the gaps that exist in the services."

The issue of treatment termination must be addressed. The program is supposed to be open-ended. However, questions arise. How long should terror victims be enrolled in the program? What is the optimal period to prevent the development of over-dependence? Should an optimal period of time be defined, or should there be a periodic evaluation for each patient to define his/her needs and wishes?

A limitation of the empowerment program is the difficulty in assessing its results due to the long periods of participants' staying in the project with its various elements, and the existence of many intervening variables related to what happens in participants' lives. Nevertheless, we are engaged in a longitudinal evaluation of the change in the participants' PTSD symptoms (Foa, 1993). We believe that additional means of evaluation should be developed.

Cooperation between services around the world that treat terror and other disasters should be fostered in order to learn from each other and to develop shared knowledge and practice models.

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Manuscript received March 27, 2007

Revision received May 22, 2007

Accepted July 26, 2007

International Journal of Emergency Mental Health, Vol. 9, No. 3, pp. 201-214 © 2008 Chevron Publishing ISSN 1522-4821

A Missing Element in Disaster Mental Health: Behavioral Health Surveillance for First Responders

Jan Shubert
U.S. Environmental Protection Agency

Col. Elspeth Cameron Ritchie, USA
Psychiatry Consultant to the US Army Surgeon General

George S. Everly, Jr.
The Johns Hopkins Bloomberg School of Public Health,
Center for Public Health Preparedness;
The Johns Hopkins University School of Medicine

Nancy Fiedler
University of Medicine & Dentistry of New Jersey,
Robert Wood Johnson School of Medicine

Mary Beth Williams
Trauma Recovery,
Education & Counseling Center

Clifford S. Mitchell
Maryland Department of Health and Mental Hygiene

Alan M. Langlieb
The Johns Hopkins University School of Medicine
The Johns Hopkins Bloomberg School of Public Health

Abstract: *Considerable literature exists on surveillance for medical effects of responses to a disaster, but there is a dearth of information on conducting surveillance of behavioral health effects for first responders. This article reviews the literature and rationale behind behavioral health surveillance in the context of medical surveillance of first responders, examines special populations and ethical issues, discusses a model currently used by the U.S. military, discusses unresolved issues, and concludes with some practical suggestions. [International Journal of Emergency Mental Health, 2008, 9(3), pp. 201-214].*

Key words: *disasters, first responders, behavioral health, medical surveillance, surveillance*

Correspondence regarding this article should be sen to: Jan Shubert, MA, L.C.S.W., Office of Emergency Management, U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460, Mail Code 5104A. (202) 564-2527. E-Mail: shubert.jan@epa.gov. The views expressed in this article are the views of the authors and do not necessarily reflect the views of the U.S. Environmental Protection Agency, the Uniformed Services University of the Health Sciences, the Department of the Army, the Department of Defense, the Maryland Department of Health and Mental Hygiene, or any other federal or state agency.

Most of the literature related to worker protection in disasters has focused on the physical health of the responders. Whether they are local firefighters, federal emergency responders, or construction workers, disaster responders often are exposed to a variety of physical hazards such as toxic chemicals, fires, explosions, biological or radiological contamination, and collapsing buildings. To protect these workers, organizations take various approaches, including

the use of engineering controls and personal protective equipment (PPE) during the response and the use of medical surveillance after the response (Hogan & Burstein, 2002). In the wake of recent natural and human-made disasters, such as the bombing of the Alfred P. Murrah Building in Oklahoma City in 1995, the attacks on the World Trade Center and the Pentagon in 2001, and the twin hurricanes Katrina and Rita in 2005, the need to broaden the term "protection" to include the psychological protection of responders has become evident.

This article examines existing methods used to protect responders, recent research findings on the effects of emergency response work and stressful experiences on behavioral and physical health, the importance of considering diversity and ethical issues, and the model currently used by U.S. military organizations to respond to behavioral health issues. We conclude with some thoughts on how behavioral health protection could be integrated into existing medical monitoring and surveillance programs. Our goal is to stimulate discussion regarding appropriate psychological protection interventions. Because recognition of the need for such interventions must precede application of an intervention, we propose the integration of behavioral health monitoring into existing medical monitoring and surveillance programs for emergency responders. We also raise issues that must be resolved as we address this serious gap in the protection of emergency responders.

Background

First responders are at risk of both physical and psychological health problems during and after disasters (Feldman et al., 2004; Liao et al., 2002; Fullerton, Ursano & Wang, 2004; Berrios-Torres et al., 2001). These include acute injuries and illness, and chronic health effects.

One of the most important public health tools used to prevent such adverse effects is surveillance. Generally, medical surveillance is used to detect potential health effects from exposures before the onset of clinical effects, thereby providing an opportunity for early intervention. In the context of occupational health, medical surveillance has been described as having four components: the systematic collection of data on occupational exposures, injuries, and diseases; the analysis of these data; dissemination of these data to appropriate parties; and interventions to improve outcomes (Markowitz, 1998). Medical surveillance typically consists of standardized questionnaires, physical examinations, physical testing (particularly cardio-pulmonary, auditory, and visual), and laboratory tests (especially of systems at risk, such as liver function tests and the hematopoietic system). An important component of surveillance is an assessment of exposure to a hazard, allowing interventions even before the onset of biological or clinical effect (Halperin & Frazier, 1985).

Medical surveillance has been shown to be effective in the prevention of injury and illness related to exposures in many industrial settings (Hulshoff, Verbeek, van Dijk, van der Weide, & Braam, 1999). There have been fewer examples of surveillance in disasters, but there are some. Probably the most comprehensive surveillance of responders involved in a civilian disaster is the surveillance program for responders to the World Trade Center attacks. That surveillance program has followed approximately 40,000 workers over more than 2.5 years, and has documented both acute and chronic health effects among responders (Herbert et al., 2006). There are also parallels in military medicine suggesting that surveillance may well play an important role in preventing injury and illness associated with disasters (May et al., 2004). The CDC's strategic plan for bioterrorism includes detection and surveillance as one of its five areas of focus (CDC, 2000). There is now discussion of how surveillance can play a role in the context of large-scale disasters that might require activation of the National Response Plan (Mitchell et al., 2007).

Behavorial Health Surveillance in First Responders: Review of the Evidence

To date there has been relatively little organized effort to monitor behavioral effects of exposure to disaster response-related risks and hazards upon first responders (North, Pfefferbaum, & Tucker, 2002). Disaster responders can be subjected to numerous potentially traumatizing experiences: fear of the unknown and the increased anxiety that are common in high-risk situations; the actual physical dangers that require workers to be constantly vigilant; the sights, sounds, and odors associated with fatalities and injuries, which often foster unrealistic feelings of guilt over not having been able to do more or save more; grief over the loss of fellow responders; and fears associated with possible exposures to harmful substances during the response and potential serious health effects. A review of the literature suggests that those who respond in the wake of disasters may develop adverse psychological and behavioral reactions.

The potential for trauma reactions and for posttraumatic symptoms in disaster responders has received significant attention in recent years. In the proceedings from the conference, "Protecting Emergency Responders: Lessons Learned from Terrorist Attacks," conducted by the RAND Science and Technology Policy Institute in December 2001 (Jackson et al., 2002), stress was considered one of the many hazards faced by the thousands of responders to the September 11 terrorist attacks. The condition of the victims of the terrorist attacks contributed to the stress levels of the construction and trades workers. As one member of the Trades Panel said, "Many of these workers had never seen a dead person – not in an automobile accident, not even in a funeral home" (p. 16). Panelists reported that more than 100 cases of psychological stress were treated in the first two months of the World Trade Center response, a number believed to be much smaller than the number of those actually experiencing distress. The panel also acknowledged the need for conducting studies on psychological risks for responders.

Trauma reactions are not limited to responders at terrorist events. Those responding to natural disasters such as the recent hurricanes that devastated the U.S. Gulf Coast saw destruction on a scale that caused potentially harmful behavioral health effects in many responders. Responders to these hurricanes included traditional emergency responders, such as fire, police, and other local emergency response personnel, as well as state and federal responders, such as the U.S. Coast Guard, the U.S. Army Corps of Engineers, the Federal Emergency Management Administration, the Environmental Protection Agency, the Red Cross, and medical, psychological, and mortuary teams from the Department of Health and Human Services. Less traditional responders, such as those in the construction and trades industries and the transportation sector, also were involved. There were ample experiences to cause responders unpleasant memories, at best, and more significant trauma reactions, such as sleepless nights and flashbacks, at worst.

The importance of behavioral health surveillance was raised in a study conducted for the National Institute for Occupational Safety and Health by the RAND Corporation, on ways to improve protection of emergency responders. The study report, "Protecting Emergency Responders: Safety Management in Disaster and Terrorism Response" (Jackson, Baker, Ridgely, Bartin, & Linn, 2003), recommended the consideration of critical incident stress in response planning. Furthermore, it emphasized the importance of providing critical incident stress assistance to nontraditional responder groups, such as construction and trades workers, and also to the families of responders. Study participants suggested that it would be important to consider responder stress levels before, during, and after deployment because responding to a disaster would likely exacerbate pre-existing stress levels and potentially result in an increase in unhealthy coping strategies such as alcohol consumption; that is, a person who experienced a previous personal disaster might be more likely to be traumatized than would someone who had never had that exposure.

Disaster research is difficult to perform, especially in the wake of mass violence and terrorism. Nevertheless, in an attempt to project the mental health needs should such events recur, a review of relevant research seems warranted. In September 2004, the Centers for Disease Control (CDC) released information derived from a study of 1,138 WTC rescue/recovery workers conducted between July 2002 and August 2004. Each worker had worked an average of 966 hours (range of 24-4,080). During the first six months of the study, 51% of the workers met criteria indicating the need for a more in-depth clinical mental health evaluation on at least one screening instrument. Approximately 6% of the participants reported symptoms of depression, panic, and generalized anxiety. Nearly 10% reported alcohol use issues; 15% reported problems with social life, 14% with work, and 13% with home life. Approximately 20% of the participants met the symptom threshold for posttraumatic stress disorder (PTSD). Only 3% reported obtaining mental health services before the study began. The study also pointed out the unusual heterogeneity of the WTC responder population, with its large numbers of construction and trade workers – a heterogeneity that may become more common if large scale terrorist incidents continue to occur (CDC, 2004).

Castellano (2005) reported on a unique law enforcement telephone hotline and referral system run by the University of Medicine and Dentistry of New Jersey (UMDNJ) – University Behavioral Healthcare (UBHC). Staffed by retired peer volunteers and clinical experts in police psychology, the system received approximately 1700 calls during its first year of operation, prior to 9/11/01. The year after 9/11, more than 4,500 calls were received. This can be interpreted as a significantly increased need resulting from the events of 9/11.

In an assessment of emergency workers conducted 34 months after the Oklahoma City terrorist attack, North and colleagues (North, Tivis, McMillan, Pfefferbaum, Spitznagel, Cox, et al., 2002) used the Diagnostic Interview Schedule to

assess, retrospectively, probable PTSD subsequent to the Oklahoma City bombing. The prevalence of probable PTSD was found to be 13% in male responders compared to a prevalence of 23% found in a sample of male primary victims. About 16% of firefighters received professional intervention for mental health issues (North, Tivis, McMillan, Pfefferbaum, Cox, Spitznagel, et al., 2002), while only about 5% of teachers (Pfefferbaum et al., 2004) and about 5% of children received counseling (Pfefferbaum et al., 2003).

Fullerton and colleagues (2004) compared disaster workers exposed to an airport disaster to unexposed disaster workers who were matched on socioeconomic status, geography, and urban or rural location. The two groups were alike on previous exposure to disaster work. The rate of PTSD was 13% among the exposed group at 13 months after the airport disaster. After adjustment for level of previous disaster exposure, the odds of PTSD were 6.34 (95% CI 1.7 - 23.61) comparing the exposed to unexposed disaster workers. Early dissociative symptoms, acute stress disorder, and depression were also predictive of later PTSD at 13 months; among the exposed disaster workers, assisting survivors was associated with greater (2.98: 95% CI 1.04 - 8.51) odds of PTSD.

In the fall of 1996 (4.5 years after the Iraqi withdrawal from Kuwait) a random survey of 2,387 Kuwaiti firefighters was conducted in an effort to assess the prevalence of PTSD (Al-Naser & Everly, 1999). Using the Impact of Event Scale to assess probable posttraumatic stress disorder, 18.5% of the 108 male respondents endorsed symptoms consistent with PTSD.

At the very minimum, surveillance programs might be initiated to help identify those who may prosper from mental health services. The National Volunteer Organizations Active in Disaster (NVOAD) recently released their recommendations for early psychological intervention, which include screening, assessment, and triage (Olson, 2005). Furthermore, some form of early psychological intervention might then be considered using surveillance data as an empirical guide, rather than working from the spurious assumption that everyone exposed to a disaster requires psychological support. Indeed, Arendt and Elklit (2001) conclude that while there is little evidence that crisis interventions prevent PTSD, there may be value in using such intervention to mitigate untoward reactions in emergency response personnel.

Similarly, Deahl and colleagues (2000), Solomon, Shklar, and Mikulincer (2005), and Solomon and Benbenishty (1986) offer data that support the notion that those exposed to mass disaster-like venues (in these cases, warfare) may benefit from some form of acute psychological intervention (see Everly & Mitchell, 2008, for a review). It seems likely that some form of psychological assistance should be in place after surveillance and used on an as-needed basis (Everly & Flynn, 2005). "In the past decade, there has been a growing movement in the world to develop a concept similar to physical first aid for coping with stressful and traumatic events in life. This strategy has been known by a number of names but is most commonly referred to as psychological first aid (PFA). Essentially, PFA provides individuals with skills they can use in responding to psychological consequences of [disasters]" (Institute of Medicine, 2003, p.4).

Physical Health Effects of Emotional Trauma

It has long been recognized that there are physical risks involved in responding to natural and human-caused disasters. As the preceding review indicates, there is mounting evidence regarding the potential risks to disaster responders of psychological injury such as the broad range of anxiety disorders, including PTSD and depression. More recently, however, the possible connections between psychological and physical health also are being examined, particularly those relating to PTSD.

Numerous studies (e.g., Beckham et al., 1998; Schnurr, Spiro, & Paris, 2000; Ouimette et al., 2004; Kimerling, Clum, & Wolfe, 2000) have explored the relationship between combat-related PTSD, general trauma exposure, and health problems in both the veteran and civilian populations. All found that the presence and severity of PTSD were related to the extent of physical health problems, particularly arterial, lower gastrointestinal, dermatologic, and musculoskeletal problems (Schnurr, Spiro, & Paris, 2000). In addition, Miranda, Meyerson, Marx, and Tucker (2002) suggest that depression accompanying PTSD may account for the relationship between the severity of PTSD and somatic symptoms, particularly chronic pain.

Research also has been conducted on the relationship between trauma and specific health problems. For example, Norman and colleagues (2006) found that different types of

trauma predicted different types of illness in men and women. Men exposed to trauma showed an increased likelihood of developing arthritis and diabetes, while women showed a greater likelihood of developing digestive disorders and cancer.

In addition to research on the relationship between PTSD, trauma, and physical illness, researchers are exploring the effects of stressful experiences on physical health. Maddi, Bartone, and Puccetti (1987) found a clear relationship between stressful life events and physical illness. Similarly, O'Leary (1990), in an overview of empirical evidence connecting emotions and immune functions, noted that "Those stressors most likely to generate HPA [hypothalamic-pituitary-adrenocortical system] activation and cortisol release, namely, chronic stress, depression, and social deprivation, seem to be consistently immunologically suppressive, consonant with cortisol effects on immunity" (p. 377). In another review of research on the relationship of stress to infectious disease, Cohen and Williamson (1991) found consistent evidence of both increased upper respiratory infection symptoms and increased health care use by individuals experiencing stress. They also indicated that stress may result in reactivation of herpes viruses. In 1993, Cohen, Tyrrell, and Smith concluded that their prospective study of 420 people intentionally exposed to upper respiratory viruses showed that "psychological stress is associated with increased susceptibility to biologically verified infections disease processes" (p. 139).

Segerstrom and Miller (2004) conducted a meta-analysis of more than 300 empirical studies examining the relationship between psychological stress and the immune system. They concluded that stressors that trigger the fight-or-flight response elicit potentially helpful responses from the immune system. They also noted, however, that the more chronic a stressor became, the greater was the potential for detrimental effects on the immune system.

Additional studies have been conducted on the effects of psychological stress on the healing of wounds. In 1995, Kiecolt-Glaser and colleagues studied the speed of wound healing among 34 spouses caring for Alzheimer's patients and 33 controls. The caregivers' wounds healed at a slower rate than did those of the controls. They concluded that their results could have health implications in the area of healing from surgery. Most recently, the effects on wound healing caused by stress from hostile marriages were examined by Kiecolt-Glaser and colleagues (2005). They found that wounds of couples having high hostility healed much more slowly than did those of couples with low hostility.

Although considerable research remains to be done in this area, there are significant indications of the potential effects of PTSD, trauma, and stress, both acute and prolonged, on the mental and physical well-being of individuals. From a preventive perspective, this would warrant serious consideration of the potential benefits from incorporating psychological surveillance into existing medical surveillance programs for responders.

Population Diversity Considerations in Surveillance

The United States has always been an ethnically diverse country, but never more so than today. Both traditional responders and nontraditional responders (i.e., construction trades workers) reflect this increasing diversity, although detailed statistical breakdowns are difficult to find. In 2004, the National Fire Protection Association reported a total of 268,800 firefighters. Of these, 15,000 (5.2%) were women (considered because they represent a minority in terms of numbers), 23,000 were Black (7.9%), and 24,000 (8.3%) were Hispanic. According to the U.S. Department of Justice's Bureau of Justice Statistics (2006), in 2003 local police departments had 580,749 full-time employees, 451,737 of whom were sworn personnel; 23.6% of these were minorities (no further breakdown was provided). For the same year sheriffs' offices had 330,274 full-time employees, of whom 174,251 were sworn personnel; 18.8% of these were minorities. Similar information is available for the construction industry, the group that generally contributes the greatest number of nontraditional responders. In 2000, 17 % of construction workers were Hispanic, 10% were racial minorities, and 9% were women (Center to Protect Workers' Rights, 2002).

All of these figures leave many questions unanswered, such as, the definition of "minorities," in what category minority women are accounted for, and the number of different ethnic groups and cultures covered by the term "Hispanic." They do, however, indicate the challenge involved in developing a culturally sensitive psychological surveillance instrument and interventions. For example, Perilla, Norris, and Lavizzo (2002) found that the minority groups involved in their post Hurricane Andrew study tended to be more fatalis-

tic in their attribution of blame for their experiences, a characteristic found to contribute to poorer outcomes in post-disaster adjustment. Combined with a greater tendency toward familism, or more collective behavior, which makes individuals reluctant to seek or accept assistance from outside sources, these characteristics complicate psychological surveillance and successful implementation of interventions. This challenge was recognized by Jayasinghe and colleagues (2005) in their study of utility workers who had been deployed to the World Trade Center disaster site. They found that "racial/ethnic minority workers were less likely than non-Hispanic white workers to attend psychotherapy" that was offered.

Clearly, there is no such thing as a "universal" response to trauma exposure. Individuals perceive and respond to traumatic experiences through many layers of filters, including age, gender, religion, extent of previous trauma exposure, and ethnic and cultural background. As noted in *Mental Health: Culture, Race, and Ethnicity: A Supplement to Mental Health: A Report of the Surgeon General* (U.S. Department of Health and Human Services, 2001), an individual's culture and social background strongly influence the availability and accessibility of mental health services as well as whether or not he or she will recognize the need for such services and actually seek them out. As efforts are made to develop methods for recognizing and intervening in negative psychological effects of trauma exposure, all of these factors need to be considered.

Surveillance: Ethical Considerations

To be ethical in any context or situation means maintaining a certain moral stance as to what is good or evil in terms of one's treatment of oneself and others. This definition of ethical behavior is a goal for practitioners and researchers, as well as for organizational managers, in their pursuit of knowledge gained through research, observation, investigation, or surveillance. Ethical principles are designed to protect human subjects by prioritizing their rights of voluntary participation and informed consent while doing no harm or minimizing harm (Williams, 2005).

Organizations have the ethical duty to protect their workers from harm, while maximizing those workers' abilities to perform effectively (World Health Organization, 2002). For those responding to potentially hazardous incidents, protection should not necessarily end when the response ends. For this reason, incorporating psychological surveillance into medical surveillance or monitoring programs that identify potentially damaging physical and posttraumatic symptoms is an ethical duty that must be undertaken by those organizations. Pre-deployment monitoring of physical health and levels of stress and/or exposure to previous critical incidents can develop baseline data by which later physical and stress-based symptoms can be measured. However, there can be ethical concerns about how and what to communicate with workers in this context, particularly if it is not clear whether the knowledge of exposure will affect the outcome (Schulte, 1986).

Development of this monitoring process is not free of ethical issues and considerations. In fact, post-disaster medical and psychological surveillance for participating responders is fraught with potential ethical questions and dilemmas.

- What is the objective of the surveillance: to minimize future risks; to identify present risks?
- How justified is a potential intrusion into the post-response lives of participants?
- Will surveillance actually help create and/or maintain future healthy response work environments, or is the data gathering only a way to enhance research and establish the gatherers' credibility and expertise?
- Who has access to data, particularly if sharing of that data could be harmful to those from whom it has been gathered?
- Does the surveillance in and of itself violate the trust of employees of the organization or volunteers responding to a disaster (Marx, 1998)?

Inclusion of sensitive, probing questions designed to assess psychological health also leads to many questions and concerns. How detailed and intrusive need questions be to gather the most helpful data? Are there objective measures upon which to base criteria? Is the measure of long-term effect in the psychological arena based solely on questions relating to acute stress, or are questions on post-traumatic stress, coping skills, and other potential mental health issues (e.g. depression, anxiety) necessary?

Responses to any measures of surveillance must be respected as confidential, within ethical limits and boundaries. Responses of persons identified with acute stress or long-term posttraumatic stress, however, also need to be coded in such a way that the responders can be offered appropriate

crisis management or intervention without fear of stigmatization or potential job loss. It is also important to develop guidelines as to who receives surveillance data and for what purposes.

How should all of these issues be addressed? First, workers should be educated regarding surveillance practices at the time of hiring, not just before deployment, particularly if their employer automatically mandates surveillance if they have been exposed to a hazard in the course of a response. An informative handout that covers both medical and psychological aspects of surveillance and highlights purposes, uses, confidentiality constraints, and interventions is a useful first step. Acknowledgement of the rights to privacy of information under HIPAA also could be included. The pamphlet also could educate potential participants about the objectives of surveillance and justify the use of specific protocols and plans of action. Workers are entitled to information about the objectives of surveillance and must be given the rationale for the choice of specific methods of information collection and data distribution.

Second, models of surveillance across multiple incidents need to be consistent and standardized. It is important to develop consensus as to when to use these measures (i.e., what constitutes a critical "enough" incident to indicate the use of surveillance and at what point to use it). Measuring effects at an acute stage of a disaster is not sufficient and often is impractical. Symptoms of behavioral distress at that point are often transitory. True, chronic symptoms generally are visible 30 days post event (crisis). If individuals are deployed only for short periods of time, however, how can surveillance/monitoring occur and at what locations? Even if "chasing down" participants post incident may be indicated, can they be forced to participate, and if so, how?

If the surveillance cannot be demonstrated to serve the greater good and, hence, help protect future responders from harm, then mandatory participation is not ethical (Steele, 2000). In no instance is it ethical to attempt to force participation through the use of veiled (or overt) threats of retribution or retaliation should participation not occur. Appealing to participants' desires to help themselves and other co-workers or volunteers, while protecting themselves and others from (or reducing the potential for) actual future harm, is a more desirable way to obtain participation.

A third major issue is the need to monitor all persons who work a disaster. Under ideal conditions, the Incident Command System falls in place quickly and everyone, including volunteers, is identified and accounted for. The ethics surrounding this potential requirement raise questions. Who becomes the gatekeeper of the responder list? How often are responders monitored – at arrival and demobilization? What about monitoring 30 days after the event? Are surveillance practices consistent for all groups, whether voluntary (e.g., Red Cross.), faith-based (e.g., Church of the Brethren), mental health/professional (e.g., Green Cross, ICISF), or untrained persons (e.g., Habitat for Humanity)?

Fourth, when developing surveillance measures, it is ethical to designate "end points" into the process as to when surveillance both begins and stops. Criteria are needed to determine when a critical incident becomes something less than a disaster and moves into the realm of routine activity, with a reduced potential for distress. Additionally, if the surveillance measures determine that workers have been harmed by participation in the response, there must be pre-determined guidelines as to the extent and limits of the ethical obligation of those doing surveillance to provide care, intervention, or even treatment, even when responders are volunteers (World Medical Association, 2002).

Surveillance has both research and practical applications. Psychological surveillance must prevent future harm, maximize protection for participants in future responses, provide necessary post-disaster services to those in need, and enhance healthy productivity of all responders. To the greatest extent possible, offering choices to those who participate (e.g., the extent or length of time of post-response participation) within an atmosphere of respect, providing the greatest extent of information possible to encourage that participation, will help achieve these goals. These considerations, and potentially many more, need to be considered when looking at the ethical components of surveillance (Iatrona, 2003). If surveillance is used, the command structure governing responses needs to recognize that ethical practices are part of the process.

Lessons from the Military Model

Although there are few, if any, models of psychological or behavioral health surveillance in the civilian sector, the military sector does have such a model. The model includes a wide range of surveillance tools in the form of anonymous surveys and clinical encounters, including in-theater mental health assessments; anonymous surveys after troops have returned from deployment; post-deployment health assessments and clinical encounters upon re-deployment; the up-

coming initiative, the Post-Deployment Health Re-Assessment (PDHRA); and evaluations of an installation after a suicide cluster (known as "EPICON" or epidemiological consultation).

In 1996, the Assistant Secretary of Defense for Health Affairs called for the development of the Joint Medical Surveillance Program for U.S. Forces to provide appropriate medical services to U.S. troops deployed to Bosnia on peace-keeping operations. A psychological screening program was part of that effort (Wright et al., 2002). Reports on two military mental health studies were released in 2002. The first (Hoge et al., 2002) found that "mental disorders appear to represent the most important source of medical and occupational morbidity among active-duty U.S. military personnel" (p. 1576). In the second study, Wright and colleagues (2002) examined military health surveillance programs for peace-keeping operations, focusing on psychological screening conducted by the U.S. Army in Europe. These authors suggested that the Army's program could be viewed as a comprehensive program for assessing troops' mental health across the three phases of the deployment cycle: pre-deployment, deployment/re-deployment, and post-deployment. They concluded: "In addition to demonstrating the need for psychological screening for military personnel deployed on peacekeeping operations, the successful implementation of the program demonstrated that large-scale screening is feasible" (p. 860).

A third study (Hoge et al., 2004), assessed the mental health of members of the military who had participated in operations in Afghanistan and Iraq after they returned. They concluded that "there was a significant risk of mental health problems and that the subjects reported important barriers to receiving mental health services, particularly the perception of stigma among those most in need of care" (p. 13).

There have now been four comprehensive in-theater (Iraq and Afghanistan) mental health assessment team (MHAT) evaluations performed. The first two of these have been published and are available on the web under www.Armymedicine.mil. The studies were done by a combination of anonymous surveys, focus groups, and interviews. The information creates a very helpful tapestry to guide resources and interventions.

The Army also uses clinical surveillance. Since the beginning of the deployments to Afghanistan and Iraq, returning soldiers and other service members have received a post-deployment health assessment, using a standard form (DD2796) and a face-to-face interview with a clinical provider. Approximately 4% of soldiers have received further evaluation.

The military recognizes that many soldiers will not admit to symptoms when they return, either because they are anxious to return home or because symptoms have not yet developed. Because of this, the military has developed and implemented a post-deployment health reassessment that is administered three to six months after soldiers return home. This extensive questionnaire asks about exposures to physical and psychological toxins and physical or psychological symptoms. It is followed up by a face-to-face interview with a primary provider. It is critical to have follow-up evaluation and treatment options in place for any soldiers who screen positive. All of the Services use this tool.

The Army has now completed five analyses of suicidal and other high-risk behavior on an installation basis. The first of these was at Ft. Bragg after the highly publicized apparent cluster of homicides and two suicide-homicides. Similar to the MHAT assessment, these Epidemiological Consultation Teams use a combination of anonymous surveys, focus groups, and interviews with key leaders. The records of "index cases" (e.g., completed suicides) also are reviewed in detail. Findings from these visits have led to recommendations on which the Army has acted. The U.S. Air Force also has developed a number of mental health related tools. The "Leader's Guide for Managing Personnel in Distress" (2007) provides military leaders with numerous check lists for identifying a variety of mental health issues and includes checklists to help identify pre-deployment, during deployment, and post-deployment stressors that can lead to behavioral changes and/or mental health difficulties.

Options for Civilian Responders

If one accepts the notion that mental health surveillance should be conducted for the benefit of disaster workers, who should deliver these services and how should surveillance activities be conducted? It seems reasonable that medical and nursing personnel, as well as mental health personnel, could be used to conduct mental health surveillance, and specially trained disaster response personnel could conduct surveillance in the field. In determining how to conduct surveillance activities, it is important to remember that workers can begin a response while carrying the effects of previous

responses; they also can exhibit effects from the current response both during and after the response. Thus, surveillance should take place during a similar timeframe.

Pre-Deployment

Pre-deployment activities might consist of a basic mental status screen as well as a screening for psychiatric histories that could suggest a significant vulnerability once deployed to the field. Generally, responders who must use personal protective equipment on a regular basis must participate in medical monitoring programs. For these workers, it would be relatively easy to incorporate mental status screening into their medical monitoring programs. These decisions, however, must be guided not only by relevant empiricism, but also by concerns for the personal, organizational, and legal ramifications of excluding someone from field service. For these reasons, establishing an *a priori* list of exclusion factors that applies to all situations and workforces becomes difficult.

During Deployment

In this phase**,** the surveillance needs to be approached carefully to avoid disrupting responders' concentration on response activities. To conduct psychological surveillance as unobtrusively as possible, managers and supervisors could be educated about symptoms of stress and the importance of taking care of their people. They also could be taught to watch for trembling, a "thousand-yard-stare," difficulty communicating, crying, irritability, startle response, rapid and inappropriate speech, and indifference to danger. Knowing what to look for could allow supervisors to informally assess the status of their teams or crews during the course of the workday. This could be particularly effective with groups that work together regularly and who know each other well. Worker experiences, such as witnessing others being injured or killed, finding human remains, or feeling at risk of serious injury or death, **can** trigger emotional responses in workers. The operative word here is **can**, because each worker will react and respond differently to such situations. At the least, however, such experiences can serve to alert supervisors about workers who might be vulnerable. In addition, since under the Incident Comand System the overall responsibility for ensuring the health and safety of responders rests with the Safety Officer, a reminder about stress management and stress symptoms can be included in the Safety Officer's daily Health and Safety Briefing. This briefing is presented to responders each morning before they deploy into the field. This would appear to be particularly appropriate as one federal agency already has given the Safety Officer responsibility for evaluating the need for and requesting assistance from the agency's Critical Incident Stress Management Team.

Post-Deployment

Numerous studies document that first responders and workers involved in cleanup and recovery are at risk for psychiatric sequelae following disasters (Neria, Gross, & Marshall, 2006). Some emergency response technicians, police, and firefighters may be more resilient than workers not typically involved in emergency situations (e.g., construction workers). Also, many disasters involve lay volunteers who may have minimal training and little preparation for their reactions to the disaster scene. To screen effectively for psychiatric symptoms during and after the emergency response requires instruments that are brief, easily incorporated into a field clinic, and acceptable to a broad range of individuals.

Psychiatric screening in medical settings and for epidemiologic surveys has shown significant progress during the past decade. Since WWII, questionnaires such as the SCL-90 (Derogatis, 1983) and the General Health Questionnaire (GHQ; Goldberg & Williams, 1988) have been used extensively to assess psychological distress in many studies. In contrast, structured clinical interviews have been developed for use by lay interviewers as aides in identifying standard psychiatric disorders according to the *Diagnostic and Statistical Manual of Mental Disorders IV* (American Psychiatric Association, 1994) criteria. Although the sensitivity and specificity of the psychiatric diagnostic interviews are quite good, they are time consuming and require extensive training to administer correctly. Furthermore, there is some suggestion that when diagnostic interviews are used in the general population, cases identified from the community are less severe than cases in treatment (Kessler et al., 2001).

Ideally, instruments that reflect general severity of distress as well as diagnosis would be optimal for screening workers and the general volunteer population. Such an instrument was developed and used in the U.S. National Health Interview Survey where it was important to fit within significant time constraints. Kessler and colleagues (2002) developed the six- (K6) or ten- (K10) question self- or interviewer-administered screening scales, which show sensitivity in the 90 to 99th percentile and consistent psychomet-

ric properties across different demographic sub-samples. The authors have developed weighted scoring methods based on the World Health Organization (WHO) World Mental Health Surveys (Kessler & Usten, 2000) and with data from the WHO Composite International Diagnostic Interview (CIDI; WHO, 1997); rules for prediction of clinical outcomes are available for these instruments.

Post-deployment surveillance might come in two forms: in the field post mission, but prior to release to return home; and follow-up, conducted two to four weeks post deployment. The follow-up may be conducted via telephone or in person , as well as more formal structured psychiatric interviews. As noted previously, the military has developed and implemented approaches that may be adaptable for civilian responders.

The notion that exposure to a disaster is the necessary and sufficient condition for the development of posttraumatic morbidity is obviously false; nevertheless, there will be those who do develop untoward reactions, even among those who are trained disaster responders. Surveillance initiatives may be a way to reduce posttraumatic morbidity and/or facilitate access to appropriate mental health care.

At the same time, it is important to consider the reluctance of emergency response personnel to seek mental health treatment. For this reason crisis assessment and intervention may provide their only access to mental health services (North, Tivis, McMillan, Pfefferbaum, Cox, Spitznagel, et al., 2002; North, Tivis, McMillan, Pfefferbaum, Spitznagel, Cox, et al., 2002). Whereas ~ 85% of military sampled who served in Iraq/Afghanistan recognized problems, only ~44% were willing to seek assistance (Hoge et al., 2004). Less than 50% of civilian disaster workers who screened positive for mental health concerns were willing to seek treatment (Jayasinghe et al., 2005). Thus, it may be that providing surveillance and acute follow-up intervention services in the wake of a disaster, specifically for those who respond in rescue, recovery, relief, and/or material removal and construction functions, could serve as a "bridge" to more formal mental health services.

Conclusion

In addition to the growing documentation of the potential for negative psychological effects from disaster response work, researchers also recognize the potential relationship between these negative effects and physical health problems. Because of the complexity of the factors influencing individual responses to trauma, the mechanisms that eventually can be implemented to monitor these responses should, of necessity, be capable of recognizing the potentially numerous ways negative responses may present in different individuals.

Military organizations have made enormous strides in confronting many of these issues. While it is important to acknowledge the different nature of their populations and their level of control over their individual members, the model used by the military has the potential to serve as a model for civilian responders. At the same time, however, further work remains to be done before moving forward. Additional research into the relationship between psychological and physical health effects of disaster response work and into ethnic and cultural differences in reactions to traumatic exposures is needed. Last, a protocol must be developed to address the ethical dilemmas posed by confidentiality requirements and treatment needs. Although the civilian population will present quite a different challenge than the military population, it is imperative that the medical and mental health communities provide civilian disaster responders with the same level of psychological protection and assistance it has provided for their physical health.

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Manuscript received: March 9, 2007

Revision received: September 12, 2007

Accepted: September 28, 2007

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International Journal of Emergency Mental Health, Vol. 9, No. 3, pp. 215-224 © 2008 Chevron Publishing ISSN 1522-4821

Living in Critical Times: The Impact of Critical Incidents on Frontline Ambulance Personnel: A Qualitative Perspective

Sharon Gallagher
Pre-Hospital Emergency Care Council
Naas, Ireland

Sinéad McGilloway
Department of Psychology
National University of Ireland at Maynooth, Ireland

Abstract: *Little is known about the impact of Critical Incidents (CIs) on the lives of ambulance personnel. One-to-one interviews were conducted with 27 participants who had experienced CIs during the previous 12 months in order to: assess the nature and impact of CIs on health and well-being; examine attitudes toward support services; and explore barriers to service use. The results showed that incidents involving children, suicides, and grotesque mutilation were the most distressing. Participants reported a wide range of physical and mental health problems including sleep difficulties, angry outbursts, irrationality and feelings of alienation. Key themes included: low support service uptake due to fears relating to confidentiality and machismo; a perceived lack of concern and support from management; and a need for professional counselling and stress awareness training. Emergency Medical Controllers (EMCs) also reported a number of difficulties unique to their role. The findings suggest that exposure to CIs has a significant impact on health and well-being; this has important implications for recognizing and appropriately addressing the health and training needs of ambulance personnel, including the effective management of Critical Incident Stress. [International Journal of Emergency Mental Health, 2008, 9(3), pp. 215-224].*

Key words: *Critical Incident Stress, Emergency Medical Technicians, Emergency Medical Controllers, qualitative research, dispatchers.*

Background

Emergency Medical Technicians (EMTs) and Emergency Medical Controllers (EMCs; known as *dispatchers* in the United States) are often exposed to high levels of Critical Incident Stress (CIS), which refers to stress arising from a disturbing incident (i.e., a Critical Incident) that overwhelms an individual's usual coping abilities (Alexander and Klein, 2001). Previous research has shown that ambulance personnel are highly vulnerable to the effects of CIS, with up to 20% reporting symptoms of trauma (Ravenscroft, 1994; Clohessy and Ehlers, 1999; Ward et al., 2006). These, and other health problems described in a recent systematic review (Sterud et al., 2006) include physical and mental health (and somatic) problems, and higher standardized mortality rates. However, there is a marked absence of qualitative data and no information is provided on EMCs. Sterud and colleagues highlight a

Correspondence regarding this article should be sent to: Sharon Gallagher, Principal Researcher, Department of Psychology, National Univiversity of Ireland at Maynooth, Maynooth, Co. Kildare, Ireland. Tel: +353 87 9369378. Fax: +353 1 7084767. Email: sharon.gallagher@nuim.ie

need for a psychological perspective in this area as well as more qualitative studies into the subjective experiences and views of ambulance personnel on the effects of work-related stress.

Very little is known about the impact of CIS on ambulance personnel working in Ireland. At the time of this study, the Irish health service comprised 8 health boards, each of which had its own ambulance service and Chief Ambulance Officer. The current study was carried out in one of Ireland's largest services, serving a population of 1.6 million within an average radius of 622 square miles. EMTs within the Irish ambulance service typically work in pairs, while EMCs are responsible for organizing, reporting, and communicating on ambulance services. The local management of the service remains the duty of Ambulance officers (usually one in every station) who provide day-to-day middle management to stations throughout the service region under the governance of a Chief Ambulance Officer. A Critical Incident Stress Management program, initiated in 1998, involved the distribution of a number of CIS leaflets and posters to all stations with the aim of raising awareness of CIS. A Peer Support program was also initiated whereby a Peer Support Worker (PSW) is drawn from the ranks of one's colleagues under the ICISF Model (previously known as the Mitchell Model) of CISM (Mitchell & Everly, 2001). The PSW's role includes assessing the need for defusing; initiating contact with 'at risk' staff; providing short-term peer counselling; and liasing with other peer support providers.

The current study forms part of a larger investigation into the nature and extent of CIS in a large ambulance service in Ireland. The first stage of the study involved a documentary analysis of current CIS policies and procedures; one-to-one interviews with key service providers (n = 12); and a cross-sectional postal survey (n = 180). The principal aim of this second stage of the study was to ascertain, using qualitative methods, the impact of CIs on frontline staff by allowing them to tell their own stories. These participants also completed a number of self-report measures of overall health and well-being, but only the qualitative data are presented here. The specific objectives were to ascertain the nature of CIs experienced by EMTs and EMCs; to explore the impact of these on their day-to-day lives; and to assess their attitudes toward current support services being provided for Irish ambulance service staff who have experienced difficulties related to CIS.

METHODS

Participants

The results of the Stage One survey showed that 98 of 112 respondents (87%) had experienced one or more CIs during their career, approximately two-thirds of whom (64/98) had experienced a CI during the previous year. Twenty-seven members (42%, 27/64) of this last group (21 EMTs, 6 EMCs) volunteered to participate in one-to-one interviews.

Measures

An interview schedule was devised on the basis of a review of the literature coupled with the Stage One findings. Questions covered a range of topics including job satisfaction; ratings of CI-induced stress; the impact of CI(s) on day-to-day living; support from management; and views of support services/procedures. Some closed questions were included to elicit background information and to facilitate comparisons across participants. The responses to the remaining questions were transcribed verbatim and subjected to a thematic analysis (see Hayes, 2000) to identify key themes and sub-themes related to interviewees' personal experiences. A random sample of transcripts was read and coded by both authors in order in ensure good reliability and validity.

RESULTS

Participants were all male (mean age: 42, range 31-60, SD = 8) and more than half (15/27) had more than 16 years' experience; the remainder had between 1 and 5 years (6/27) or 11 and 15 years (6/27) of experience respectively. The themes and sub-themes identified from the analysis are described below.

Theme 1: The nature of the Critical Incident(s)

'Taken before their time' - premature deaths: Participants recounted with great clarity and poignancy some of the most distressing incidents to which they were exposed, most of which revolved around the death/injury of children (Table 1). These included Cot [*Crib*] Deaths, emergency childbirth, neonatal resuscitation, and other injuries or fatalities to children. Twenty interviewees reported the last of these to be particularly stressful, while 11 participants found Cot Deaths to be particularly harrowing, not least because they also had to deal with traumatized parents. Another EMT

spoke at length about an incident during which he was required to carry out a lengthy resuscitation of a newborn baby. He recalled the mother's trauma and afterwards described how he "…was having nightmares about it. Every time I saw a baby, I was getting shivers down my spine." All six EMCs also reported high levels of stress when taking calls involving children and in providing reassurance to traumatized parents. Many of the interviewees also spoke about identifying with the victim either as a parent or as an individual at a similar stage of his/her life.

Eight of the participants reported suicide incidents to be the most traumatic due in large part to overriding feelings of helplessness, and the trauma and tragedy for the families involved. For example, one 38-year-old EMT described a death by suicide on a train track and his overwhelming distress for the family. He also reported that he had experienced a disturbing flashback to that incident after returning to the scene recently. Like many of his counterparts, he reported considerable distress in dealing with the body.

Serious and grotesque mutilation: Ireland has a high (per capita) number of Road Traffic Accidents (RTAs) - especially among young males - and it is perhaps not surprising that 17 of the interviewees found road and rail accidents to be extremely distressing. Other CIs included cardiac arrests, fire fatalities, murders, physical abuse, and accidents involving the ambulance. A selection of illustrative quotes is provided in Tables 1 through 6.

Table 1.
Nature of Critical Incidents

"I can honestly say they [Cot deaths] *are the worst* [interviewee gets upset]*...there's nothing worse than carrying a dead infant. For some reason, they don't look dead but you know they are and then you've the parents as well and it just hits you to the heart and you get frustrated. COT deaths are one of them things that stick with you for life."*

"…*the remains that I carried out* [from a caravan fire] *were indescribable*."

"…*there was a hanging* [participant gets upset] -

I've had lots of hangings but this one was like...almost a photograph of my own son, same age, same build. When we actually had him on the stretcher and I looked at him, it just started getting me upset. The family were there and they were all upset and the more I stayed with them… [participant gets upset] *... I just had to walk away otherwise I'd have cracked up over it."*

"*There were two fellas burned to death in a car. That was last year sometime. They were in their mid-twenties. It was the undignified way, the condition of the boys, you know. That was nearly a year ago but it sticks out in your mind*."

"[It was] *something like you would see in 'Nightmare on Elm Street.' There was that much blood all over the walls. The woman was killed – that stuck in my mind alright*."

"...*that knocked the wind out of me* [15 year old fatality in RTA]*...afterwards that night, particularly when you're lying in bed, it just flashes back to you because I might have been looking at my own son lying there on the stretcher with blood everywhere...that one had an effect. It took a lot out of me."*

"...*a young child was murdered. I lost a lot of sleep after it and I still remember the father's words on the phone...I hated coming to work for a while. It shakes you."*

Theme 2: The Impact of the Critical Incident(s)

Stress and coping - the psychological impact: A second key theme explored during the interviews related to the perceived negative impact of a CI(s) on the interviewees' lives. Eighty percent of the CIs were rated as 'extremely stressful' with symptoms lasting up to 8 months. Two key subthemes were explored here, relating mainly to the psychological/emotional impact of the CI(s), but also relating to effects on physical health and overall quality of life (see Table 2).

The most common psychological effects reported included angry outbursts, sleep problems, recurring dreams and nightmares, an increase in alcohol consumption, feeling alienated from other people, and an inability to relax. Many also described feelings of despondency, intrusive thoughts of the incidents, and flashbacks, while some others said that they had become irrational, and over-protective due to the high levels of stress they encountered in the course of their

work (Table 2). The delayed psychological impact of many of these incidents was also commonly reported. Four participants also reported having taken long-term sick leave during the previous year due to job-related stress, saying that they felt continuously tired, fatigued, and/or moody.

Interviewees also alluded to the cumulative nature of CIS, which appeared, in some cases, to be compounded by interpersonal conflicts at work and personal problems which left them unable to cope. Furthermore, the common perception that EMCs are not exposed to stress was not supported by the, albeit smaller, number of EMCs included here, all of whom referred to the stress they had experienced when dealing with CIs. Only five interviewees reported no negative effects on their mental health and an examination of their responses revealed a recurring, underlying machismo, which set them apart from the remainder of the group. Only three of the interviewees sought help from a professional counselor or a psychologist.

Table 2.
Impact of Critical Incident

Stress and Coping:
"*I had sleep problems, I couldn't eat- lost weight. I smoked more. - I wouldn't go to bed...I was walking the house all night...I'd go to bed in the middle of the day… forgetting things…pure and utter stress...*"

"I was very nervous and agitated for weeks after this...I woke up several times in a lather of sweat thinking that I or my family would be shot."

"*I nearly had a complete breakdown that night when I got home...I drank a full bottle of Jack Daniels [*whiskey*]...I couldn't take any more…*"

"*Before I came into this job, I wanted to help people and save lives and I probably did on numerous occasions but it doesn't matter any more, it just doesn't matter...*"

"You become irrational I think really, slightly irrational and over protective, the way I drive with my wife and kids in the car. If the kids go out on the bike without a helmet you're running the streets trying to find them...They can't climb walls or trees, they can't go out on the roads...Every headache is a brain tumour all that kind of thing you know."

Physical Health and overall quality of life:
"*Since I joined this job, I developed diabetes. Because of the nature of the job, I wasn't eating properly. I had no proper lunch breaks therefore the diabetes got worse and that's how I ended up being out sick for 14 weeks…..*"

"*...if I have a bad day in work and I arrive home, I wouldn't be the welcoming husband. I'd be like thunder some days..I don't want to talk to anyone.. I just want to be left alone*."

"*You can't relieve the adrenaline that's building up on the job...it's going to make you ill*."

Machismo attitude
"*You learn to deal with it, you learn to accept it. It's a job that you either want to do or you don't want to do...It's like a vocation...you can't just go in and just go through your day as if nothing is wrong...That's not the type of job it is."*

"*It* [working as an EMT] *has not affected my health...It makes you more confident going into situations dealing with people."*

"*If it does affect them* [other EMTs]*, they shouldn't be in the job.*"

Physical health and overall quality of life: The most commonly reported effects of CIS on physical health included weight gain, back problems, and lack of appetite. Many respondents reported that it was difficult for them to maintain or improve their general levels of fitness because of shift work and the lack of on-site exercise facilities. Others reported smoking-related illnesses due to an increase in their smoking habits.

A sub-theme emerged, related to the effect on family relationships. Over half of the interviewees (14/27) mentioned that their personal relationships and their home lives had been negatively affected due to work-related stress (Table 2). Some reported having 'angry outbursts' at home after a stressful day, or not being able to talk to their partners about distressing incidents. The long working hours and shift work also reduced the amount of time they spent with their family.

Theme 3: Organizational hassles

A third theme related to the participants' attitudes toward and views of the general management of the ambulance

service. These were predominantly negative in nature and revolved around several emergent sub-themes.

Interpersonal conflict: Ten respondents alluded to the amount and nature of interpersonal conflict and bullying in individual stations which appeared to add significantly to their overall stress levels (Table 3). For example, one 53-year-old EMT found that he had more difficulty in coping with the stress he encountered in the station than '*on the road*.' Other EMTs spoke of how they did not mind *'doing the job'* but referred to '*issues in the base and their colleagues'* that were a major source of concern, such as unprofessional conduct which was not appropriately managed. All but one of the EMCs (5/6) also indicated that EMTs regularly abused them on the radio when receiving calls.

Table 3.
Organizational Hassles

Interpersonal Conflict:
"...*they* [fellow EMTs] *actually took the rubber protection off the ear pieces of my stethoscope and glued the tops of medication bottles that I had in my equipment bag*."

"...*she* [fellow EMT] *started screaming at me to go back to the station... I knew we couldn't…she started screaming at me again, so loud like it was unbearable... I had to get out of the ambulance. I couldn't stick it any longer. I felt very stressed after that*."

"*EMTs have messed me over the airways too many times...they question everything I do. They're shouting back at you over the airways - they try and put you down all the time…it's a case of us* [EMCs] *and them* [EMTs]*..."*

"*All they* [EMCs] *want to do at the end of their shift is to make sure that they've left a clean screen and they don't care who pays for it*."

Lack of concern from Management:
"*You're only a number. You're counted in pounds, shillings and pence...they [*mgt*] never come and ask how you are*."

"We are heroes to the public when we arrive on scene but we are only tools to management."

"*...if they think you're suffering from stress, then they think you shouldn't be doing the job. If you can't handle it, get out!*"

Lack of concern/support from management: The perception of an absence of 'climate of care' on the part of management (i.e., at Officer level and above) was a prominent theme - reported by all but four of the participants (Table 3). For example, more than three-quarters of the participants (21/27) alluded to the lack of recovery time allowed after a CI, while difficulties for non-rostered staff were also noted (e.g., varying travel times to stations) and most importantly, the failure on the part of management to acknowledge the impact of Critical Incidents. Some participants felt that management only paid 'lip service' to the Peer Support service and that, realistically, it was not a priority for them perhaps because, as a number of EMTs suggested, they had no personal experience of CIS.

Other EMTs also expressed concerns about responding to further calls after exposure to a CI. They felt that they might be unable to give the next patient their full attention, or be so distracted that they would be unable to adequately carry out their life saving skills. Clearly, this could have serious consequences. In general, the EMTs felt that management were too distant to appreciate the nature of on-the-job stress.

Training: Almost two-thirds (17/26) indicated that the training they had received to help them deal with CIS was 'not at all adequate,' while only 9 considered it to be 'reasonably adequate.' Fifteen participants suggested that training and education on stress in general should be an integral part of their basic training. The major training needs included communication skills, coping skills, learning how to detach from a CI or to manage one's emotions, facilitating discussions concerning CIs, preparatory CI training, improving awareness of support available, and education regarding signs and symptoms of CIS.

Other participants felt that additional training would be beneficial for new recruits who have no previous experience in emergency work. The general view of the interviewees was summed up well by one EMT who stated, *"The more in-*

formed you are regarding stress issues, the better." Another suggested that the amount of training received is not beneficial unless staff are given appropriate recovery time after a CI. Others highlighted a need for management (i.e., ambulance or station officers) to be properly trained to recognize signs of stress and, more importantly, to be able to take effective and appropriate action (e.g., to allow some 'down-time' or advise/refer to a professional counsellor; see Table 4).

Table 4.
Training

"*You are not given any training whatsoever to deal with stress involved. It would help to cope with it a bit better -* [you] *could go home and detach from it or take your mind away from it."*

"*I think each individual buries it,* [CIS and their feelings]. *Everyone could benefit from more education and training as regards CIS. I think that would be a major benefit, just to have it out in the open to make sure that everyone knows it's there. Everyone has it…we're still thinking we don't suffer mental problems, that's a big drawback I think."*

"*Its still a very taboo subject among the staff, even if you only mention the word 'stress', it implies that you are not able to cope...A lot of the staff they're just not au fait with it or dealing with it. If they* [management] *could go a step better and let people know that the service is there for them and* [that] *they're not jeopardising their position by seeking out these things. That's the main concern among staff..."*

Theme 4: The perceived effectiveness of Peer Support

Issues regarding the Peer Support Service related principally to barriers to using the service, fears of 'discovery' by management and issues related to machismo (Table 5). While all of the participants were aware of the Peer Support service, almost two-thirds (17/27) reported that they had never seen or read the CIS information leaflets or posters which form part of the service. Only two of the interviewees had used the service and felt that it had been beneficial as they were subsequently referred to counselling. Most of the comments suggest a general perception that PSWs are not appropriately qualified to undertake such a role, while concerns about confidentiality were also highlighted. Many felt that the support service was a service 'in name only,' while others stated that it should be more widely advertised. There was also a commonly held view that only mental health professionals should manage CIS and that staff should have access to a 24-hour helpline. A number of EMTs indicated that managers should be more closely involved with the service and should promote it more actively in order to overcome barriers of fear, trust, and machismo.

Table 5.
Peer Support Service

"I think that for EMTs it seems to be a good service, but for EMCs it's not, and needs to be improved. Resources are restricted which causes extra stressors for everyone, - flared tempers, its not good for the service and has repercussions."(EMC)

"No EMT feels the need to approach PSW due to it being a sign of weakness"

"Not comfortable with people selected for the role, feel they are as stressed as I am."

"Not qualified to give help or advice, confidentiality also a big issue would not dream of confiding in anyone at work - need professionals."

"Our PSW lacks experience within the service and show signs of stress himself."

"Our PSW would not keep any information confidential."

"There's nothing worse if we get a bad call, be it a RTA or a cardiac arrest, and we finish up the call at the hospital, pack up our gear, clean up the ambulance and we get another call. We're taking all the hassle and stress with us to the next call. It might only be as simple as a drunk or something and you might take out your anger on them and not meaning to do it. But it's something that we need to be aware of and deal with..."

Theme 5: EMCs - the 'forgotten few'?

Potential sources of stress for EMCs were multi-faceted and a source of considerable concern for all six interviewees who felt that neither Peer Support staff nor management had any concern for their well-being (Table 6). Stress in 'Control' appeared to be a daily occurrence as EMCs were constantly dealing with 'traumatic callers' (in contrast to EMTs who may not necessarily experience this on a daily basis), especially calls involving violence or children. While the EMCs acknowledged that they do not deal physically with trauma, they reported that they, nonetheless, experience stress when engaging with distressed callers. Interviewees alluded frequently to repetitive calls from patients and/or their families as they become increasingly traumatized while waiting for the ambulance. Dealing with abuse, animosity, and traumatized callers was also commonly reported; four EMCs reported that they had been threatened on several occasions (Table 6).

Other potential sources of stress may arise from dealing directly with EMTs on the radio as well as members of the fire and police service, GPs, hospital staff, and undertakers. All of the EMCs reported that their training was inadequate. The solitary role of an EMC was also highlighted as being particularly problematic. In the two Control stations included in this study, there is one EMC on duty at night and on weekend shifts. The EMCs indicated that these are often the busiest shifts and that this solitary role can be stressful and isolating, particularly if they deal with a 'bad call' and have no immediate support.

Table 6.
EMCs (Dispatchers)

"*We get stress in Control from all sides -the Gardai* [Irish police force], *fire services, EMTs on the radio and then trying to calm people down on the phone……it can be very difficult to cope..."*

"*We are helpless at the end of a phone and we worry constantly about the outcome. Psychologically, it's torture...we don't know how the patient is after an incident - we can't follow up every call - there are just too many...but when I get home, I start to wonder about the callers...its not healthy, we don't get closure like the EMTs*."

"*We definitely need more training in how to calm people down on the phone, and how to deliver instructions over the phone to people on the scene. We could also benefit from training on how to calm ourselves down after an abusive caller."*

"*The animosity from EMTs and from the public happens on a daily basis...Control is a pivotal point...you get embroiled with all the services. You can get very frustrated if the EMTs are out on the road screaming for a fire brigade...so you can get it from every angle and get it very quick and then it can stop all of a sudden...we are left wondering...hanging…but we still have to deal with the next call*."

"*Today we were 'out the door'* [very busy] *with calls...We had hospitals ringing looking for routine transfers and we had to say to them we couldn't do it...this builds up in you...pressure, pressure all the time. I think sometimes that some of the lads might blow a gasket if they don't get some release or relief……Some of the lads can cope with it, but you need release and support from management."*

"*In here* [in 'Control]' *you're 'in a tunnel'. You can hear what's going on, but you can't see or touch it."*

"*Sometimes it can take a few hours to come back to yourself after a stressful caller*."

DISCUSSION

This study qualitatively explored the impact of exposure to one or more Critical Incidents on the health and well-being of EMTs and EMCs. To date, there is no published research in Ireland in this area, while little is known within the wider literature about peer support in emergency care, or the impact of CIS on EMCs. The lack of qualitative research in this area has also prevented a full exploration of the nature and experience of stress in frontline ambulance personnel.

The findings indicate that some CIs are more traumatic than others and may, therefore, have a more significant impact on mental health. CIs involving children, suicides, and RTAs appeared to be most distressing, a pattern also seen in previous work (e.g. Van der Ploeg & Kleber, 2003; Alexander & Klein, 2001). Additionally, the findings support those of

earlier studies which have highlighted the serious psychological impact of dealing with injured or dead children (e.g., James, 1988; Dyregrov & Mitchell, 1992). Incidents involving suicides were also described as very traumatic, not least because of the overwhelming sense of helplessness which was compounded by the distress of family members. Similarly, Bryant and Harvey (1996) reported strong feelings of helplessness in helpers and rescuers after a traumatic incident. The rating of most of the CIs as 'extremely stressful' is supported by the results of the standardized self-report measures, which were administered at the same time. Briefly, these showed poor physical and mental health (including high levels of PTSD symptoms) and moderate levels of emotional exhaustion and depersonalization. Many interviewees also described the cumulative effect of several CIs which had occurred over a relatively short period and which had impacted negatively on their overall health.

The need for more recovery ('down') time after a CI was identified by three quarters of participants; Alexander and Klein (2001) suggest that the nature of the incident and its impact may be related to recovery time availability. This, coupled with the other findings, highlights the need to provide more support for EMT/Cs in the aftermath of these kinds of incidents as well as appropriate training to help manage CIS. However, this raises questions about the appropriate use of available resources and the capacity and/or willingness of senior managers to respond sensitively and appropriately to the needs of frontline staff. The absence of a 'climate of care' at managerial level was a prominent and recurring theme in this study and has been highlighted as a significant stressor among ambulance personnel elsewhere (e.g., Alexander & Klein, 2001; Mahony, 2001).

Mitchell and Everly (2001) describe a resistance within the emergency services to acknowledge the presence of any psychological problems among staff which may hinder the effective identification and management of CIS. However, Alexander and Klein (2001) suggest that displacement may, in part, account for this, whereby some staff may not admit to or be able to tolerate their own emotional vulnerability with the result that they may blame "the system" instead. Therefore, the role of middle management also ought to be clarified in relation to the acknowledgement and prevention or management of CIS and to other work-related stressors that may exacerbate Critical Incident-related stress.

The concept of Critical Incident Stress Management (CISM) and Peer Support has received considerable support since the 1980s, with the work of Mitchell (Mitchell, 1983; 1988) and Dunning (1988) in the US, but participants expressed a largely negative view toward using the PSWs attached to the current service. Barriers to service utilization included their perceived lack of training, concerns about confidentiality, feelings of embarrassment, peer pressure, and the perceived negative views of management. Some of these appear to stem from the 'machismo' attitude that prevails within this male-dominated occupational group. The results suggest that confidence-building measures may need to be implemented in order to promote a greater awareness of the service and to improve uptake. Many interviewees believed that mental health professionals or qualified counsellors should be routinely available to all staff with the support, in some cases, of a 24-hour helpline to accommodate shift-working. According to Mitchell and Everly (2001), the use of mental health professionals in combination with specially trained peer support personnel are encouraged when dealing with high-risk occupations such as ambulance personnel. They further emphasize that the application of CISD by inadequately trained staff may cause the process to fail; hence the importance of providing appropriate training for the PSWs in this study.

Little research has examined the impact of work-related or CI stress on EMCs. While our findings should be interpreted with caution in view of the small number of EMC participants, four key issues were identified relating to this group, including the lack of support from management and the PSW service; the lack of appropriate training (e.g., to deal with traumatised callers); insufficient resources, particularly during busy periods; and the solitary nature of night and weekend duty. All of these factors would only serve to exacerbate pre-existing difficulties related to CIS and especially the feelings of helplessness which constitute an inevitable part of the job of an EMC.

Conclusions

The findings from both stages of this research converge to highlight the significant and potentially serious effects of exposure to one or more CIs on the health and well-being of those working at the frontline of emergency ambulance care in Ireland. The results raise important questions about the appropriateness and effectiveness of support services, stress awareness training for EMTs and EMCs, and the role of and support from middle management. Our findings also suggest, in line with recommendations by Sterud and colleagues (2006), that more attention should be focused on the general

job and time pressures faced by ambulance staff as well as their emotional demands, particularly in view of research suggesting that stress-related problems of emergency workers may lead to career disruption and long-term disability (Bennett et al., 2004; Van der Ploeg et al., 2003; Marmar et al., 1999). Importantly, the ambulance service in this study has implemented some support for its personnel, which should be recognized and valued. However, the results suggest that there is considerable scope for further development and improvement of existing support services. In conclusion, this study highlights a number of important lessons for the appropriate and effective management of CIS in the ambulance service and by extension, perhaps, to other emergency services.

Acknowledgements: The authors would like to thank all those who participated in the study and the Pre-Hospital Emergency Care Council for sponsoring the research.

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Received June 7, 2007

Accepted August 9, 2007

International Journal of Emergency Mental Health, Vol. 9, No. 3, pp. 225-230 © 2008 Chevron Publishing ISSN 1522-4821

Calming the Campus: Training School Staff and Crisis Teams to Manage Student Behavior During Emergencies

Kendall Johnson
Claremont Unified School District and
Independent Practice, Claremont California

Abstract: *Conversations with school and crisis personnel following large scale emergencies in and around schools, such as shootings, wildfires, and the attack on the World Trade Center on September 11, 2001, indicated a need for pre-incident training in managing student behavior during emergencies. This article outlines a training program of this kind and offers suggestions regarding both content and process of this training. The suggestions follow discussion of the unique context and needs of the school setting. [International Journal of Emergency Mental Health, 2008, 9(3), pp. 225-230].*

Key words: *School crisis; critical incident training; school personnel; pupil support services; emergency behavior; emergency mental health; mental health critical care; crisis intervention*

Unfolding violence on campus, prolonged isolated lockdowns inside classrooms, sudden disasters impacting the campus or adjacent community—these are just some of the many incidents that can introduce sudden chaos into the school campus. Site personnel and school crisis team members need tools to assist in regaining calm and control. The purposes of this discussion are to describe a training approach for teaching these skills and to illustrate its diverse application.

Editor's Note: An invited paper for the International Journal of Emergency Mental Health. Kendall Johnson, Ph.D. teaches orthopedically handicapped and seriously health-impaired children at Danbury School in Claremont, California. He is a family therapist in private practice in Claremont, and lectures and consults on trauma, crisis intervention, and self care. Correspondence regarding this article may be addressed to Kendall Johnson, Ph.D., Danbury School, 1725 Lynoak Drive, Claremont, California. Email: kjohnson@chsmail.claremont.edu.

Background

During 1992 and 1993 this author trained school crisis response teams in the New York City Schools under the auspices of the Chancellor's Office. These teams consisted of school counselors, school psychologists, school social workers, nurses, and teachers. The teams were trained to assist students and staff in dealing with the psychological and organizational aftermath of events that could overwhelm the students' and school's capacities to cope. Such events typically include violence, sudden loss, or destruction.

In the immediate aftermath of the attack on the World Trade Center on September 11, 2001, these teams responded to a school and community crisis of hitherto unprecedented magnitude. The skills, strategies, and experience of the teams were tested under unforeseen circumstances. While all of the school districts in New York were gravely affected, Community School District 2 lay at the epicenter. The district boundaries began in mid-Central Park and included all K-8

and some specialty high schools southward to Battery Park (i.e., the area including and surrounding the World Trade Center). All schools within the district were seriously impacted—some more than others—by the sights and sounds of the attack; the loss of parents who worked in the Trade Center; the financial and psychological effect on their families; and by the prolonged disruption to the communities.

As part of their support duties to Community School District 2, the author, in conjunction with Dr. Joanne Tortorici Luna of California State University at Long Beach, conducted an informal after-action study to determine the usefulness of the various components of the team trainings provided in 1992 - 1993. The purpose of this query was formative: to assess the team's needs for further training. Group and individual conversations held with team members in November, 2001 revealed several things regarding their training needs. The team reported that for the most part the training had served them well. Specifically, it was the micro-skills of individual consultation and group interaction that were the most useful, combined with an overview of the team's purpose and intent. In particular, the simulation exercises in the training were deemed to have been the most helpful. It was reported that what their team needed most were techniques to stabilize students and adults while the incident was occurring, during moments of loss of control in class time, or during consultation in the aftermath of the incident.

Techniques to stabilize students and their behaviors during times of severe crises were expressed to the author by crisis team members and other professionals following other large, chaotic incidents, such as the school shootings in Littleton, Colorado and Santee and Granite Hills, California, the wildland fires in Yellowstone and Southern California, and the San Francisco and Northridge earthquakes. Further, a widespread fear exists among both school and law enforcement professionals that schools may be specifically targeted in the future by terrorists, foreign or domestic. From these discussions it became apparent that a training supplement for crisis team members and school personnel, dealing with the management of individual and group behavior during emergency, was needed.

A School-Friendly Approach to Training

Some training programs exist along these lines, but are generally geared toward law enforcement, mental health, or trauma-specific organizations. Schools present a unique set of response needs. The majority of school incidents have the capacity to spin quickly out of control and must be resolved by site personnel before police or other emergency agencies have time to arrive. Large numbers of children of differing developmental levels must be considered. Thus the training must involve simple on-scene assessment of individual and group behavior and intervention approaches that are easy and natural to perform for professionals and non-professionals alike. Further, the strategies must be generic and applicable to a wide variety of situations and contexts.

The Training

Training can take place on several topics: awareness raising (approximately 2 hours recommended); basic concepts and strategies (1/2 day); basic concepts and basic skill building simulation exercises (full day); and extended concepts and expanded skill building with practice in responding to contingencies (2 days). The full training should address the following subjects and sequence.

- The nature and characteristics of school crisis
- The immediate response of students and adults to crisis
- Simple rapid assessment techniques to determine approach
- Facilitative vs. Stabilizing approaches
- Dealing with over-reactive and agitated behavior
- Dealing with under-reactive and fading behavior
- Techniques for dealing with small groups
- Techniques for dealing with large groups
- Considerations for dealing with key special groups and circumstances
- Self-care during emergency

Several key concepts should include the unique nature of school crises, the purpose of emergency behavior management, a rapid assessment technique, differentiating between facilitative vs. stabilizing approaches, and techniques for dealing with groups.

Schools

The school presents a unique setting for crises. Schools consist primarily of large, shifting groups of people of different developmental levels coexisting in a complex dynamic of controlled chaos. This dynamic is vulnerable to outside influence, developmentally and socially driven needs, emotional and behavioral contagion, and sudden changes in procedure or routine. Crises on campus or in the community disrupt the school dynamic, threatening chaos and escalating crisis.

Purpose

The purpose of emergency behavior management in the school setting is limited to de-escalating crisis, containing emotional and behavioral contagion, and assisting in the re-establishment of routine and control. It can be utilized with individuals, small groups, classrooms or campus wide.

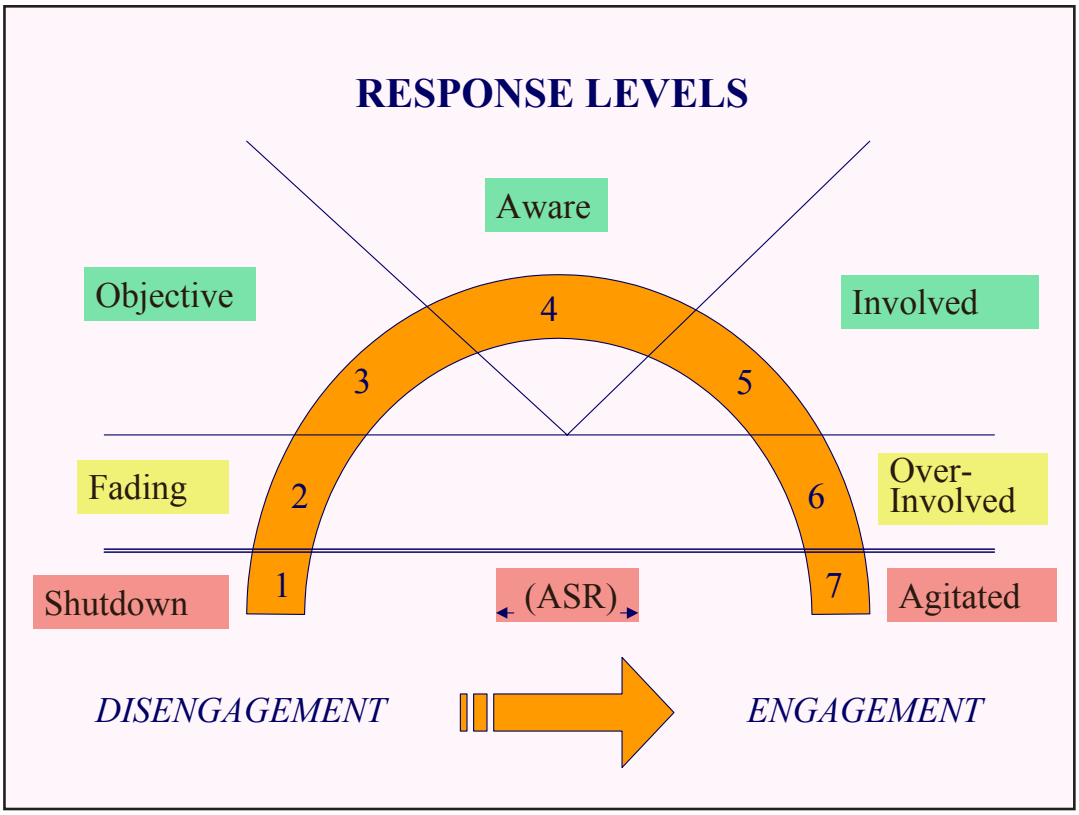
Assessment

Emergency behavior management techniques are driven by a rapid assessment approach designed to classify observed individual situational reactions into type and intensity. Following the continuum of reactions illustrated in Figure 1, students are observed to be over- or under-reacting, and more or less functional. These considerations determine the interveners approach.

Facilitative vs. Stabilizing Approaches

Under emergency situations, students need to make good decisions and take appropriate action. Interventionists should help facilitate this; their approach should be to clarify the situation and provide direction. With students who are functional, the best way is to enlist cooperation, provide information and clarification, and link them with other students and resources. In short, the goal with functional students is to facilitate constructive decision-making. With

Figure 1. Response Levels



students who are less functional, the intervener may need to help focus the student's attention, use simple, more directive language, determine their capacity for decision making and self-care, and provide external structure as necessary. The goal, then, with less functional students is to provide direction and stabilization. Thus the specific tactics taken with each student and group are driven by these different approaches.

Groups

The primary encounter between adults and students occurs within group contexts. Small group contacts may occur inside the school building in hallways, or outside on school grounds, and often take place in the presence of other groups of onlookers. Further, how one group acts will affect the reactions and behavior of other, adjacent groups. Group contact may occur within whole classroom settings or even in larger groups such as assemblies or evacuations. Finally, intervention may be called for when the school is disrupted by widespread chaos. A complicating factor in assessing and intervening with these different types of groups is the range of reactions of individuals within the group and the contagion effect of the more extreme reactions. Trainees must be presented with a variety of stabilizing and facilitative techniques for dealing with diverse student groups.

Some Applications

The training program implemented by this author has been well received by trainees and their organizations. The rapid assessment and simulation exercises, in particular, have proven useful, and many trainees have reported their success in utilizing the approaches they learned in training. A frequent comment is "it went just like we did in the simulation."

Over the past several years the program has been provided in a variety of educational and emergency settings. The approach has been described at length (Johnson, 2004; 2006) and has resulted in a training film for the Federal Emergency Management Agency. The following three ongoing cases have ongoing training programs in Managing Emergency Behavior and illustrate the diversity of application of the approach for schools.

Case #1: A Large Western K-12 School District

Following the increased frequency of school crises and violence in this very large district (one of the ten largest in the United States) it was deemed necessary to upgrade the role and responsibilities of the district's elementary and secondary campus proctors. This included skill building in security-oriented, direct intervention with students under difficult circumstances. Part of the skill building included a full day module in managing students in emergency situations. This involved the presentation of key concepts and both individual and group stabilization procedures followed by simulation exercises.

Case #2: An Urban County Office of Education

The county office of education for a large, urban county provides periodic two-day trainings in disaster management for district crisis teams. Four specialists in various relevant subjects provide half-day components within their areas of expertise. Beyond reviewing the basics of crisis support planning, the class explores jurisdictional interface with outside agencies and resources available through the County. One of the key subjects covered is emergency behavior management, including key concepts and procedures. The emerging intent is to break the training into key 15- to 30-minute segments wherein the crisis team can periodically present an abbreviated bare-bones set of skills to school staffs as a part of normal staff meetings.

Case #3: A Major University

A large metropolitan university stands in an area particularly vulnerable to natural disaster, civil disorder, and possible terrorist activity. In such events the campus could itself be impacted directly or, in the event of widespread community impact, it may serve as a community shelter. This would have the effect of overtaxing the small campus law enforcement department in their efforts to protect and control the large student population. As part of the university's disaster preparedness planning, a Volunteer Crisis Resource Team has been organized and trained to supplement the efforts of the law enforcement officers by assisting to stabilize the campus, allowing the officers to focus their activity. The team consists of site staff and faculty who receive special

training. The majority of the two-day team training consists of skill development in managing emergency behavior of students and adults.

Some Considerations

The specific skills taught and the training milieu in which they are presented are critical. Over time the following considerations have proven important in teaching both educators and other professionals who would work within the school context during emergencies.

- The assessment approach used must be simple, rapid, and useful.
- The language used to describe reactions must be non-clinical and intuitive.
- Procedures must be simple, direct, and not require extensive memorization.
- A training involving only presentation does not provide skill building; a variety of simulation exercises help trainees to practice the skills in a variety of conditions, resulting in a reflexive "kinesthetic knowledge" that carries over into actual situations.
- The training must clearly indicate what behavior is beyond the province of the audience and requires law enforcement or clinical intervention, and must outline modified approaches to take if such assistance is unavailable.
- The training must address strategies for small and large group situations, given the school setting.
- During simulations and role-plays it is important to manage the trainees tendency to be overly dramatic. Give clear instructions addressing the desired intensity of reaction.
- Provide low intensity role-plays first in order to clearly model correct approaches, then gradually escalate the degree of intensity.

Toward the Future

While we can't read the future, it cannot be assumed that we have seen the worst of school crisis, either in frequency or scale, nor can it be assumed that the contribution of the school crisis team must be limited to aftercare. Pre-incident planning must take into account the need to provide the school staff with tools to assist them in calming the campus during emergency. As the role of school crisis teams evolves it should include such staff training and definine the role of crisis team members during unfolding incidents. If our children are to be protected we must be more proactive.

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Manuscript received September 5, 2007

Revised September 6, 2007

Accepted September 7, 2007

INTERNATIONAL JOURNAL OF
EMERGENCY MENTAL HEALTH

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Selected Annotated Journal Resources

Karina E. Chapman, M.S. and Jessica R. Rothstein, M.S.

Radcliffe, J., Fleisher, C. L., Hawkins, L. A., Tanney, M., Kassam-Adams, N., Ambrose, C., & Rudy, B. J. (2007). Posttraumatic Stress and Trauma History in Adolescents and Young Adults with HIV. *Aids Patient Care and STD's, 21*, 501-508.

TYPE OF ARTICLE

- Original Empirical Investigation

OBJECTIVE/PURPOSE OF THE ARTICLE

- To examine trauma history and posttraumatic stress in a sample of adolescents and young adults with HIV/AIDS.

METHODS

Participants

- Participants were recruited from an outpatient HIV clinic in an urban pediatric hospital in northeastern U.S. Inclusion criteria were: ages 18-24 years; HIV diagnosis; fluency in English; and willingness to provide written informed consent.
- 30 youth participated, and the mean age of the sample was 21.4 years (range 18-24 years), with 83% African American, 10% European American, and 7% biracial. The sample was 70% male, 23% female and 7% transgender (male-to-female).
- Among the males, 67% were men who have sex with men (MSM), 14 % heterosexual, and 19% bisexual; among the females, 71% were heterosexual, and 29% lesbian.
- All but one participant was infected with HIV through unsafe sex; the other was infected perinatally.
- Mean time since diagnosis was 4.6 years (range 1.9-11.5). Most (63%) participants were employed or attending school or college.

Materials

- Participants were asked about their prior exposure to trauma, via the Traumatic Events Screening Inventory (TESI). The TESI is a semi-structured interview that includes a survey of potentially traumatic events, including injuries or accidents, hospitalizations, disasters, domestic and community violence, physical and sexual abuse, and questions regarding reactions to the event. The present study added the item of receiving an HIV diagnosis, for a total of 15 events. In accordance with the DSM-IV criteria, the criteria for scoring an event as traumatic was that the participant reported experiencing intense fear, a sense of helplessness, or feeling horrified at the time of the event. Trauma history was scored as a count (0 to 15) of the number of traumatic events experienced.
- PTSD and PTSS were assessed with the Posttraumatic Stress Disorder Checklist-Civilian Version (PCL-C), a 17-item measure of symptoms keyed to DSM-IV diagnostic symptoms of PTSD. The PCL-C was administered twice; first referencing the participant-identified "biggest, hardest" event they had ever experienced, and a second time referencing either receiving their HIV diagnosis (if that was not identified initially) or their "next hardest" experience. Participants who reported moderate distress by one or more re-experiencing symptoms, three or more avoidance symptoms, and two or more arousal symptoms over the past month were identified as meeting symptoms criteria for PTSD. These criteria were used to evaluated PTSD both for HIV diagnosis and for the par-

ticipant-identified other significant traumatic stressor. PTSS was defined by at least one severe rating in each symptoms category as well as assessed impairment from these symptoms.

Procedure

- From 2004-2005, potential participants coming to the clinic for a regular medical visit were approached by a member of the clinic team and asked if they wished to participate in a study seeking to understand what stressful and traumatic events young people have experienced and how young people feel following these events.
- If the youth agreed, a member of the investigative team explained the study in more detail and asked for formal consent. Once consent was established, the study questionnaire was administered in a private office by a trained research assistant.

RESULTS

- All participants reported experiencing at least one potentially traumatic event and participants reported enduring 5.6 events they identified as traumatic (range, 1-10).
- All participants reported that they had received a diagnosis of HIV; other frequently endorsed events included having a person close to the participant become seriously ill or injured, being a victim of a physical attack or abuse, involvement in a serious accident, and witnessing domestic violence. Almost all participants (93%) indicated that receiving their HIV diagnosis was traumatic.
- High percentages of trauma were also reported in response to sexual abuse (100%), being separated from a caregiver, such as in foster care (100%), physical attack (94%), and having someone close to them sick or hurt (92%). When asked to name their "worst" event, 59% of the sample reported that receiving their HIV diagnosis was their "hardest" or "worst" event; the remaining 41% of the sample named another event such as physical attacks or other serious injury.
- The majority of the participants (57%) reported traumatic stress symptoms consistent with PTSD or PTSS in response to at least one traumatic stressor among the 15 potentially traumatic events surveyed. An average of each participant's most severe traumatic stress symptoms was calculated and revealed a moderate level of symptoms ($M = 36.87$, $SD = 14.29$).
- 20% of the participants reported symptoms consistent with PTSS in response to the HIV diagnosis, with an additional 13.3% meeting full symptoms criteria for PTSD. Thus, overall, 33% of the sample showed a notable degree of posttraumatic stress in response to the HIV diagnosis. There was no significant relationship between post-traumatic stress and length of time since diagnosis ($r = -0.16$, $p = .039$).
- In response to the "other" most traumatic events, 47% of the participants reported traumatic stress reactions, with 23.3% meeting symptoms criteria for PTSD. Participants reported moderately severe levels of posttraumatic stress in response to other-related trauma ($M = 31.69$, $SD = 12.93$).
- Levels of traumatic stress symptoms related to HIV diagnosis did not differ from those related to another traumatic event. No significant differences existed between extent of HIV diagnosis-related symptoms as compared to other trauma-related symptoms in each symptom category, although there was a trend toward re-experiencing symptoms being more severe for other-related as opposed to HIV-related trauma ($t(25) = -1.780$, $p = 0.09$).
- Of the participants who met PTSD criteria, all but one met criteria for functional impairment as well. There were no significant differences found between the average number of stressors experienced, for both types of stressors combined, or for HIV-related traumatic stress alone.

CONCLUSIONS/SUMMARY

- Individuals in the study reported having experienced high levels of potentially traumatic events in addition to receiving a diagnosis of HIV. Though receiving a diagnosis of HIV was almost universally traumatic, 20% reported diagnosis-related PTSS while approximately 13% of the sample met criteria for PTSD related to HIV diagnosis.
- Other life stressors were more frequently associated with both PTSD and PTSS with 23.3% of the sample reporting PTSD and an additional 23.3% reporting PTSS.
- Reactions to receiving a diagnosis of HIV were as intense as reactions to other life stressors, with relatively high levels of re-experiencing, hyperarousal, avoidance, and functional impairment.
- The numbers of traumatic events experienced by the participants are increased relative to community samples.

The high rate of posttraumatic stress symptoms related to HIV diagnosis and other events is consistent with the adult HIV literature.

- One limitation of the present study is the relatively small number of participants, especially females. Females represent the fastest growing population of individuals being diagnosed with HIV, and women with HIV have been found to present with high rates of trauma history including sexual abuse and violence, thus, including a greater number of females in the study would have allowed for more detailed analysis of the effects of trauma on adolescent and young adult women with HIV.
- An additional limitation of the current study was the use of a questionnaire format to assess posttraumatic stress reactions instead of a structured clinical interview. Other limitations include the cross-sectional design of the study and the lack of information on illness severity at the time o the interview, and the sequence of stressors reported, especially in relation to receiving the HIV diagnosis.

CONTRIBUTIONS/IMPLICATIONS

- Care providers need to be aware of the traumatic nature of receiving a diagnosis of HIV/AIDS among adolescents and young adults. This may be particularly true among the youth who have already experienced multiple traumas.
- The symptoms associated with posttraumatic stress, re-experiencing, hyperarousal, and avoidance, may interfere with adherence to medical care.
- Having counseling resources available or making referral to mental health professionals is an important component of providing comprehensive care to adolescents and young adults with HIV.
- Future research needs to examine the prevalence of posttraumatic stress among adolescents and young adults with HIV/AIDS through larger scale studies, and it would be helpful to expand the study to include the effects of posttraumatic stress on adherence to medical care, including highly active antiretroviral therapy.
- Finally, the development of effective clinic-based interventions to reduce PTSS in youth with HIV/AIDS will facilitate their over-all competence in living with HIV/AIDS.

Denson, T. F., Marshall, G. N., Schell, T. L., & Jaycox, L. H. (2007). Predictors of Posttraumatic Distress 1 Year After Exposure to Community Violence: The Importance of Acute Symptom Severity. *Journal of Consulting and Clinical Psychology, 75*(5), 683-692.

TYPE OF ARTICLE

- Original Empirical Investigation

OBJECTIVE/PURPOSE OF THE ARTICLE

- To replicate cross-sectional findings demonstrating that exemplars of broadly defined risk factors assessed shortly after trauma exposure predict PTSD severity at 12-months post-trauma.
- To determine whether widely recognized risk factors remain significant predictors of 12-month PTSD symptom severity after adjusting for initial levels of posttraumatic distress.
- To evaluate the extent to which long-term symptoms of posttraumatic distress are explained by acute posttraumatic stress above and beyond the risk factors studied.

METHODS

Participants

- Medical patients seen at a Level I trauma facility who sustained an injury related to community violence were eligible to participate. 413 of the 423 (98%) eligible patients agreed to participate. The majority of participants sustained injuries from gunshots (57%) while the remainder had received injuries from blunt (e.g., closed fists or bats) or other penetrating objects (e.g., knives).
- Participants were predominately young (mean age = 25.10 years, *SD* = 6.03) male (94%) adults and 78% were Hispanic: 47% were born in the United States, 38% in Mexico, and 15% in Central America. 41% were high school graduates.

Materials

- Demographic variables assessed include gender, age, ethnicity, income, and educational attainment
- *Pretraumatic psychological factors* were assessed, including prior exposure to traumatic events and life stressors, pretraumatic psychological symptoms, and

personality variables. Lifetime community violence exposure was measured with the 18 items modeled after the Survey of Children's Exposure to Community Violence (SCECV; Richters & Saltzman, 1990). Other lifetime trauma exposure was assessed with 8 items assessing non-community-violence-related traumatic events which were summed to create an index of trauma exposure. 9 items were drawn from the Life Experiences Survey (LES; Sarason, Johnson, & Siegel, 1978) were included to assess the number of life stressors during the past year (M = 2.08, SD = 1.68). Recent history of major depression and dysthymia was assessed with 3 dichotomous items (i.e., have you had 2 years or more in your life when you felt depressed or sad most days, even if you felt okay sometimes?) developed by Rost, Burnam, and Smith (1993).

- Trait optimism was assessed with the 6-item Life Orientation Test—Revised (Scheier, Carver, & Bridges, 1994). Trait neuroticism was assessed with 5 items from the NEO Five-Factor Inventory (Costa & McCrae, 1989). This was an abbreviated version of the original 12-item scale. In responding, participants were asked to answer with respect to what "they were generally like as a person before the attack".
- *Characteristics of the traumatic event* such as the severity of the injury, mechanism of assault, and length of the hospitalization were all obtained. Objective injury severity was obtained using the Injury Severity Scores (ISS; Association for the Advancement of Automotive Medicine, 1990). The mechanism of injury was coded as gunshot versus all other mechanisms. The mean length of hospitalization was 6.96 days (SD = 8.06). The ISS and length of hospitalization variables were log transformed to meet the assumptions of linearity in the regression analysis.
- *Reactions to the traumatic event*. Peritraumatic dissociation was assessed with a modified version of the Peritraumatic Dissociative Experiences Questionnaire (PDEQ; Marmar, Weiss, & Metzler, 1997). Self-blame was assessed using items developed by Downey, Silver, and Wortman (1990) and assessed the extent to which participants blamed themselves for the attack (e.g., "How much do you blame yourself for what happened?").
- *PTSD symptom severity* was assessed using the 17-item PTSD Checklist (PCL; Weathers, Litz, Herman, Huska, & Keane, 1993). Participants rated the degree to which they were bothered by each symptom on a scale ranging from 1 (not at all) to 5 (extremely). Symptoms were assessed with respect to the attack.

Procedure

- Participants completed face-to-face interviews in English (72%) or Spanish (28%) in the hospital within days of the injury; median interval from admission to baseline interview was 5 days. Subsequently, face-to-face in-home interviews were conducted at 3 and 12 months following the initial interview.
- Of the 413 participants initially interviewed, 304 (74%) completed the 12-month follow-up interview. For those who did not complete the 12-month follow-up and were missing PTSD symptom severity outcome data, estimates were determined based on 3-month data.
- Participants were given $25 for each interview completed.

RESULTS

- A substantial portion of the sample reported clinically significant psychological distress at each assessment. Based on a screening of the PCL responses, 25% of the participants met screening criteria for PTSD at the 5-day assessment, whereas 20% met criteria at the 12-month follow-up. Although there was a significant decrease in symptom severity over time, the effect size was small (d = -.31), suggesting that while symptom levels may decline somewhat, they stay relatively constant in the year following the attack.
- Recent history of depression, lifetime violence exposure, neuroticism, optimism, injury severity, length of hospitalization, peritraumatic dissociation, self-blame, and 5-day PTSD severity were all associated with PTSD severity at follow-up. As would be expected, the strongest correlation existed between 5-day and 12-month PTSD severity.
- There was a small but significant percentage of variance (4%) in 12-month PTSD symptom severity predicted by demographics such that being younger and being Hispanic was associated with decreased PTSD symptom severity.
- Controlling for demographic and the other pretraumatic factors, only a recent history of depression prior to the traumatic event has significant unique associations with 12-month PTSD symptom severity.
- Characteristics of the traumatic event only predicted an additional 2% of the variance in 12-month PTSD symp-

tom severity; specifically, injury severity was uniquely related to 12-month PTSD symptom severity, while controlling for demographic and pretraumatic factors.

- An additional 4% of the variance was explained when adding psychological reaction variables to the model; Peritraumatic dissociation and self-blame were significant predictors of 12-month PTSD symptom severity.
- Five-day posttraumatic distress was the strongest predictor of 12-month PTSD symptom severity. After this predictor was entered into the model, none of the 6 constructs that had been significant predictors of 12-month PTSD symptom severity remained significant. The addition of 5-day symptom severity resulted in the largest improvement in the predictive ability of the model (11%), and this single coefficient is approximately 4 times larger than any other predictor and is nearly as large as all of the other predictors combined. These regression analyses were replicated using logistic regression and a dichotomous index of probable PTSD.

CONCLUSIONS/SUMMARY

- The regression analysis revealed demographic characteristics (i.e., age, Hispanic ethnicity), pretraumatic psychological factors (i.e., recent history of depression), characteristics of the traumatic event (i.e., injury severity), and reactions to the traumatic event (peritraumatic dissociation, self-blame) all predicted PTSD symptom severity at 12 months. Together, these categories of risk factors accounted for 14% of the variance in PTSD symptom severity. This is consistent with prior research.
- However, 5-day PTSD symptom severity remained the only significant predictor of 12-month PTSD after adjusting for the four classes of apparent risk factors, and it predicted nearly as much variability in PTSD symptom severity as all of the other predictors combined.
- Symptoms of distress in the days immediately following the trauma were good predictors of long-term psychological problems. High levels of acute posttraumatic distress should be seen as a marker for risk of long-term psychological problems.
- Only acute posttraumatic distress appeared to meet the criteria for being designated as a risk factor for PTSD, based on demonstrations that it precedes *and* is associated with PTSD.
- Limitations of the study include the homogeneity of the sample (i.e., young, male, Hispanic), retrospective reports on several of the measures, participant attrition, and possible omission of important predictors of PTSD.

CONTRIBUTIONS/IMPLICATIONS

- The study was the first to explicitly address the role of acute symptoms while systematically adjusting for a broad range of theoretically important risk factors.
- Long-term psychopathology might be significantly influenced by survivors' extreme initial reactions to a traumatic event.
- This finding raises questions about the nature of symptoms of distress that, when occurring in the immediate days following trauma exposure, are often regarded as normal and nonpathognomonic.
- High levels of distress during the immediate aftermath of trauma may be an important target for intervention or prevention: most respondents who developed chronic PTSD symptoms in this sample had established an unhealthy pattern of distress within days of the trauma.
- The finding that self-blame did not directly contribute to PTSD may be inappropriately regarded as indicating that self-blame is not an important contributor to PTSD. However, self-blame may operate by influencing acute symptoms of distress, which, in turn, affect long-term adjustment.

Salciglu, E., Basoglu, M., & Livanou, M. (2007). The Effects of Live Exposure on Symptoms of Posttraumatic Stress Disorder: The Role of Reduced Behavioral Avoidance in Improvement. *Behaviour Research and Therapy, 45*, 2268-2279.

TYPE OF ARTICLE

- Original Empirical Investigation

OBJECTIVE/PURPOSE OF THE ARTICLE

- To explore the effects of exposure on the PTSD symptom of avoidance and how this impacts improvement.

METHODS

Participants

- Participants were recruited from two permanent housing sites that were built by the Turkish government for homeless survivors following the 1999 earthquake and from

referrals to the community center in the epicenter region.

- A total of 879 survivors were screened with a diagnostic self-rating scale, the Traumatic Stress Symptom Checklist (TSSC; Basoglu et al., 2001). One hundred and eighty survivors who presented with posttraumatic stress problems according to the TSSC and were available for further interview were assessed for eligibility for the study.
- Inclusion criteria were PTSD diagnosis according to DSM-IV criteria, literacy, age 16-65 years, and absence of alcohol or drug dependence, severe depression with suicidal intent, psychotic illness, predominating grief, use of benzodiazepines, use of antidepressants, and previous CBT for earthquake-related traumatic stress problems.
- Fifty-nine survivors fulfilled these criteria and were randomized into either the SSBT ($n = 31$) or waiting list (WL) control conditions ($n = 28$).
- Mean age was 36.3 years ($SD = 11.5$); 50 (85.5%) were women and 48 (81%) married. Twelve (20%) of survivors were trapped under rubble, 23 (39%) suffered physical injury and 11 (19%) participated in rescue work. Three (5%) survivors lost a first-degree relative, 19 (32%) lost a second-degree relative, and 58% lost a friend or neighbor.

Materials

- The standardized Turkish version (Aker et al., 1999) of the Clinician-Administered PTSD Scale (CAPS; Blake et al., 1996) was used for assessment of PTSD symptoms. The CAPS assesses severity of a particular PTSD symptom on two dimensions: frequency and intensity. A frequency rating of 1 or higher and an intensity rating of 2 or higher is considered present (Blake et al., 1999) and this scoring approach was adopted to determine symptom presence or absence in the current study.

Procedure

- Participants in the treatment condition received single-session behavioral treatment (SSBT) within 1 week after baseline assessment and were followed up at 6-, 12-, and 24-week post-treatment. Survivors in the WL condition were re-assessed at 6 weeks after trial entry, given the same treatment, and followed up at 6-, 12-, and 24-week post-treatment.
- Treatment involved a shorter version of CBT, which was modified by a) limiting cognitive interventions to the explanation of the treatment rationale only, b) focusing on reduction of fear and avoidance, and c) shifting from habituation to anxiogenic stimuli to enhancement of sense of control over traumatic stressors.
- The first step in treatment (10 min) involved identification of the presenting problem (i.e., fear of earthquakes, behavioral avoidance of earthquake reminders, re-experiencing, and hyperarousal).
- The second step (30 min) consisted of an explanation of the treatment rationale and focused on increasing sense of control over earthquake-related fears, distressing trauma reminders, and associated emotional and/or behavioral responses rather than habituation to trauma reminders.
- The third step (20 min) involved treatment target setting and self-exposure instructions, and targets involved four of the most functionally disabling problems, such as avoidance of safe buildings, staying home alone, sleeping in the dark, etc. Once agreement was achieved on the targets, self-0exposure instructions were given. No fear hierarchy was established and the participants were advised to work on any treatment target of their choosing. No systematic cognitive restructuring was undertaken during treatment.

RESULTS

- The most common symptoms reported (endorse rate over 80%) were behavioral avoidance, distress upon reminders, cognitive avoidance, irritability, memory and concentration difficulty, hypervigilance, and startle.
- The between-groups differences at week 6 were significant on all outcome measures. Greater illness severity, higher education, and past trauma predicted less improvement.
- There was no significant between-groups differences in symptom severity scores or symptom prevalence rates at baseline.
- Significant between-groups differences were found on only behavioral avoidance, with trends towards significance on distress upon reminders, nightmares, intrusive thoughts, cognitive avoidance, hypervigilance, sense of foreshortened future, and memory and concentration difficulty. Thus, behavioral avoidance was the first symptom to respond to self-exposure.
- Effect sizes on behavioral avoidance and hypervigilance were large, despite the fact that the between-groups dif-

ferences failed to reach significance on the latter symptom. Medium effect sizes were noted on psychological and physiological distress upon reminders, nightmares, cognitive avoidance, emotional numbing, memory and concentration difficulty, sense of foreshortened future, and intrusive memories.

- Although change in behavioral avoidance was significant, improvement was partial (32% reduction in symptom severity), reflecting the slow pace of exposure conducted by the participants.
- Total CAPS scores reduced by 35% in the treatment group (10% in the control group), reflecting partial improvement at week 6.
- Some improvement was noted in some symptoms in the control group, which could be attributed to therapist contact, detailed assessment, and possibly other nonespecific factors (Basoglu, Salcioglu et al., 2005).
- Treatment effect sizes were large for all symptoms. Recovery rates (symptom absent) ranged from 60% to 89% for the majority of the symptoms. Similarly, clinically significant change (2 *SD* change from baseline in symptom severity) ranged from 60% to 100% for 14 symptoms. Overall, PTSD symptoms improved by 605, with a large effect size of 1.8.
- Compared to those who recovered from behavioral avoidance, those who still had the symptom were more likely to have intrusive memories, nightmares, distress upon reminders, physiological reactivity, avoidance of trauma-related thoughts, los of interest, hypervigilance, startle, insomnia, memory and concentration difficulty, emotional numbing, and detachment. Compared to avoidant participants, those who recovered from avoidance showed twice as much reduction in total CAPS scores (respectively, mean 36% (*SD* = 35) vs 72% (*SD* = 20, $t(19.5) = 3.88, p < .001$).

CONCLUSIONS/SUMMARY

- Given the chronic nature of PTSD in the study participants and less than 10% reduction in PTSD during the waiting period, improvement in behavioral avoidance and other PTSD symptoms can be attributed to treatment.
- A relatively short control period of 6 weeks might have underestimated the treatment effects. Because treatment did not involve the usual monitoring of behavior therapy (e.g., verbal praise, encouragement, setting new exposure tasks, etc.), the participants conducted self-exposure at their own pace, which slowed and protracted improvement.
- The fact that avoidance was the first symptom to improve suggests that the treatment effects on other symptoms were mediated through reduction in avoidance.
- A symptom constellation consisting of re-experiencing symptoms, cognitive and behavioral avoidance, hypervigilance, and startle is characteristic of earthquake trauma and reflects conditioned fears caused by repeated exposures to earthquakes. Improvement in these symptoms is thus likely to be a direct result of reduction in fear and avoidance.
- The generalization of treatment effects to all PTSD symptoms, as well as depression, might be explained by increased sense of control over fear and distress associated with the trauma.
- Improvement in cognitive symptoms is consistent with findings of other studies reporting cognitive change with exposure treatment. Emotional numbing is thought to be associated with opioid-induced analgesia produced by cues associated with uncontrollable stress (Mineka & Zinbarg, 2006), and analgesia produced by initial exposure to the trauma might be sustained by continued exposure to fear and distress triggered by reminders of the trauma (e.g., conditioned emotional responses; Foa, Zinbarg, & Rothbaum, 1992). Thus exposure treatment might improve numbing by reducing and/or enhancing sense of control over fear and distress associated with trauma cues.

CONTRIBUTIONS/IMPLICATIONS

- The suggestion that PTSD can be effectively treated with an intervention focusing solely on behavioral avoidance raises questions about the need for other interventions often used in CBT programs.
- Evidence that live exposure is more effective than imaginal exposure may be explained by the fact that the former involves exposure to both past trauma memories and cues that signal future threat, and thus, provides opportunities to gain control over both types of stressors.
- Few treatment studies have measured effects on behavioral avoidance, and it is hard to determine whether imaginal exposure reduces avoidance *before* any actual exposure occurs. In one of few studies examining these issues, imaginal exposure was not effective in reducing avoidance, a finding which might explain why improve-

ment did not generalize to other symptoms such as emotional numbing and guilt.

- Findings of the current study suggest that a treatment focus on reducing behavioral avoidance is sufficient in achieving marked generalized improvement in all PTSD symptoms and depression. Replication of these findings might lead to the development of a briefer and more cost-effective treatment for PTSD.
- In other cases where PTSD is not characterized by behavioral avoidance, treatment could focus on trauma reminders that trigger distress or other re-experiencing symptoms.

Craig, D.C., & Sprang, G. (2007). Trauma exposure and child abuse potential: Investigating the cycle of violence. *American Journal of Orthopsychiatry, 77*, 296-305.

TYPE OF ARTICLE

- Original empirical investigation: Passive observational design.

OBJECTIVES/PURPOSE OF THE ARTICLE

- This study investigated the relation between trauma exposure experienced at different ages and the potential as an adult to perpetuate child abuse.
- In addition, the researchers examined the influence of gender, prevalence of trauma experiences (e.g., the number of traumatic events experiences), and the type of trauma experienced (e.g., physical abuse, sexual abuse, etc.) on abuse potential.

PROCEDURE

Subjects

- 1,680 caregivers receiving services at the University of Kentucky's Comprehensive Assessment and Training Services project, a multidisciplinary outpatient clinic serving maltreating families.
- Number of lifetime traumas experienced ($M = 4.84$).
- Type of trauma included childhood sexual abuse ($n = 244$), motor vehicle accidents ($n = 131$), sexual harassment ($n = 1$) and torture ($n = 1$).

Predictor Variables

- Using the criteria in the DSM-IV-TR for exposure to trauma, participants answered either yes or no to the following, "I have been exposed to a traumatic event in which both of the following were present: (a) experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others, and (b) response involved intense fear helplessness, or horror,"
- Individuals who answered no were then categorized into a no-trauma exposure group ($n = 294$). Those who responded yes were classified as the experiencing trauma group ($n = 446$).
- Additionally, participants were categorized into groups based on the time in their life in which they had experienced trauma. Those who had experienced trauma at or before the age of 17 years ($n = 93$) were classified as child-only trauma group, those who experienced trauma at age 18 or older ($n = 154$) were classified as adult-only trauma group, and those who experienced trauma during both times were classified into the child-adult trauma group ($n = 199$).

Outcome Variables

Child Abuse Potential Inventory (CAPI)

- The CAPI is a self-report measure that contains 160 forced-choice questions.
- Seventy-seven of the items load on the Abuse scale.
- The Total Abuse score derived measures the degree in which the respondent's answers, and his or her interpersonal profile, are indicative of individuals who are known to be physical abusers of children.
- The total score is referred to as an individual's child abuse potential, with higher scores categorizing an increased risk for physical abuse perpetration.

RESULTS

- Individuals who experienced trauma as a child and an adult had a higher number of total trauma exposures ($M = 6.49$, $SD = 3.60$) compared to the child-only ($M = 4.41$, $SD = 3.57$) and adult-only trauma ($M = 3.77$, $SD = 2.42$) groups.
- There was a significant difference in the total CAPI scores between the groups that experienced trauma and the no-

trauma group ($p < .0005$); however, no difference was found in between group comparisons of the trauma groups based on the specific time in which the trauma was experienced.

- A significant differences was found for gender and child abuse potential ($p = .005$). Higher mean CAPI scores were found for women ($M = 10.64$, $SD = 3.27$) than for men ($M = 9.27$, $SD = 3.27$).
- Those who had not experienced trauma had significantly lower ($p < .0005$) mean CAPI scores ($M = 8.69$, $SD = 3.28$) than those in the child-only trauma group ($M = 11.47$, $SD = 3.65$), those in the adult-only trauma group ($M = 10.65$, $SD = 3.99$), and the child-adult trauma group ($M = 11.41$, $SD = 4.06$).
- Hierarchical regression results indicated significant predictors of adult caregivers' child-abuse potential. These predictors included experiencing: childhood sexual abuse, childhood physical abuse, adult physical abuse, adult sexual abuse, and domestic violence.
- Although not reaching significance, the authors noted a trend towards child abuse potential for those who had experienced a motor vehicle accident.
- Exposure to disasters and the death of loved ones were not significant predictors of child abuse potential among adult caregivers.
- Those who experienced trauma during childhood were 53% ($p = .007$) more likely to be in a clinically elevated group (CAPI scores of > 215) than those who experienced trauma as an adult.
- Women had a 2.1 times higher chance ($p = .007$) than men to be categorized into the clinically elevated CAPI group.
- Individuals who experienced trauma as a child were 2.26 times more likely to be in the clinical elevated CAPI group than those who had not experienced trauma ($p = .029$).
- Those who had experienced trauma as an adult were 3.03 times more likely to be in the clinically elevated CAPI group than those who had not experienced trauma ($p = .001$).
- Furthermore, those who had experienced trauma during both timeframes were 4.23 times more likely to be in the clinically elevated CAPI group than those who had not experienced trauma.

CONCLUSIONS/SUMMARY

- Results indicated that those who had experienced trauma during any period in their life were more likely to show elevations on their CAPI scores, which the authors contend increases their risk for child abuse perpetration.
- The most significant factors that predicted a risk for child abuse potential were experiencing child abuse, sexual abuse, and adult sexual abuse.
- Being a woman was also found to be related to a higher risk of child abuse perpetration.
- Although not significant, there was a trend towards child abuse potential among those who had experienced motor vehicle accidents. This may indicate that additional factors such as the "overall turmoil" in an individuals' life after experiencing a trauma, which may include problems with alcohol and drug abuse, also factor into risk potential.

CONTRIBUTIONS/IMPLICATIONS

- Results of this study could influence intervention programs for those who had experienced trauma to end the cycle of violence which begins with being a victim and may result in becoming a perpetrator.
- These findings could be used to come up with a profile for those who have experienced trauma and characteristics that may lead to child abuse perpetration.

Pole, N., Neylan, T.C., Otte, C., Metzler, T.J., Best, S.R., Henn-Haase, C., & Marmar, C.R. (2007). Associations between childhood trauma and emotion-modulated psychophysiological responses to startling sounds: A study of police cadets. *Journal of Abnormal Psychology, 116,* 352-361.

TYPE OF ARTICLE

- Original empirical investigation: Experimental design

OBJECTIVES/PURPOSE OF THE ARTICLE

- The purpose of this study was to investigate whether experiencing trauma in childhood influences physiological reactivity and emotional responses during adulthood. The authors are investigating this phenomenon for individuals who do not currently meet criteria for an Axis I disorder in the DSM-IV-TR.

PROCEDURE

Subjects

- 90 police cadets in the San Francisco Bay area police academy.
- The researchers used the *Life Stressor Checklist-Revised* (Wolfe, Kimerling, Brown, Chresman, & Levin, 1996) to asses participants exposure to trauma and if present, the age at which they experienced the traumatic event(s).
- On this checklist, Childhood Trauma (CT) group ($n = 25$) indicated that they had experienced a traumatic event before the age of 14 years during which they thought that they could be "killed or seriously harmed," and felt emotions such as helplessness, horror, or fear.
- The No Childhood Trauma (NCT) group ($n = 65$) did not indicate experiencing such events. Individuals who stated that they witnessed such an event happening to someone else and did not indicate the feelings described above could also be classified in the NCT group.
- Using the *Structured Clinical Interview for DSM-IV Axis I Disorders*, the researchers verified that none of the cadets currently met criteria for an Axis I disorder.

Control Variables

- In order to control for issues of social desirability, the participants were administered the *Social Desirability Scale* (Reynolds, 1982). This scale contains 13 true/false questions that measure an individual's tendency to answer self report-items in an attempt to obtain approval from others and avoid being viewed as controversial.
- The researchers measured the participants' trait anxiety by administering the *State Trait Anxiety Inventory, Trait Form Y-2*. This measure consists of 20-items of enduring anxiety symptoms. Respondents indicate how they "generally feel" using a 4-point Likert scale ranging form scores of 1 (almost never) to 4 (almost always).
- To measure the participants positive and negative affect during the past month, they were administered the *Positive and Negative Affect Schedule* (Watson, Clark, & Tellegen, 1988). This measure asks respondents to rate how often they felt 20 feelings in the past month using a 5-point Likert scale ranging from 1 (very slightly or not at all) to 5 (extremely). Sum scores for affects falling into negative and positive affect categories were obtained.
- In order to investigate whether there were current symptoms of general psychiatric distress, participants were administered the *Symptom Checklist 90-Revised* (SCL-90-R). On this measure, respondents indicate how much they have "been distressed" during the past week on a 5-point Likert-type scale with anchors of 0 (not at all) and 4 (extremely). The global severity index or mean score was used to measure participants' general psychiatric distress over the last week.

Predictor Variables

- Using a Lablinc V Modular System, participants were presented with 10 sounds, binaurally though headphones, that were 106-dB(A), 40-ms white noise bursts within 0-ms rise and fall times separated by intertribal intervals of between 30 s and 50 s.
- Care was taken to allow for 2 minute initial resting period to gather baseline psychophysiological measures. In addition, the first 5 sounds were not used in order to obtain a stable response.
- Participants were exposed to three different threat conditions: low, medium, and high that were administered less than l minute apart. The order of threat conditions was counterbalanced. Each condition lasted approximately 4 minutes.
- During the low threat condition participants were told that they would receive shocks during another portion of the study that would require them to wear a Coulbourn Instruments E13-22 Transcutaneous Aversive Finger Stimulator. They were told they could not be shocked unless they were wearing this device.
- The medium threat condition consisted of participants wearing the finger stimulator. However, in the low threat condition they looked at a computer monitor that had an X, in the medium threat condition the words "No Shock" appeared.
- In the high threat condition the participants also wore the finger stimulator but the computer monitor showed the words, "Shock Coming," and participants received a 2.5-mA shock which the authors describe as "annoying but not painful."

Outcome Variables

Psychometric Measures

- Participants were administered the *Emotional Response Scale* after receiving all three of the threat conditions and were asked to indicate how they felt during the ex-

periment. This scale consists of 7 negative emotion words such as anxiety, danger, fear, anger, stress, annoyance, and helplessness. It also contains 5 positive emotion words such as safety, pleasure, calm, contentment, and amusement. Participants rated each word on a 5-point Likert-type scale with anchors of 1 (not at all) and 5 (quite a bit).

Physiological Response Measures

- Three physiological behaviors typically associated with startle responses were measured: eye-blink electromyogram (EMG), skin conductance (SC), and heart rate (HR). These were measured during the resting baseline and after the presentation of each startle response.

RESULTS

- The results did not show any differences among the two groups in reporting bias that is indicative of social desirability, trait anxiety, or current general psychiatric distress (as measured by the control variables).
- The CT group reported fewer positive emotions than the NCT group. This was evident for positive emotions such as contentment ($p < .001$), calm ($p < .001$), pleasure ($p < .001$), and reported safety ($p = .005$).
- There were no significant findings for the influence of type of threat condition on the experience of positive emotions among the CT and NCT groups.
- The CT group also reported more negative emotions than the NCT group. This was specifically true for negative emotions such as anxiety ($p = .002$), danger ($p < .001$), fear ($p = .001$), stress ($p < .001$), annoyance ($p = .002$), and helplessness ($p < .001$).
- When examining the difference in negative emotions and threat conditions, the CT group showed an increase in negative emotions from the conditions of low to medium threat ($p = .005$) and from medium threat to high threat ($p < .001$), whereas the NCT group results only indicated increases in negative emotions from medium to high threat conditions ($p < .001$).
- The CT group had a larger eyeblink response than the NCT group.
- The CT group also had a larger SC response than the NCT group.
- There were no significant findings for the HR response among the two groups.

CONCLUSIONS/SUMMARY

- The findings indicate that for adult police academy cadets who are currently free of Axis I diagnoses, but have a history of childhood trauma, there was a difference in their physiological and emotional response to the pairing of startling sounds and the threat of shock, compared to those who had not experienced childhood trauma.
- Specifically the cadets who had experienced trauma showed elevations in physiological measures of startle response such as an increase in eyeblink responses and skin conductance response.
- As the level of threat increased, the cadets that experienced childhood trauma also indicated they had more negative emotions, and less positive emotions than their counterparts.
- The authors contend that because the cadets who had experienced childhood trauma were more reactive to the medium threat condition than their peers, this may indicate that those who have experienced trauma place an emphasis on danger cues when faced with situations in which both dangerous and safety cues are present.

CONTRIBUTIONS/IMPLICATIONS

- The authors state that their findings may allow for some prediction of PTSD factors.
- In addition, the results appear to provide evidence that the physiological response, and potentially a child's developing nervous system, is altered for those who experience trauma during childhood.

Meiser-Stedman, R., Smith, P., Yule, W. & Dalgleish, T. (2007). The Trauma Memory Quality Questionnaire: Preliminary development and validation of a measure of trauma memory characteristics for children and adolescents. *Memory, 15,* 271-279.

TYPE OF ARTICLE

- Original empirical investigation: Survey construction.

OBJECTIVES/PURPOSE OF THE ARTICLE

- The purpose of this article is to validate the Trauma Memory Quality Questionnaire (TMQQ) a measure de-

scribed by the authors to "use in identifying which aspects of a child's [traumatic] memories merit therapeutic attention." The researchers employed two samples to test their survey and they also examine the questionnaires' criterion and construct validity.

PROCEDURE

Subjects

Sample 1

- 254 children and adolescents who were enrolled in a secondary school in England.
- Participants were asked to recall the most frightening event they had experienced recently. Some of these events included: road traffic accidents, bereavement, illness or injury of a family member or close friend, bullying, being attacked or followed by a stranger.
- The sample consisted of 146 females (57.5%) with an age range of 11-18 years ($M = 14.5$, $SD = 2.2$).

Sample 2

- 106 children and adolescents who had attended an Accident and Emergency Department in London following a traffic accident or assault participated.
- Participants were seen for 2-4 weeks following the event.
- The sample consisted of 39 females (36.8%) with an age range of 11-16 years old ($M = 14.0$, $SD = 1.9$).
- Specifically, 60 (56.6%) of the participants had experienced an assault while 46 (43.4%) had experienced a road traffic accident.

Measures

Revised Impact of Event Scale (RIES-C)

- The RIES-C is a shortened form of the adult version of the scale and measures posttraumatic stress symptoms.
- The scale consists of 13 items that load on three symptom factors, re-experiencing, avoidance, and hyperarousal.
- Children respond to the questions indicating 0 (Not at all), 1 (Rarely), 3 (Sometimes), or 5 (Often).
- Children completed this scale during every assessment visit.

Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-C)

- The ADIS-C is a structured clinical interview. This measure was administered at 2-4 weeks in cases of Acute Stress Disorder (ASD) and at 6 months for cases of PTSD.
- This measure is used to assess whether children meet criteria for DSM-IV-TR anxiety disorders.
- The authors note that they added questions regarding dissociation to the ADIS-C to aid in diagnosis.

Trauma Memory Quality Questionnaire

- This measure is the authors' self-designed questionnaire which consists of 14 items, which the authors note have a high degree of face validity.
- Respondents indicate if they 1 (Disagree a lot), 2 (Disagree a bit), 3 (Agree a bit), or 4 (Agree a lot).
- This questionnaire was administered at the 2-4 week assessment period.
- When completing the questionnaire, children are asked to consider their memories of pertinent frightening events.
- According to the researchers, the items are designed to stress the visual quality (i.e, my memories of the frightening event are mostly pictures or images.), as well as the non-visual sensory qualities (i.e., when I think about the frightening event I can sometimes smell things that I smelt when the frightening event was happening.).
- The researchers indicate that they attempted to gather information on the quality of the memory (i.e., my memories of the frightening event are very clear and detailed), not the frequency of the memories.
- Furthermore, the researchers asked the children if the memories of the traumatic event where different than "normal" memories (i.e., "when I think about the frightening event it is just like thinking about anything else that has happened to me," note this item is reverse scored).
- An additional item attempted to measure how scared the children were during the event. The authors note that responses to this question utilized a Likert scale but the point system varied slightly for each sample. In sample 1, participants responded using a 0-10 scale, while in sample 2 the scale was the same as the one utilized for the other questions with anchors of 1 (Disagree a lot), 2 (Disagree a bit), 3 (Agree a bit), and 4 (Agree a lot).

RESULTS

Item Reduction and Internal Consistency

- Following an item analysis, three items were dropped from the measure due to weak-item total correlations and poor additions to internal consistency.

Criterion Validity

- Children who met criteria for ASD had significantly higher scores on the TMQQ than those without ASD ($p < .0001$).
- Children who met criteria for PTSD had significantly higher scores on the TMQQ than those without PTSD ($p < .05$).

Construct Validity

- Correlations between the TMQQ and the RIES-C, show support for construct validity of the TMQQ in that the measure is related to the symptom presentation of PTSD following contemporary cognitive models.
- Additional data analysis indicate that the TMQQ does not simply measure symptoms of re-experiencing, like the RIES-C, but can be used to show unique pattern of PTSD symptoms.

CONCLUSIONS/SUMMARY

- In the two samples utilized in this study, the TMQQ does appear to provide additional unique information of a child's memory of traumatic events.

CONTRIBUTIONS/IMPLICATIONS

- According to the authors, their study indicates that the cognitive models of PTSD that have been used for adult populations might also be appropriate to understand a child's experience of PTSD.
- The authors also contend that their measure can be used to track improvements in therapy and to understand the mechanisms of PTSD.

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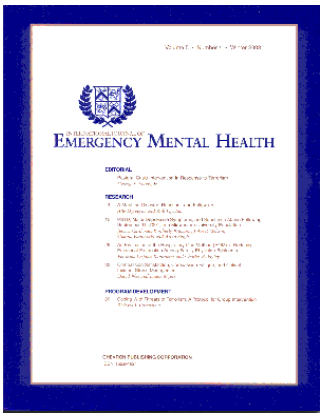

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Rule Number Two: Lessons I Learned in a Combat Hospital

By Heidi Squier Kraft, Ph.D.

Little, Brown and Company, 2007, 243 pp., $23.99

In the acclaimed television show, M*A*S*H, a powerful episode features Hawkeye Pierce operating on a high school friend and the anguish he experiences when his friend dies. His commander, LTC Henry Blake, tells Hawkeye, "…there are two rules of war. Rule number one is that young men die. Rule number two is that doctors can't change rule number one." To this dialogue, the author, Dr. Kraft adds, "War damages doctors, too. They are damaged by rule number two (p. 133-4)."

Former Lieutenant Commander Heidi Kraft, a U.S. Navy clinical psychologist, deployed to Iraq in 2004 with Alpha Surgical Company, First Medical Battalion, First Marine Fleet Service Support Group, leaving behind her Marine Corps husband with their fifteen-month-old twins. This is her highly personal account of her deployment and return from combat.

Dr. Kraft recounts the conception of her book from an email she composed as she and her unit prepared to deploy home. She writes, "I decided one of the things I should compose for my own closure and healing was a list: Things That Were Good about Iraq and being Deployed with the Marines, and Things That Were Not Good (p. 221)."

Under the Good, for example, she lists 'Sunset over the desert,' 'Walking, every day, and having literally every single person who passed by say "Ooh-rah, Ma'am,"' and 'My friends…My patients…My comrades.' Under the Not Good, she lists, 'Terrifying camel spiders,' '132 degrees,' and 'Trying, as if in total futility, to do anything I could, to ease the trauma of group after group…that suffered loss after loss, grief after inconsolable grief…'

She ends both lists with 'And finally, above all else…Holding the hand of that dying Marine.' That dying Marine was Corporal Jason Dunham, who was posthumously awarded The Congressional Medal of Honor, the highest award for valor in action against an enemy force.

Corporal Dunham, who threw himself on a grenade to save two of his Marines, was triaged as expectant (the medical term for casualties who are too critically injured to be saved) when he arrived at the hospital. Dr. Kraft was asked to hold his hand as those in attendance waited for his heart and breathing to finally still. However, he suddenly squeezed Dr. Kraft's hand once, and then again, in response to commands. Flooded with hope, the trauma team called for an urgent surgical medevac.

Later in the book, Dr. Kraft reports being told 10 days later that Jason's parents made the difficult decision to withdraw life support after he arrived stateside at Naval Medical Center Bethesda. Still later in the book, she shares an email from Jason's mom, which thanks her and a nurse for caring for her son. In her Epilogue, Dr. Kraft states she had the honor of attending the ceremony at the White House when President Bush awarded the Medal to Jason's parents (Read the full-text citation at www.history.army.mil/html/moh/iraq.html).

Amidst the loss, trauma, and terror of a combat deployment, how does one stay sane? One of the engaging characteristics of this book is Dr. Kraft frankly sharing tales of managing her stress. Some are humorous. Many are techniques that we as Critical Incident Stress Management (CISM) practitioners often recommend, such as exercise, sleep, humor, and talking to others.

For example, she and colleagues made an early decision to watch the entire series of The Sopranos, timing it so they watched the last episode on their last night in country. She details acts of kindness, such as the petty officer who quietly

cleaned a blood soaked Humvee so the Marines who transported their fatally-injured colleague in it would not have to clean the vehicle themselves, explaining "They're all our Marines, ma'am. It's just what we do."

Numerous examples of CISM principles pervade the book. Several interventions/CISDs are referenced, including a series of interventions with Seabees after their unit suffered multiple casualties in a two-day period. Another was with Marines in Mortuary Affairs, whose daily task is to recover bodies, inventory personal effects, and complete paperwork on the deceased. Later, an impromptu Post Action Staff Support session with a visiting psychiatrist provided a brief respite for the weary mental health professionals.

At one point, Dr. Kraft was asked "Who is the shrink for the shrink in a combat zone?" She answers to herself, "simply that person who understood at any given moment." For her, this was often Jason, the psychiatrist she worked with; or sometimes Karen, a Navy nurse ten years her junior; or perhaps the battalion chaplain; or even a helicopter pilot. "Paul (the pilot) smiled warmly at me. It was one of those genuine smiles that told me he had no idea what to say but would sit there with me anyway…if I learned anything out here, it was that everyone needs a break sometimes (p. 186-7)."

Similar to what we often see in disaster responses, many times educated words or perfect psychotherapeutic interpretations aren't necessary. Rather, simple actions such as listening when someone wants to talk, cleaning a vehicle like the petty officer described above, or helping a colleague clean a patient's blood off her boots are the right things to do.

Like many returning military veterans (Clark, 2006), Dr. Kraft struggled after returning home. She recounts being startled by a loud noise during her first day back in a stateside clinic. A nearby psychiatric technician noticed and asked if she was OK, to which she replied "Oh, sure." Apparently realizing better, the psych tech followed her into her office, closed the door and stated, "It's okay if you're not okay." They sat quietly for ten minutes, and then returned to work. "And so I returned to life as a clinical psychologist in a peacetime hospital."

I highly recommend this book. Rule Number Two offers outstanding insight into the daily challenges, heartbreaks, and occasional joys of living and working in a combat zone. From her multiple perspectives of Navy officer, mental health professional, colleague, friend, mother, wife, and daughter, she shares from her heart. Her clinical cases cover the diagnostic spectrum, from anxiety to schizophrenia to suicide.

She even assisted five senior enlisted personnel to stop smoking. One day in the chow line, one of the five called out, "Hey, Doc – what do you call a Marine in a combat zone who smokes two packs a day and is worried about getting lung cancer someday?…An optimist (p. 172)."

Heidi Squier Kraft received her Ph.D. in clinical psychology from the UC San Diego School of Medicine in 1996. She joined the Navy during her internship and served as both a flight and clinical psychologist. Having left active duty in 2005, Dr. Kraft serves as the deputy coordinator for the Navy Combat Stress Control Program. She is donating 10% of her royalties to the Injured Marine Semper Fi Fund. For more information, please visit RuleNumberTwo.com.

Clark, D.W. (2006). Review of book, Courage after fire: Coping strategies for troops returning from Iraq and Afghanistan and their families. International Journal of Emergency Mental Health, 8(3).