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- *Practice guides:* Reports of existing, developing, or proposed programs that provide practical guidelines, procedures, and strategies for working emergency service and mental health professionals.

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A Quantitative Expression of Resiliency in the Workplace: An Odds Ratio Analysis

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Abstract: *This paper reviews four empirical investigations into the effectiveness of workplace-based crisis intervention programs designed to enhance psychological resiliency. As an extension of a previously published review of effect sizes of workplace-based crisis interventions (Everly et al., 2006), this paper extends the expression of intervention effectiveness by proposing, then utilizing, the odds ratio statistic. It is proposed that the odds ratio is a more useful tool by which to express the practical utility of workplace-based psychosocial interventions. Thus, the use of odds ratios may be a tool that serves to ease the translation of research into practice. That is, odds ratios may aid in expressing the potential usefulness of workplace-based crisis intervention programs in terms that can be easily understood by program managers and policy makers without extensive training in inferential statistics, thereby potentiating increased utilization of such programs as indicated. [International Journal of Emergency Mental Health, 2008, 10(3), pp. 169-176].*

Key words: *Resiliency, workplace crisis intervention, odds ratio*

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The management of traumatic stress and its related syndromes has moved from its post-Vietnam era roots as a well-circumscribed clinical challenge to emerge most recently as a large-scale public health issue. The field has seen the focus of inquiry move from the 30-year preoccupation with the individual "treatment" of posttraumatic stress, to the subsequent enhancement of "resiliency," at both the individual and population levels, and finally to the most recent emerging interest in the development and implementation of "resistance," i.e., protective factors that may psychologically "immunize" individuals, as well as the population at large. While recent publications have highlighted the importance of the construct of resiliency as one aspect of a comprehensive psychological continuum of care, there is seldom agreement on just what that actually means. In this paper, we shall review one integrative continuum of care and introduce a method for quantitatively expressing the resiliency factor within that model. Lastly, we shall apply the proposed methodology to a corpus of research as an example of how resiliency may be expressed and better understood as a contribution to evidence-based practice.

"Resistance, Resilience, and Recovery" as an Integrative Continuum of Care

Both theory and observation suggest that the psychological response to critical incidents and even disasters unfolds with a rather predictable trajectory (Myers & Wee, 2005; NIMH, 2002). The public health corollary of that recognition is that the most effective use of emergent psychological and sociological interventions is predicated upon integrating the most appropriate interventions in a comprehensive continuum of care so as to correspond to the needs of the situation and the target population at the most appropriate times (Everly & Langlieb, 2003; Everly & Mitchell, 2008; Kaminsky et al., 2007; NIMH, 2002; Nucifora et al., 2007; Raphael, 1986; Ursano et al., 2003;).

One manner in which the trajectory of critical incidents and disasters, as well as the continuum of care, may be organized and understood is through the three constructs of "resistance, resilience, and recovery." This approach has its conceptual roots in a multi-perspective approach to psychiatric assessment that has been developed at The Johns Hopkins Department of Psychiatry and Behavioral Sciences (McHugh & Slavney, 1998). The formulation represents an evidence-informed, outcome-driven framework for organiz-

ing an integrative approach to disaster mental health. Currently, this model is being developed at The Johns Hopkins University. At its core, this perspectival model assists in strategic planning by considering both multiple intervention perspectives and subsequently aligning the tactical interventions most suited to achieve the desired outcome within an overarching framework, that is, building resistance, enhancing resilience, and facilitating the recovery of those affected by the disaster. This concept is consistent with Millon's "integrative psychotherapeutic concepts" (Millon et al., 1999) wherein: *potentiating pairings* (using interacting combinations of interventions so as to achieve an enhancing clinical effect), *catalytic sequences* (sequentially combining tactical interventions in their most clinically useful ways), and *polythetic selection* (selecting the tactical interventions as determined by the specific needs of each critical event, or mass disaster situation) are all utilized to create the intervention approach with the greatest potential for achieving a successful outcome. The greatest strength of this evidence-informed model, however, is its functional separation and delineation of the constructs of resistance and resiliency (Kaminsky et al., 2007; Nucifora et al., 2007); as such it represents a significant addition to the relevant literature. This intervention model would appear to be applicable to a wide variety of settings including hospitals, industrial and financial organizations, educational institutions, the military, transportation industries, government agencies, etc.

Resistance refers to the ability of an individual, a group, an organization, or even an entire population, to literally *resist* manifestations of impairment or dysfunction associated with critical incidents, terrorism, and even mass disasters. Resistance may be thought of as a form of psychological/behavioral immunity to distress and dysfunction. We believe that resistance may be built through the following:

- Experience (prior successes in vivo and in vitro)

- Expectancy (being provided information so as to create accurate expectations)

- Encouragement and Support

- Self-regulation (the ability to modulate personal stress physiology)

- Constructive cognitions

Historically, this element of disaster mental health response was conspicuous in its absence. More specifically, disaster mental health services were almost exclusively reac-

tionary in nature. The notion of creating resistance represents a proactive step in emergency mental health. Notions of "psychological immunization" and "psychological body armor" are engendered by the introduction of this intervention to the pre-incident phase of the temporal continuum.

Resilience refers to the ability of an individual, a group, an organization, or even an entire population, to *rapidly and effectively rebound* from psychological and/or behavioral perturbations associated with critical incidents, terrorism, and even mass disasters.

While resilience is often thought of as an innate quality, relevant literature underscores the power of interpersonal support as a factor believed to enhance resilience (Everly, 2009; Haglund et al., 2007; Luthar, Cicchetti, & Becker, 2000; McCubbin et al., 1997). Similarly, resilience may be enhanced by any intervention or process that instills confidence and reduces manifestations of distress, impairment, or dysfunction (Bandura, 1997; Rutter, 1985). Interpersonal support is believed to exert just such an effect. Crisis interventions are, if nothing else, a form of interpersonal support. Thus, it is reasonable to conclude that crisis interventions may improve resilience.

Psychological crisis intervention techniques were initially developed by military psychiatry during World Wars I and II (Artiss, 1963; Kardiner, 1941; Salmon, 1919) and later applied within the context of community psychiatry (Caplan, 1961, 1964; Decker & Stubblebine, 1972; Langsley, Machotka, & Flomenhaft, 1971; Parad & Parad, 1968). A recent review argues that workplace-based crisis intervention may be effective in reducing distress as well (Everly et al., 2006).

Finally, *recovery* may be thought of as the application of therapy and rehabilitation interventions that facilitate the restoration of functionality once it has been compromised.

In this paper, we focused on resilience. More specifically, we proposed a quantitative method for the expression of resilience that is novel to the field of disaster mental health.

Rationale

In conducting studies that affect public health decision making, it is not only important to determine whether results are statistically significant, but it is also important to determine the magnitude or strength of the relation between the predictor and outcome variables. Statistical significance is a function of sample size and effect size. Hence, a very large sample size can compensate for a small effect size and produce statistical significance. Alternatively, it is possible for a researcher to obtain statistical significance when the sample size is small but the effect size is large. In other words, the value of the statistical test is equal to an effect size index times a sample size index. Thus, it is important for the researcher as well as the policy maker to pay attention to all of the factors that contribute to statistical significance. The ubiquitous, yet overly simplistic, determination that given results are "statistically significant" does not tell the whole story and raises issues concerning clinical versus statistical "significance" i.e., what may be statistically significant may not be clinically meaningful, nor programmatically useful.

Meaningful Expression Of Research Findings

The power of a research finding may be thought of as the effect size. The three most basic forms of effect sizes are the following: when the independent variable is dichotomous (e.g., treatment vs. control) and the outcome variable is continuous, effect sizes that utilize mean differences are appropriate (e.g., Cohen's *d*, Hedges' *g*); when the independent variable is continuous and the outcome variable is continuous the most appropriate measure of effect size tends to be some form of a correlation coefficient (a Pearson Product-moment, for example); and finally, when both the independent and dependent variables are dichotomized then the most appropriate measure of effects size for 2 by 2 tables tends to be odds ratios or relative risks indices. Although most, if not all, of the effect sizes can be converted from one to another, the most common effect sizes reported in the social sciences tends to be Cohen's *d* statistic and the Pearson Product-moment correlation coefficient. However, within the medical/ epidemiological/public health venues, the relative risk and odds ratios tend to dominate. These measures tend to be very popular because they provide a very intuitive and practical understanding of effect sizes.

Relative risk provides the researcher with a way of conveying the likelihood of an outcome given a specific risk. Relative risks are derived by forming a ratio of the probability of an outcome given the risk over the probability of an outcome given the absence of the risk. Odds ratios are determined by taking the probability of an outcome associated with a specified risk divided by the probability of the outcome not happening. Alternatively, one can think of the odds

ratio as the ratio of two odds. An odds is the number of cases in the x group divided by the number of cases that are not in the x group.

Although the relative risk has more of an intuitive understanding (the ratio of two probabilities in a cohort study) it does have certain limitations that move the pendulum in the direction of using odds ratios. First of all, odds ratios can vary between zero and infinity, unlike the relative risk. Odds ratios also possess a symmetrical property: if you reverse the outcomes - looking for the good outcome as opposed to the bad outcome - the new odds ratio is simply the reciprocal of the original odds ratio [unlike the relative risk where this is not true]. In case control studies the relative risk is inappropriate because the prevalence of a particular outcome is unknown. The odds ratio is not hindered by this lack of knowing the prevalence. And finally, the odds ratio can be used in situations where control or confounding variables are incorporated into a regression analysis (i.e., logistic regression), unlike the relative risk which cannot be used in regression-type analyses (Deeks, 1996).

Quantitative Expression of Resiliency

It may be argued that mental health has yet to gain parity with physical health in the domain of public health policy and practice. One reason for this inequity may be the failure of researchers in the mental health field to translate findings into a terminology that is readily useful to public health policy makers, practitioners, and, in the case of the workplace, managers.

It will be recalled that resiliency may be defined as the ability of an individual, a group, an organization, or even an entire population, to *rapidly and effectively rebound* from psychological and/or behavioral perturbations associated with critical incidents, terrorism, and even mass disasters. We indicated that resilience can be enhanced through the use of psychological crisis intervention techniques initially developed by military psychiatry during World Wars I and II and later applied within the context of community psychiatry and even the workplace. The challenge is how to translate empirical findings relevant to psychological resiliency into terms more pragmatic than traditional expressions of statistical inference. For the reasons noted above, we chose to employ the odds ratio for our analyses of workplace-based crisis intervention.

METHOD

In light of the challenge noted above, the current researchers decided to employ odds ratio analysis as a means of expressing the effect sizes associated with empirically-based investigations of crisis intervention-enhanced resiliency as engendered through workplace-based initiatives. This analysis was conducted using investigations previously identified by Everly, Sherman, Stapleton, Barnett, Hiremath, and Links (2006) in their analysis of workplace crisis intervention. Four studies were extracted from the aforementioned review that were deemed relevant to the investigation of resiliency.

Analysis

Everly and colleagues (2006) converted the various statistics found in their constituent studies into the Cohen's *d* statistic. This statistic provides information regarding how much difference, in standardized units, exists between the means of two groups. A *d* value of 1 indicates the sample mean of Group A is one standard deviation above the mean of Group B. However, what this means in pragmatic terms becomes somewhat problematic. The degree of overlap between the two distributions is 44.6%, but what this means in terms of likelihood of intervention effectiveness, survival, or success, etc., is not easily interpreted. A partial remedy to this is to convert the Cohen's *d* into a more readily interpretable effect size index without too much loss of information. One such approach is the conversion of Cohen's *d* into odds ratio. Devilly (2007) has created a software program that converts the various effect size measures from one to another. Utilizing this program, the current authors took the values (Cohen's *d*) from the identified studies and converted them into odds ratios. Cohen (1988) suggested that *d*'s of .2, .5, and .8 represent weak, moderate, and strong effects and when converted to odds ratios the values become roughly 1.50, 2.50, and 4.30. Listed below are the identified studies with their resultant odds ratios (*OR*).

RESULTS

Study #1. Campfield and Hills (2001) conducted a putative randomized controlled trial of crisis intervention subsequent to robbery at the workplace. Employees (*n* = 77) were randomly assigned to an immediate crisis intervention condition (<10 hours, *n* = 36), or a delayed crisis intervention con-

dition (>48 hours, $n = 41$). Posttraumatic morbidity was assessed using the Posttraumatic Stress Diagnostic Scale (PDS) at intervention, 2 days post intervention, 4 days post intervention, and 2 weeks post robbery. Campfield and Hills (2001) noted, "For both number of symptoms and severity of symptoms, there was a significant main effect of group: symptoms, $F(1,75) = 52.92, p < .001, \eta^2 = .41$; severity. $F(1,75) = 59.48, p < .001, \eta^2 = .44$. There was also a significant main effect of time interval: symptoms, $F(3,225) = 133.46, p < .001, \eta^2 = .64$; severity, $F(3,225 = 267.28, p < .001, \eta^2 = .78$" (pp. 333-334). These findings were transformed into the following effect sizes (d) and odds ratios (OR):

1) For the main effect of group on symptoms, Cohen's d = 1.66, **$OR = 20.31$**

2) For the main effect of group on severity, $d = 1.77$, **$OR = 24.79$**

Study #2. Richards (2001) conducted prospective field trials wherein he compared two crisis intervention approaches, Critical Incident Stress Debriefing (CISD) and Critical Incident Stress Management (CISM), following armed robberies. The CISD approach involved small group crisis intervention discussions following the robberies. The CISM approach reflected an integrated multi-component crisis intervention approach which follows Millon's theoretical intervention model. The two approaches were applied in a serial manner reflecting the evolution of the human resources program with the employing organization. Post traumatic distress was assessed using the Impact of Events Scale (IES) and Posttraumatic Stress Scale (PSS), applied at 3 days, 1 month, 6 months, and 12 months post robbery for both groups. In the sample of 217 (CISD alone, $n = 75$; CISM, $n = 142$), analysis of between groups psychometrics at follow-up (f/up = mean of 3, 6, 12 month scores) yielded the following effect sizes and odds ratios:

1) IES effect size, Cohen's $d = .31$, **$OR = 1.75$**

2) PSS effect size $d = .25$, **$OR = 1.57$**

Study #3. Following Hurricane Iniki, Chemtob, Tomas, Law, and Cremniter (1997) conducted an evaluation of a brief psychological crisis intervention applied 6 months post disaster. Two groups were employed in a time-lagged pre and post test intervention assessment paradigm wherein the post test of group 1 ($n = 25$) was concurrent with the pre-test of group 2 ($n = 18$). Posttraumatic morbidity was assessed using the Impact of Events Scale (IES). Three months separated the pre and post testing for both groups. Analysis of vari-

ance for repeated measures (within group factor) was employed for both groups. The authors state, "The within group treatment effect was highly significant ($F = 21.13, df = 1,40, p < .001$)." The within group treatment effect was Cohen's $d = .73$, **$OR = 3.76$**.

Study #4. Boscarino, Adams, and Figley (2005) conducted a methodologically robust investigation of workplace-based crisis intervention. This study represents a prospective, random sample of 1,681 New York adults interviewed by telephone at 1 year and 2 years after 9/11 in order to assess the effectiveness of workplace-based crisis interventions. "We classified respondents who attended these worksite sessions as the brief crisis intervention group ($n = 180$) and all others as the non-intervention group ($n = 1,501$)" (p. 12). Results indicated that crisis interventions in the form of critical incident stress management had a beneficial impact across a variety of outcomes when assessed using the Brief Symptom Inventory-18 (BSI) and various standardized psychiatric interview guides. More specifically, when compared with individuals who did not receive these interventions, the workplace-based crisis interventions were associated with reduced risks for:

- binge drinking ($d = .74$), **$OR = 3.83$**
- alcohol dependence ($d = .92$), **$OR = 5.31$**
- PTS symptoms ($d = .56$), **$OR = 2.76$**
- major depression ($d = .81$), **$OR = 4.35$**
- anxiety ($d = .98$), **$OR = 5.92$**; and
- global impairment ($d = .66$), **$OR = 3.31$**

DISCUSSION

In this paper we have utilized the odds ratio as a means of providing a practical quantitative expression of the utility of workplace based crisis intervention programs to enhance posttraumatic resiliency. In doing so, we have provided evidence for the notion that psychological/behavioral resiliency can indeed be empirically enhanced via such programs.

Take for instance the finding by Boscarino, Adams, and Figley (2005) where they reported that the implementation of a workplace-based crisis intervention (vs. a non-intervention control group) significantly reduced depression compared to the control group, $d = .81$. Converting this d to an odds ratio produces an odds ratio of 4.35. Thus, the odds were more than four times greater for the treatment group to

reduce depression in comparison to the control group. If this value were a relative risk it would indicate the probability of reducing depression would be more than four times more likely for the treatment group than for the control group.

Similarly, the intervention significantly reduced symptoms of posttraumatic stress compared to the control group, $d = .56$. Converting this d to an odds ratio produces an odds ratio of 2.76. Thus, the odds were more than two times greater for the treatment group to reduce posttraumatic stress symptoms in comparison to the control group. If this value were a relative risk it would indicate the probability of reducing posttraumatic stress would be more than two times more likely for the treatment group than for the control group.

Posttraumatic distress subsequent to robberies represents a significant risk in the banking industry. The study by Campfield and Hills (2001) found early crisis intervention (Critical Incident Stress Debriefings) significantly reduced symptoms of posttraumatic stress compared to the control group (delayed intervention), $d = 1.66$. Converting this d to an odds ratio produces an odds ratio of 20.31. Thus, the odds were more than twenty times greater for the treatment group to reduce posttraumatic stress symptoms in comparison to the control group.

If studies such as these are indeed representative of the field of crisis intervention and its ability to exert positive effects upon resilience and the lowering of symptoms of distress related to work-related incidents at the worksite, then serious consideration must be given to their implementation in high risk industries.

Findings such as these are not only supportive of the constituent investigations, but they tend to support the more global notion that workplace-based crisis intervention programs can enhance posttraumatic resiliency as operationally defined. Expression of findings such as these in the more "user friendly" form of odds ratios may ultimately lead to greater understanding of the positive impact that such programs may have, which may in turn further lead to wider utilization of such programs.

Once considered an innate quality, resilience may be fostered by interpersonal support and any process that engenders a heightened sense of self-confidence, self-efficacy. From this perspective, workplace-based crisis intervention programs should be considered as one potential means of enhancing resilience.

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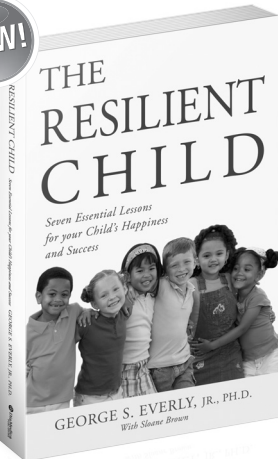
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George S. Everly, Jr., Ph.D.

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- Learn to make difficult decisions.
- Learn to take responsibility for your own your actions.
- Learn that the best way to help others, and yourself, is to stay healthy.
- Learn to think on the bright side and harness the power of the self-fulfilling prophecy.
- Believe in something greater than you are.
- Learn to follow a moral compass: Integrity

George S. Everly, Jr., PhD is one of the "founding fathers" of modern resiliency and stress management. He is on the faculties of The Johns Hopkins University School of Medicine and The Johns Hopkins University Bloomberg School of Public Health.

Characteristics of Four Types of Patient Assaults: Fifteen-Year Analysis of the Assaulted Staff Action Program (ASAP) With EMS Implications

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Abstract: *Thirty years of empirical research have documented the recurring risk of assault by psychiatric patients on emergency services and health care providers. Most studies have reported all patient assaults in the aggregate. However, six studies that have reported physical assault, sexual assault, nonverbal intimidation, and verbal threats as separate categories have reported significant patient/staff victim differences in characteristics by category. This 15-year retrospective study examined patient assaults and their impact by four standard assault categories. Similarities and differences across assault categories are presented. Methodological issues and the safety implications for emergency services are discussed. [International Journal of Emergency Mental Health, 2008, 10(3), pp. 177-184].*

Key words: *Assaults, Assaulted Staff Action Program (ASAP), emergency services, patient assailants, patient assaults, staff victims*

For more than 30 years, empirical research (Blair, 1991; Busch & Shore, 2000; Davis, 1991; Flannery, 2001a, 2001b; Flannery, Hanson, & Penk, 1994; Owens, Tarantello, Jones & Tennant, 1998) has documented patient assaults on staff to be a worldwide occupational hazard for emergency services personnel and health care providers. These assaults may occur in a variety of inpatient/outpatient health care settings, in the patient's home, or on community streets. They may result in death, permanent or time-limited medical disability, medical injury, increased use of sick leave and industrial accident claims, medical and legal expense, lost productivity, and severe psychological distress and posttraumatic stress disorder (PTSD; American Psychiatric Association, 1992; Flannery, White, Flannery, & Walker, 2007).

The patient assailant X staff victim X environmental context represents a complex array of potentially salient variables for assessing patient assaults; researchers have examined various components of this matrix (e.g., staff victim gender [Lowoko, Soares, & Nolan, 2004]). Although many studies report all types of assault incidents as one class of events (Busch & Shore, 2000; Davis, 1991), there are at least

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four distinct types of patient assaults. These include physical and sexual assaults, nonverbal intimidation (including damage to property), and verbal threats/derogatory racial slurs (Flannery, 1998). An ability to understand which type of patient assailant may commit which type of assault on which type of EMS or health care provider may yield important information for risk assessment and risk management on site. However, to date, there appear to be only six studies that have empirically assessed the possible role of the differing types of patient assault characteristics on care providers (Daffern, Mayer, & Martin, 2003; Daffern, Mayer, & Martin, 2006; Dietz & Rada, 1982; Flannery & Walker, 2001; Grube, 2007; Krakowski & Czobor, 2004).

Collectively, these studies report on 2,206 incidents of patient aggression that included physical assaults; sexual assaults; nonverbal intimidation, including property damage; and verbal abuse and derogatory racial slurs. The subjects were primarily public sector psychiatric and psychiatric forensic inpatients. Studies ranged in duration from 4 months to 6 years. Assailants were of both genders, were 25 to 35 years of age, had a diagnosis primarily of schizophrenia, and were frequently acutely psychotic. Physical assaults were the most frequent category and ranged from 35% to 88% of assaults in any given study. Reported precipitants included positive psychotic symptoms, substance use, overcrowding, and increased levels of ward activity. Female assailants were the most frequent aggressors in two studies (Flannery & Walker, 2001; Krakowski & Czobor, 2004). Males were the more likely aggressors or equal to female aggressors in the remaining studies. Assault victims included other patients and, more frequently, staff. One study reported males to be the more likely victims of aggression, but that study included all forms of aggression in the aggregate (Daffern et. al., 2003). One study found females to be the more likely perpetrators of aggression in each assault category, except for sexual assault (Flannery & Walker, 2001).

The purpose of the present study was to continue the inquiry into patient and staff victim characteristics of the differing major types of patient assault during the course of a 15-year retrospective study. These findings will be examined in the context of earlier research from this database (Flannery & Walker, 2001) that examined patient and staff victims characteristics over a 6-year period.

METHODS

Subjects

The subjects were 1,047 male and 1,056 female child and adult assaultive patients of the Massachusetts Department of Mental Health (DMH) who received care in seven state hospitals and nine DMH state or DMH-vendored community programs from April 2, 1990, through March 31, 2005. There were 806 male and 766 female assaultive inpatients and 241 male and 290 female assaultive community patients. Their average age was 36 years (SD = 11.74). Subjects were Caucasian (74%), Black (16%), Asian (2%), and other (8%). The primary diagnoses included schizophrenia (48%), affective disorders (15%), personality disorders (19%), and various other diagnoses (16%). During these years there were 1,068 male and 1,055 female DMH and DMH-vendored staff victims. Assaulted staff included mental health workers (64%), nurses (25%), and residential house counselors and other groupings (3%). Employees ranged in experience from new hires to very seasoned staff. No statistically significant differences in patient or staff characteristics emerged in the reductions in force in 1990, 1995, and 1999.

Measures of Assault

The four types of assaults assessed in this study remained constant during the 15 years of this study. Physical assaults were defined as unwanted contact with another person with intent to harm, including punching, kicking, slapping, biting, spitting, and throwing objects directly at staff. Sexual assaults were unwanted sexual contacts and included rape, attempted rape, fondling, forced kissing, and exposing. Nonverbal intimidation referred to actions intended to threaten and/or frighten staff, such as pounding on the staff office door, random throwing of objects, and destruction of property. Verbal threats were statements meant to frighten or threaten staff and included threats against life and property as well as racial slurs and other derogatory comments. Serious incidents other than assaults (e.g., sudden death of a patient) were recorded as "other incidents"; no data are reported here for those incidents.

Procedure

The data on patient assailants and staff victims were recorded on the Assaulted Staff Action Program (ASAP; Flannery, 1998) report forms in the 16 DMH state and

vendored facilities that had fielded an ASAP team during the years of this study. ASAP is a voluntary, peer-help, system-wide, crisis intervention program to assist staff victims with the psychological sequellae patient assaults. The program offers individual, group, and staff victim family crisis interventions, an ongoing staff victim support group, and referrals to individual therapists who specialize in treating trauma victims, when indicated. ASAP has strong empirical support for its efficacy (Flannery, 1998; Flannery, Farley, Rego, & Walker, 2006).

All ASAP team members practiced completing ASAP report forms until acceptable levels of reliability were obtained. An upgrade in the software package (1994) allowed data on staff victim functioning in the domains of mastery, attachment, and meaning, as well as in the presence of the physical, intrusive, and avoidant symptoms of psychological trauma, to be captured between 1994 and 2005. To guard against underreporting (Lion, Snyder, & Merrill, 1981), each facility was required to fill out a DMH report form for each incident, to call the ASAP person on duty, and to review the incident at daily staff meetings. At times, total numbers do not equal 100% because of occasional missing data when staff victims declined ASAP services, declined to identify the patient assailant, or when the patient's record did not include sufficient documentation of the study's variables. This analysis assumed that all staff were at equal risk for the full study period, except for some brief hospitalizations during which community patients were absent from residential placements. All data are reported as assault incidents.

RESULTS

During this 15-year time period, ASAP teams responded to 2,152 patient assaults on staff. ASAP was accepted in 1,862 incidents (87%) and declined in 290 others (13%). There were 1,068 male (50%) and 1,055 female (49%) victims. Of these, 824 were male (51%) and 764 female (47%) staff victims in inpatient settings. 240 male (45%) and 290 (54%) staff victims were reported from community settings. Staff victims declined ASAP services in 187 inpatient (12%) and 108 community (20%) incidents.

Patient Assailant Variables

Table 1 presents data on the characteristics of assultive patients in each of the four types of assaults. Although there

was a tendency for assailants of nonverbal intimidation to be somewhat older, there were no statistically significant differences in age by type of assault.

With the exception of sexual assaults, females were the more frequent assailants in all categories of violence [x^2 (4) = 10.61, p < .03]. Diagnoses were fairly uniformly across assault categories, with a diagnosis of schizophrenia statistically increasing the association of assault in incidents of physical, sexual, and nonverbal intimidation. Individuals diagnosed with personality disorders were the more frequent assailants in verbal abuse incidents [x^2 (16) = 125.43, p < .0002]. Histories of violence toward others [x^2 (8) = 157.12, p < .0003], personal victimization [x^2 (8) = 25.87, p < .001], and substance use disorder [x^2 (8) = 52.99, p < .0008], as well as acute intoxication at time of incident [x^2 (8) = 15.75, p < .04], were statistically significantly associated with assault. Violence toward others was most highly associated with denial of services. Denial of services was the more frequent precipitant in physical and verbal assaults; psychosis was the most frequent precipitant in sexual assaults, and excess sensory stimulation was the most frequent precipitant in instances of nonverbal intimidation [x^2 (28) = 69.24, p < .0002].

Staff Victim Variables

Table 2 presents data on the characteristics of staff victims for each type of assault. Female staff members were more likely than male staff to be victims of assault in all categories except physical assault [x^2 (4) = 30.59, p < .0004]. Nursing personnel, especially mental health workers, were the most frequent victims of assaults across all four categories. [x^2 (32) = 243.9, p < .0003]. Mental health workers were more frequently victims of assault than any other category of impatient or community health care provider. Whereas bruises were the more common injury in physical assaults, psychological stress and trauma were frequently associated as a response to the other three categories of assault [x^2 (28) = 683.16, p < .0001]. Severity in all types of incidents was mild to moderate and not statistically significant [x^2 (16) = 18.83, p < .2]. ASAP services were most frequently declined in nonverbal intimidation and verbal threat incidents [x^2 (4) = 13.77, p < .008].

In the subanalyses of domains and symptoms, disruptions in the domains of reasonable mastery, caring attachments, and purposeful meaning as well as the psychological trauma symptoms of physical, intrusive, and avoidant re-

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Table 1.
Characteristics of Patient Assailants

Types of Assaults

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Patient Variables	Physical (N = 1,846)	Sexual (N = 33)	Nonverbal Intimidation (N = 37)	Verbal Threat (N = 154)	p-value
Age (years)	35.54	35.06	37.97	35.30	ns
Gender					
Males	901 (49%)	23 (70%)	15 (41%)	64 (42%)	
Females	907 (49%)	10 (30%)	19 (51%)	90 (58%)	.03
Diagnosis					
Schizophrenia	915 (50%)	18 (55%)	19 (51%)	46 (30%)	
Affective Disorder	285 (15%)	4 (12%)	5 (14%)	27 (18%)	.0002
Personality Disorder	300 (16%)	6 (18%)	5 (14%)	74 (48%)	
Violence to Others	1,420 (93%)	28 (85%)	28 (80%)	137 (90%)	.0003
Personal Victimization	1,012 (66%)	16 (49%)	18 (51%)	111 (73%)	.001
Substance Use Disorder	805 (52%)	17 (52%)	11 (31%)	119 (78%)	.0008
Acute Intoxication	128 (8%)	4 (12%)	3 (9%)	19 (13%)	.04
Most Frequent Precipitant	Services Denied (18%)	Psychosis (33%)	Excess Stimulation (44%)	Services Denied (37%)	.0002

sponses were frequently associated with all categories of assault. Each category of violence resulted in disruptions in the domains of mastery [x^2 (4) = 13.24, $p < .01$], caring attachments [x^2 (4) = 63.87, $p < .0001$], and meaningful purpose [x^2 (4) = 12.05, $p < .01$] and in the physical [x^2 (4) = 19.59, $p < .0007$], intrusive [x^2 (4) = 72.90, $p < .0001$], and avoidant [x^2 (4) = 290.26, $p < .0006$] symptoms. In general, physical and sexual assaults and verbal threats resulted in more frequent domain disruptions and symptom clusters than nonverbal intimidation incidents, which resulted in less disruptions and clusters.

DISCUSSION

This 15-year retrospective study includes at least three important findings. First, this study's findings support extensive previous research that patient assaults on caregivers, including emergency medical services (EMS) personnel, constitute a serious and ongoing occupational hazard (Blair, 1991; Busch & Shore, 2000; Daffern et al., 2003; Daffern et al., 2006;

Davis, 1991; Dietz & Rada, 1982; Flannery, 2001a, 2001b; Flannery et al., 1994; Flannery and Walker, 2001; Flannery, Farley, et al., 2006; Flannery, Hanson, Corrigan, & Walker, 2006; Grube, 2007; Krakowski & Czobor, 2004; Lomoka et al., 2004; Owens et al., 1998). This research has been consistent in its findings that patient assaults are most frequently perpetrated by either male or female patients with a diagnosis of schizophrenia or personality disorder. The assailant, on average, is about 35 years old and has a history of violence toward others and substance use. Recent research (e.g., Flannery, Farley, et al., 2006) has reflected assessment advances in the field of identifying victims of violence. Personal victimization, included in this study as a third variable, was highly associated with subsequent assault. Frequent precipitants in this study included psychosis, excess sensory stimulation, denial of services, and substance use disorder, findings consistent with previous studies.

Recent research (Flannery, Hanson, et al., 2006) examined the three clinical variables of violence toward others,

Table 2.
Characteristics of Staff Victims

Types of Assaults

Staff Victim Variables	Physical (N = 1,846)	Sexual (N = 33)	Nonverbal Intimidation (N = 37)	Verbal Threat (N = 154)	p-value
Gender					
Males	958 (52%)	11 (33%)	11 (30%)	57 (37%)	.0004
Females	866 (47%)	22 (67%)	26 (70%)	95 (62%)	
Job Group					
Mental Health Worker	1,230 (67%)	15 (45%)	10 (27%)	85 (55%)	
Nurses	460 (25%)	4 (12%)	13 (35%)	35 (23%)	.0003
Residential House Counselors	27 (2%)	4 (12%)	10 (27%)	15 (10%)	
Injury	Bruises (46%)	Fright (73%)	Fright (87%)	Fright (81%)	.0001
Severity	Mild (40%)	Moderate (6%)	Mild (33%)	Moderate (36%)	ns
ASAP Declined	240 (13%)	1 (3%)	9 (24%)	31 (20%)	.008
Disrupted Mastery	1,224 (66%)	25 (76%)	18 (49%)	100 (65%)	.01
Disrupted Attachments	620 (34%)	19 (58%)	11 (30%)	49 (32%)	.0001
Disrupted Meaning	975 (53%)	19 (58%)	13 (35%)	96 (62%)	.01
Physical Symptoms	748 (47%)	17 (52%)	11 (34%)	57 (37%)	.0007
Intrusive Symptoms	347 (22%)	12 (36%)	12 (38%)	39 (25%)	.0001
Avoidant Symptoms	357 (23%)	13 (39%)	8 (25%)	31 (20%)	.0006

personal victimization, and substance use, both singly and in their various combinations, to assess their roles in subsequent assaultive behavior. Each variable singly was modestly associated with subsequent assault. Violence toward others and personal victimization combined greatly enhanced the likelihood of subsequent assault, whereas violence toward others, personal victimization, and substance use combined yielded the highest probability of subsequent assault. Care providers and EMS should assess the presence of these three clinical variables in the patient's history and treat them as potential warning signs of possible dyscontrol.

Similarly, other researchers (Daffern & Howells, 2002; Flannery, Hanson, et al., 2006) have noted the stability of these patient assailant characteristics over time. These assailant profiles have remained constant, even with advances in psychopharmacology and psychosocial rehabilitation interventions. This stability of treatment resistance over time may reflect a true biological component of assault in some cases of untreated schizophrenia. It may also reflect the

timing of the assault incident in the patient's course of illness. Assaults during the first few days of treatment may occur for biological reasons, as medicines will not have had enough time to address the medical problem. However, assaults later in the course of a patient's illness, when appropriate medications have been administered, may reflect deliberately intended assaults motivated by anger, fear, or denial of services. Future research would benefit from recording the time of assault in the course of the patient's illness. As noted for the clinical variables above, care providers encountering a patient with the traditional demographic variable should assume a potential risk for assault until demonstrated otherwise.

Secondly, the present study's findings also support previous research with regard to the importance of examining the assault characteristics of various types of assaults (Daffern et al., 2003; Daffern et al., 2006; Dietz & Rada, 1982; Flannery & Walker, 2001; Grube, 2007; Krakowski & Czobor, 2004). In these studies, some patient and staff victim charac-

teristics remained constant across types of assault. For patient assailants, the average age, diagnosis, violence toward others, personal victimization, and substance use disorder were constants. For staff victims, the present study and the cited research document that staff most at risk are those who are least experienced, less formally trained, and yet have significant direct care responsibilities. Bruises and psychological fright appear to be the most usual responses to commonly occurring physical assaults.

However, this study also found differences in characteristics across assault categories. Similar to previous research (Flannery & Walker 2001; Krakowski & Czobor, 2004), in this study females were the likely assailants in all categories of assault except sexual assault. This may reflect females modeling male behavior, fighting for limited resources, or learning that violence often works in obtaining one's way. Individuals diagnosed with personality disorders committed the most incidents of nonverbal intimidation. This may reflect a tendency, when such an individual feels overwhelmed, to strike out at property rather than people. This view receives some support when examining the precipitants to assault. These precipitants varied by category, with denial of services preceding physical and verbal abuse with psychosis preceding sexual assaults. However, excess sensory stimulation was highly associated with acts of nonverbal intimidation.

Unlike Daffern et al. (2003), we found in our study that females, not males, were the more likely victims of all forms of assault. With the exception of physical assaults, where the focus was on possible bodily injury, most victims reported psychological fright as their main response; this is reflected in both the domain and symptom disruptions.

The results of the present study and the six other studies examining differing types of assault present a paradox. They are all in agreement in reporting differing assailant and staff victim characteristics across assault categories, but the studies examined differing assailant/victim variables, so generalizations across studies are limited. Future research will need to address this issue.

Thirdly, comparing the present 15-year findings with the earlier 10-year findings from this database (Flannery & Walker, 2001) yielded both similarities and differences over time. The patient assailant variables of age and diagnosis, as well as the three clinical variables associated with subsequent assaults, remained stable as did the staff victim variable of the least educated and experienced being most at risk. In both

studies there were appreciable domain and symptom cluster disruptions across domains. However, over the past 5 years, assailant substance use disorders and histories of personal victimization have appreciably increased. During these same years staff victims are reporting fewer domain disruptions but more intense symptom clusters. These findings may suggest that the presence of substance use increases the intensity of the violent incidents. Even though the staff may have learned better skills of coping with such incidents, the nature of these incidents may have increased the emotional distress experienced by staff victims.

These differing outcomes over a 5-year time interval demonstrate the importance of longitudinal rather than cross-sectional studies. As the present study suggests, some patient assailant/staff victim variables remained constant. However, a health-care system is an organic entity that is influenced by ongoing changes in the general culture, and as this study demonstrates, these societal changes may vary the impact of patient assaults and their aftermath. This field needs longitudinal studies that differentiate the four basic types of assaults, that have similar operational definitions of these assaults across studies, and that examine at least some agreed upon dimensions of patient assailant and staff victim characteristics. Ratings of severity of incident and its victim impact should be assessed routinely. Studies should also be expanded to include assaultive patients in private facilities to assess possible public/private sector differences in assaults. Studies strengthened by these methodological additions will yield a greater ability to generalize across studies and enhance our understanding of the process of patient assaults

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Risk Management Implications for Emergency Services

The findings of the present study, as well as those of the reviewed literature, provide a clear guideline for emergency services personnel who are asked to provide care to psychiatric patients: Approach with initial caution until the assessments below are completed and the findings suggest a low probability of assault risk.

Preparation to assist these patients begins when the call is received. In transit to the site, review the nature of psychosis, its symptoms, and its potential association with substance use, personal victimization, violence toward others, and violence toward self. Review also the major medications for these illnesses as well as their possible side effects (espe-

cially neuromalignant syndrome) and the signs of medication noncompliance. If the patient is known to the service, review the log book for possible incidents of past violence or other behavioral difficulties.

Once on site, survey the scene carefully. Look for any warning signs of potential loss of control, such as disheveled dress, pacing, and angry demeanor. Assess for signs of substance use, including the presence of drug paraphernalia, empty alcohol containers, and medication vials.

Many patients diagnosed with psychoses have histories of untreated psychological trauma or posttraumatic stress disorder. Given that this possible co-occurrence is common in these patients, if there is no immediately life-threatening medical emergency, assume initially that the patient is a victim of trauma as well as psychosis. Stay at a respectful distance, to help the patient maintain his or her boundaries. Speak in clear, simple language. State who you are, why you are there, and explain what procedures you wish to employ. Then, with the patient's permission, move closer, explain again what you will be doing, and begin. It is helpful to ask the patient to help you in some small way (e.g., hold your writing pen), so that the patient's sense of control is restored. Perform the assessments for psychosis, substance use, personal victimization, and potential violence. Then develop your intervention plan. If it is possible, include the patient in the development of the plan. (For a more detailed discussion of these procedures, see Flannery, in press.)

Psychosis, especially its early episodes, is very frightening to the patient, and often he or she self-medicates with alcohol or other drugs. Personal victimization of the patient further complicates the presenting problem, and these three issues together greatly increase the possibility of assault. The graded approach outlined above often reduces fear in the patient, makes the patient your ally, and restores some sense of control to the patient. Finally, research findings indicate that psychological fright is a frequent response to the various categories of patient assaults. This suggests the importance of critical incident stress management (CISM) approaches (Everly & Mitchell, 1999), such as ASAP (Flannery, 1998), in addressing the aftermath of patient assaults that befall our colleagues. This overall approach outlined here enhances the safety of everyone on site and results in high quality, cost-effective care.

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Cognitive-Affective Resilience Indicia as Predictors of Burnout and Job-Related Outcome

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Abstract: *Resiliency has emerged as a critical construct in areas as far ranging as child development to disaster mental health. Resiliency may be thought of as the ability to rebound, or bounce back, from adversity (Kaminsky, McCabe, Langlieb, & Everly, 2007). Numerous interventions have been postulated and/or shown to enhance resiliency, e.g., journaling, social support, psychological first aid, and formal crisis intervention systems, such as Critical Incident Stress Management. As the search to develop more efficient and effective resiliency enhancement interventions continues, it becomes important to search for the mechanisms of action that actually serve to account for the ability to rebound after adversity. One such postulated mechanism is that of positive emotionality. Positive emotionality may be thought of as the presence of ambient positive emotions, as well as the ability to express positive emotions in the wake of adversity. Constructs such as confidence, optimism, and the ability to find meaning may underlie such expressions. This investigation attempted to assess the relationship between the expression of ambient emotions (within the last few weeks) upon measures of burnout, job satisfaction, perceived performance, and intention to leave one's job. This study represents a randomized sample of 2,500 out of approximately 91,333 potential subjects. Four hundred eighty-nine and four hundred ninety-one usable responses were received for inclusion in the analyses. Correlational analyses revealed that expressed positive emotions, as well as expressed negative emotions, were related to the outcome variables in a significant but complementary manner. [International Journal of Emergency Mental Health, 2008, 10(3), pp. 185-190].*

Key words: *Resilience, positive emotions, psychological first aid, crisis intervention.*

The experience of positive emotional granularity and the avoidance of negative affect have been posited to be essential elements in human resiliency. Resiliency may be thought of as the ability to bounce back, or rebound, from adversity (Kaminsky, et al., 2007; Nucifora, Langlieb, Siegel, Everly, & Kaminsky, 2007). Kaminsky and colleagues (2007) have formulated a tripartite model that deconstructs resil-iency into *resistance* (protective factors) and *resilience* (the ability to rebound from adversity). These authors believe that self-efficacy (Bandura, 1997) serves to build immunity, while interpersonal and organizational support, such as psychological first aid (PFA) and comprehensive crisis intervention systems such Critical Incident Stress Management (CISM; Everly & Mitchell, 1999, 2008) serve to enhance the

ability to rebound. As we search for ways in which to build protective immunity and to enhance the ability to rebound, an understanding of respective mechanisms of action seems critical. One such postulated mechanism is that of positive emotionality. Positive emotionality may be thought of as the presence of ambient positive emotions, as well as the ability to express positive emotions in the wake of adversity. Constructs such as confidence, optimism, and the ability to find meaning may underlie such expressions. One popular formulation within which an understanding of the useful effects of positive emotions may be found is the "broaden-and-build" theory of positive emotions (Fredrickson, 1998, 2001). This theory argues that negative emotions narrow the momentary "thought–action repertoire" of the individual, whereas positive emotions broaden one's thought–action repertoire, expanding the range of cognitions and behaviors that are then available. These broadened cognitive-behavioral options serve to build the individual's psychophysiological, intellectual, and social resources that then may be operationalized as resiliency.

In a series of three studies designed to more closely examine the effects of positive emotions, Tugade and Fredrickson (2004) generated findings indicating that those demonstrating positive emotions were able to achieve a more rapid "emotional regulation" as evidenced by increased cardiovascular recovery and by finding some positive meaning in "negative circumstances." In another investigation of 46 college students, Fredrickson, Tugade, Waugh, and Clarkin (2003) found that positive emotions served to buffer against depression in the wake of the terrorist attacks of September 11, 2001.

If positive emotionality can indeed build resistance and enhance resilience, then it seems it would be an effective pillar upon which PFA and integrative disaster response systems could be constructed. This study attempted to assess the relationship between the expression of ambient emotions (within the last few weeks) upon measures of practical and highly meaningful outcome: burnout, i.e., physical and mental exhaustion (Maslach, 1982), job satisfaction, perceived performance on the job, and intention to leave one's job.

METHODS
Subjects and Procedure

Subjects were selected from a mailing list provided by the American Institute of Certified Public Accountants

(AICPA). A randomized sample of 2,500 members out of the approximately 91,333 Institute members currently employed in public accounting were sent the measures used in this study. Four hundred eighty-nine and four hundred ninety-one usable responses were received within a pre-designated eight week response period for inclusion in the study.[1] The early-late hypothesis was used to assess non-response bias. Independent sample t-tests were conducted to assess the significance of mean score differences between the first 50 respondents and the final 50 respondents on each of the scales administered. No significant non-response bias associated with the study emerged.

Of the initial respondents, 58% were male; 59% indicated that they were between 26 and 45 years old.

Measures

The two predictor scales were designated DISCORD13 and POSITIVE PERCEPTION. These scales were empirically derived from the Stress Arousal Scale (SAS) developed by Everly, Sherman, and Smith (1989). The original SAS contains 20 items designed to tap the respondent's cognitive-affective domain, i.e., the precipitators of the psychophysiological stress response, thereby allowing an indirect assessment of one's level of stress arousal.[2] The conditions that define emotional arousal (as measured on the SAS) are highly correlated with stress-related physical symptoms (Smith, Everly, & Johns, 1993; Smith, Davy, & Stewart, 1998; Everly & Sobelman, 1987).

The SAS has been utilized in a number of accounting research studies (e.g., see Smith, Davy, & Everly, 2006; Smith et al., 1998; Smith, Davy, & Everly, 1995; Smith et al., 1993; Smith & Everly, 1990). Factor analysis of the SAS on a large dataset (Smith et al., 1993) indicated the presence of two underlying dimensions, DISCORD13 (13-items) and POSITIVE PERCEPTION, (4-items). In terms of the present study, the former may be defined as the state of cognitive-emotional distress experienced as a result of interpretation of environmental events, and the latter as a state of cognitive-affective and psychophysiological homeostasis predicated upon a positive psychological assessment of current conditions. Item responses were based on instructions to respond "as you generally feel within the last few weeks" and were made on 4-point Likert type scales ranging from "seldom or never" (1) to "almost always" (4).

Outcome variables were assessed as follows:

1. Performance: a six-item scale drawn from Dubinski & Mattson (1979);

2. Turnover intentions: three items drawn from Donnelly & Ivancevich (1975).

3. Job Satisfaction: 27-items drawn from the Churchill, Ford, Hartley, & Walker (1985) scale.

4. Burnout was measured via the 24-item multidimensional role-specific (MROB) version of the Maslach Burnout Inventory (MBI) as developed by Singh, Goolsby, & Rhoads (1994).

Each of these outcome measures was measured using five-point Likert-scales.

Analyses

The primary analyses used within the study were Pearson Product-Moment correlations, subsequent to the employment of the Cronbach Alpha as an assessment of the internal consistency of the predictor scales.

RESULTS

Table 1 lists the Cronbach Alpha correlation coefficients as measures of internal consistency.

As a Cronbach alpha of .70 is generally deemed acceptable, the alphas for the DISCORD13 and POSITIVE PERCEPTION scales may be considered acceptable. The fact that the 4-item POSITIVE PERCEPTION SCALE is comparable to the 13-item DISCORD13 scale is also worthy of mention, as the alpha will be seen to increase as the number of scale items increases.

Table 2 reports the correlations for the variable DISCORD13 as a predictor of the designated outcome variables. Table 3 reports the levels of significance. Table 4 reports the correlations for the variable POSITIVE PERCEPTION as a predictor of the designated outcome variables. And Table 5 reports the significance levels.

DISCUSSION

This study supports the work of previous theorists and empiricists alike who have for decades concluded that the

Table 1.
Cronbach Alpha measures of internal consistency

	ALPHA
DISCORD13	.91
POSITIVE	.88

Table 2.
Pearson correlation matrix for 13 Discord Items center table in this column

	DISCORD13
DISCORD13	1.000
Burnout	0.532
Satisfaction	-0.348
Performance	-0.170
Turnover	0.449

Table 3.
Matrix of Bonferroni Probabilities for 13 Discord Items

	DISCORD13
DISCORD13	0.0001
Burnout	0.0001
Satisfaction	0.0001
Performance	0.002
Turnover	0.0001

Number of observations: 491

Table 4.
Pearson correlation matrix for 4 Positive Perception Items

	POSITIVE
POSITIVE	1.000
Burnout	-0.486
Satisfaction	0.368
Performance	0.227
Turnover	-0.371

Table 5.
Matrix of Bonferroni Probabilities for 4 Positive Perception Items

	POSITIVE
POSITIVE	0.0001
Burnout	0.0001
Satisfaction	0.0001
Performance	0.0001
Turnover	0.0001

Number of observations: 489

cognitive-affective domain is an essential predictor of "down-stream" behavioral outcome (Lazarus & Folkman, 1984; Everly & Lating, 2002). However, this study goes further in that it has begun to deconstruct that domain into component parts, more specifically, putative mechanisms of action. Of special interest in the current study were the mechanisms of action which support, or otherwise define, resilience.

It has been posited that positive emotionality supports resilience (Fredrickson, 2001). The results of the present investigation support that conclusion by extending the finding to the behavioral domains of job-related burnout, satisfaction, performance, and intention for turnover.

Results of the study show a complementary relationship between positive emotions and negative emotions within the cognitive-affective complex. Positive emotions appear to support job satisfaction and performance, whereas negative emotions appear to be predictors of burnout and intentions to leave the job.

The current study would appear to offer guidance into the development of programs for the provision of psychological first aid (PFA) as well as integrated disaster mental health systems. More specifically, such programs should seek to build resistance and enhance resilience by targeting the cognitive-affective complex in such a manner so as to increase positive emotionality, while at the same time decreasing negative emotionality, especially granularity. Based upon previous research reviews (Kaminsky, et al., 2007; Everly, 2009) self-efficacy, hardiness, optimism, coherency (meaning, faith), physiological self-regulation, and systematic interpersonal support may serve to achieve such ends.

Cross-sectional, correlational studies such as this certainly have limitations among which are the potential for trajectory bias, i.e., state versus trait issues, as well as assumptions of causality rather than coincidence. Future research should attempt to create causal models in order to confirm the extant findings.

ENDNOTES

[1] The response rate was comparable with that cited for other national studies using trade association membership and with other studies that used AICPA membership lists (Fogarty, Singh, Rhoads, & Moore, 2000, 43.)

[2] The three excluded items asked respondents "Within the last few weeks, how often have you found yourself: 1) under a great deal of pressure; 2) pushed close to your limit; and, 3) feeling very tired or run down." These items were excluded from consideration at the outset of the study as they were not found to load significantly on either the psychological discord or relaxation factors in the Smith *et al* (1993; 1998) studies, and they did not significantly contribute to the internal consistency reliability or construct validity of the scale.

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Characteristics of Patients in Restraint: Fifteen-Year Analysis of the Assaulted Staff Action Program (ASAP) With EMS Implications

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Abstract: *Research on the demographic and precipitant characteristics of restrained patients has documented that younger male/female patients diagnosed with schizophrenia, affective disorder, or personality disorder are at risk of being restrained when acutely psychotic or confronted with excess sensory stimulation or denial of services. However, many patients with these same characteristics are not restrained. Thus, these variables have yielded little predictive power. This study compared restrained/ nonrestrained subjects on the demographic, precipitant variables and added three clinical variables (past violence to others, personal victimization, and substance use disorder) to assess the possible predictive power of clinical variables. Demographic and precipitant variables were similar to previous research findings. Violence toward others in combination with personal victimization was associated with higher restraint usage. The implications of the findings for emergency services are outlined. [International Journal of Emergency Mental Health, 2008, 10(3), pp. 191-196].*

Key words: *Assaulted Staff Action Program (ASAP), emergency services, patients, restraints, restraint reduction*

Emergency medical services (EMS) providers and mental health care staff at times encounter behavioral emergencies in which patients are out of control and present an imminent risk of harm to self or others. In these circumstances, if other alternatives to restraint have failed (e.g., taking the patient down), physical, mechanical, and/or chemical restraints may be employed to restrict the patient's movements in order to ensure safety. Restraint is neither a treatment intervention nor a form of punishment but a strategy of last resort to be used infrequently when safety is compromised (Busch & Shore, 2000).

Restraints increase the risk of death, disability, medical injury, intense psychological suffering, and lost productivity for the restrained individual as well as for family members, care providers, and innocent bystanders (Medical Directors Council, 2000; Zun, 2005). Efforts are now under way nationally to move toward restraint-free systems of care (e.g., see Massachusetts Department of Mental Health, 1996). These restraint-free initiatives are in place in community, prehospital, and hospital settings. The ability to assess and manage potentially violent patients early on would enhance the effi-

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cacy of initiatives and policies to reduce and eliminate the use of restraints.

Toward this end, over 30 years of research on the characteristics of patients who have been restrained has been conducted; the findings have been summarized in five print-journal review articles (Busch & Shore, 2000; Evans & Fitzgerald, 2002; Fisher, 1994; Soloff, Gutheil, & Wexler, 1985; Zun, 2005). This research has found that there is an increased probability of risk with younger, male or female, patients with a diagnosis of schizophrenia, affective disorder, or personality disorder, in either acute or extended care settings. Common precipitants of these assault incidents, with subsequent loss of patient control, have included acute psychotic activity, excess sensory stimulation, staff restrictions on patient behaviors, and denial of services (Flannery, 2007).

Although the restrained patient characteristics have been consistent over the years, research has focused primarily on demographic and precipitant variables. Given that there are patients with these same variables who are not restrained, these variables by themselves have yielded little appreciable predictive power in assessing the need for restraints.

One recent study included the common clinical variables of histories of violence toward others, personal victimization, and substance use disorder, in addition to the demographic variables, to assess whether clinical variables might enhance predictive power (Flannery, Rachlin, & Walker, 2001). Assessing the impact of these clinical variables singly, the study found that female patients with a diagnosis of personality disorder and personal victimization required more frequent restraints in community settings than did male and female patients with substance use disorder and personal victimization in state hospital inpatient settings.

Two studies have examined both the demographic and three common clinical variables in their association with assault in samples of assaultive, public sector, psychiatric patients, some of whom were restrained (Flannery, Stevens, Juliano, & Walker, 2000; Flannery, Hanson, Corrigan, & Walker, 2006). In these studies, the clinical variables were studied singly and in combinations with each other. The demographic variables associated with patient assault were essentially consistent with the previously reported research findings on restrained patients. Each of the clinical variables singly had a low correlation with assaultiveness. However, the combination of violence toward others and personal victimization appreciably increased the strength of the correlation, and the combination of violence toward others, personal victimization, and substance use disorder yielded the highest correlation with assault.

The purpose of the present 15-year retrospective study was to continue the inquiry into the characteristics of patients who are restrained. This study utilized the demographic and precipitant variables and the common clinical variables singly and in combinations in a comparison of restrained and nonrestrained assaultive psychiatric patients.

METHODS

Subjects

The subjects were 1,047 male and 1,056 female assaultive patients of the Massachusetts Department of Mental Health (DMH) who received care in seven state hospitals and nine DMH state or DMH-vendored community programs from April 2, 1990 through March 31, 2005. There were 806 male and 766 female assaultive inpatients and 241 male and 290 female assaultive community patients. Their average age was 36 years ($SD = 11.77$). Subjects were Caucasian (74%), Black (16%), Asian (2%), and other (8%). The primary diagnoses included schizophrenia (48%), affective disorder (15%), personality disorder (19%), and various other diagnoses (16%). Restraints were employed for safety in 924 incidents.

Measures of Assault

The four types of assaults assessed in this study remained constant during the 15 years of this study. Physical assaults were defined as unwanted contact with another person with intent to harm, including punching, kicking, slapping, biting, spitting, and throwing objects directly at staff. Sexual assaults were unwanted sexual contacts and included rape, attempted rape, fondling, forced kissing, and exposing. Nonverbal intimidation referred to actions intended to threaten and/or frighten staff, such as pounding on the staff office door, random throwing of objects, and destruction of property. Verbal threats were statements meant to frighten or threaten staff and included threats against life and property as well as racial slurs and other derogatory comments. Serious incidents other than assaults (e.g., sudden death of a patient) were recorded as "other incidents," and these data not reported here.

Procedure

The data on patient assailants and staff victims were recorded on the Assaulted Staff Action Program (ASAP; Flannery, 1998) report forms in the 16 DMH state and vendored facilities that had fielded an ASAP team during the years of this study. These included data on the demographic, precipitant, and three clinical variables. ASAP is a voluntary, peer-help, system-wide, crisis intervention program to assist staff victims with the psychological sequelae of patient assaults. The program offers individual, group, and staff victim family crisis interventions, an ongoing staff victims' support group, and referrals to individual therapists who specialize in treating trauma victims, when indicated. ASAP has strong empirical support for its efficacy (Everly & Mitchell, 1999; Flannery, 1998; Flannery, Farley, Rego, & Walker, 2006).

All ASAP team members practiced completing ASAP report forms until acceptable levels of reliability were obtained. An upgrade in the software package (1994) allowed data on the clinical variables of violence toward others, personal victimization, and substance use disorder to be gathered from 1994 to 2005 and data on precipitants to be gathered from 2000 to 2005. To guard against underreporting (Lion, Snyder, & Merrill, 1981), each facility was required to fill out a DMH report form for each incident, to call the ASAP person on duty, and to review the incident at daily staff meetings. At times, total numbers do not equal 100% because of occasional missing data when staff victims declined ASAP services, declined to identify the patient assailant, or when the patient's record did not include sufficient documentation of the study's variables.

In this study a restraint incident was defined operationally as any patient assault or threat of assault in which staff determined the need for restraining the assailant to ensure safety in accordance with the guidelines noted in the Introduction. This analysis assumed that all staff were at equal risk for the full period, except for some brief hospitalizations during which community patients were absent from residential placements. All data are reported as assault incidents.

RESULTS

During this 15-year time period, ASAP teams responded to 2,152 patient assaults on staff. ASAP was accepted in 1,862 incidents (87%) and declined in 290 others (13%). There were 1,071 male (50%) and 1,049 female (49%) victims. Of these, 827 were male (51%) and 758 female (47%) staff victims in inpatient settings. Community settings reported 244 male (45%) and 291 female (54%) staff victims. Staff victims declined ASAP services in 181 inpatient (11%) and 109 community (20%) incidents.

In this study, restraint was involved in 924 incidents (43%) and was not utilized in 1,228 incidents (57%). Males were restrained in 476 assaults (52%) and females were restrained in 428 incidents (46%).

Table 1 presents an analysis of the basic demographic and clinical variables in this study for both restrained and nonrestrained subjects. The subjects requiring restraint were younger (t= 5.70; df =1, $p < .0001$) and were diagnosed primarily with schizophrenia [x^2 (4) =13.85, $p < .01$] in both acute and extended care facilities. The primary precipitant in restraint episodes was negative staff attitudes, and in nonrestraint episodes it was denial of services [x^2 (8) = 80.21, $p < .0001$]. Chi-square analyses revealed no statistical differences for assailant gender or site of incident.

Those patients who were restrained committed 873 physical assaults (95%), 11 sexual assaults (1 %), 5 acts of nonverbal intimidation (0.5 %), and 20 verbal threats (2%). Nonrestrained patients committed 973 physical assaults (79%), 22 sexual assaults (2%), 32 act of nonverbal intimidation assaults (3%), and 134 verbal threats (11%). These differences were statistically significant [x^2 (5) = 108.28, $p < .0001$]. With the exception of physical assault, all other categories revealed a disproportionately high frequency in cases where restraint was not in use.

With regards to the clinical variables considered singly, there were no statistically significant differences for personal victimization and substance use disorder. Both groups scored highly on histories of violence toward others. However, the restrained group had statistically significantly more histories of such violence [x^2 (2) = 16.11, $p < .0001$]. An analysis of the clinical variables in their various combinations revealed that violence toward others combined with personal victimization was statistically significantly more frequent in restrained patients [x^2 (2) = 8.89, $p < .003$].

DISCUSSION

With regard to the demographic and precipitant variables, this study's findings are consistent with previously reported research (Bush & Shore, 2000; Evans & Fitzgerald,

Table 1.
Characteristics of Restrained and Nonrestrained Assaultive Patients

Variables	Restraint Incidents (N=924)	Nonrestrained Incidents (N= 1,228)	p-value
Demographic Variables			
Age	33.96 (+ 11.29)	36.89 (+ 11.97)	.0001
Gender	476 Males (52%) 428 Females (46%)	571 Males (47%) 629 Females (51%)	ns
Diagnosis	411 Schizophrenia (45%) 170 Affective Disorder (18%) 180 Personality Disorder (20%)	616 Schizophrenia (50%) 161 Affective Disorder (13%) 220 Personality Disorder (18%)	.01
Precipitants	56 Negative Staff Attitudes (21%) 46 Acute Psychosis (17%) 31 Denial of Services (12%)	83 Denial of Services (24%) 61 Excess Stimulation (17%) 55 Acute Psychosis (16%)	.0001
Clinical Variables			
Violence to Others	746 (93%)	904 (88%)	.001
Personal Victimization	534 (67%)	658 (64%)	ns
Substance Use Disorder	441 (55%)	547 (53%)	ns

2002; Fisher, 1994; Flannery 2007; Soloff et al., 1985; Zun, 2005). In this study, as in the earlier work, the restrained subjects were younger male/female patients with a diagnosis of schizophrenia, affective disorder, or personality disorder, and common precipitants included negative staff attitudes, acute psychosis, and denial of services. These present findings were true in both acute and extended care facilities. These findings have been stable for several decades and represent risk factors to be monitored. However, as was noted earlier, some patients with these same characteristics do not need to be restrained. Thus, this study's findings are again consistent with previous findings that the demographic variables in their own right yield little predictive validity of incidents in which restraints will need to be utilized.

With regard to the clinical variables in this study considered singly, the present findings are not consistent with ear-

lier findings on restrained subjects (Flannery et al., 2001). In this study, there was a strong association between a history of violence toward others and the need for restraint. The earlier study (Flannery et al., 2001) found that females in the community with personality disorder and personal victimization and female inpatients with personal victimization and substance use disorder were more likely to be restrained, but these associations were not as strong as those in the present findings. These findings for the clinical variables considered singly suggest that there may be strong relationships between the various clinical and demographic variable subsets, which need to be delineated. However, the present findings may also reflect the more recent admissions of more male patients with histories of violence toward others, or it may be that the present findings more accurately reflect the limited predictive values of clinical variables considered singly.

This study's findings for the clinical variables considered in their various combinations are consistent in part with earlier findings (Flannery et al., 2000; Flannery, Farley, et al., 2006) in that histories of violence in combination with histories of personal victimization resulted in the more frequent need for restraints. However, unlike the earlier studies, the addition of substance use disorder as a third variable did not further strengthen the association with restraint utilization. Although it is possible that extensive exposure to violence itself may result in violent incidents where restraints are needed, in this study there were great variations in gender among the various clinical combinations. As with the clinical variables considered singly, the clinical variables in combination may need to be considered in various demographic variable subsets to yield true predictive power. However, these early research findings on the clinical variables are encouraging, and further research is warranted.

Taken collectively, the clinical variables at this point in field do not yield significant predictive power. However, they are highly associated with violence with or without restraint and should be considered important risk factors, along with the demographic and precipitant variables, if they are determined to be present in any given patient.

Methodological Issues

This study's findings suggest the importance of longitudinal prospective or retrospective studies over time as a method of enhancing the generalizability of findings. This study's findings differ from the previous findings from the same database 5 years earlier (Flannery et al., 2001). This may reflect methodological flaws, but it might also reflect true change in the characteristics of restrained patient population.

This field of characteristics inquiry would benefit in general from clear operational definitions of assaults, restraints, and the relevant demographic, precipitant, and clinical variables. Studies need to include different populations in both public and private sector settings and may need to include additional clinical variables considered to be more relevant. Control groups, for comparison purposes, should be routinely included in the findings presented. Research studies that include a person *x* event *x* environment paradigm may prove of assistance in delineating the salient variables that will in time enhance our ability in the field to predict when restraints will be needed for safety.

Implications for Emergency Services

Similar to previous research findings on restrained patients (Busch & Shore, 2000; Evans & Fitzgerald, 2002; Fisher, 1994; Flannery et al., 2001; Soloff et al., 1985; Zun, 2005), the present study's findings confirm two important themes. First, although there are commonly recurring characteristics in patients who are restrained (younger male/female patients with a diagnosis of schizophrenia or personality disorders and with histories of violence toward others, personal victimization, and substance use disorder, who encounter psychosis, excess sensory stimulation, and/or denial of services), there are again many patients with these same characteristics who are not restrained. Thus, predicting which individual patient may need restraint is problematic. Second, the findings are also clear that restraint procedures are fraught with dangerous outcomes (including death) for the patient, innocent family members, and bystanders as well as EMS caregivers (Medical Directors Council, 2000; Zun, 2005). Restraint-free care is the better alternative whenever possible.

As a first step toward this end, all EMS personnel will want to be fully trained in alternatives to restraints. These strategies vary widely and can be adapted to individual patient needs. Common alternatives to restraint include offering the patient some space, allowing the person to express his or her feelings, providing options in collaboration with the patient that restore the patient's sense of personal control, offering calming activities (a cigarette, writing things down, listening to music, smoking a cigarette, breathing deeply), and one-to-one opportunities to speak with the EMS personnel onsite. EMS personnel may actually know in advance the preferred mode of calming strategies of frequent utilizers of emergency medical services.

If the various alternatives to restraint are of no assistance and safety is truly being compromised, then restraints should be considered, as a final resort. EMS caregivers will want to be familiar with the warning signs of potential loss of control (Flannery, in press), and all EMS personnel in the same health-care system will want to be trained in one system of restraint, so that various team members are not working at cross-purposes with one another during restraint procedures. Restraints should not be undertaken by only two EMS personnel. The health-care agency or the police should be called to provide backup. The judicious use of restraints should result in enhanced safety and minimal or no injury to those involved. Given the serious risks involved in using restraints, it is important that prehospital health-care

providers work toward the national health-care goal of re-straint-free interventions as hospitals and outpatient services have begun to do.

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A Short Guide to Giving Bad News

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"It is my painful duty to inform you that a report has this day been received from the War Office notifying the death of..."

- From a standard British "Army Form B 104-82" in use in October, 1914. War Office, Whitehall, London.

Abstract: *Approaching an individual or a family with bad news, but without an appropriate plan to present the information in a structured manner, is almost a guarantee of greater emotional pain and disruption for the recipients of the news. Crisis interveners must develop a strategic plan for the announcement of bad news. That plan should entail a lead-up phase, a transmission phase, and a follow-up phase. The lead-up phase encompasses the gathering of accurate, verifiable information and the clear identification of the targets of the information. The transmission phase includes immediate preparation for the presentation of the information, the actual announcement, and the presentation of additional details as questions arise. The follow-up phase includes a range of supportive interventions to assist people in the immediate crisis reaction. It also includes a system of referrals for people who might benefit from additional professional care. This article provides practical guidelines for providing bad news to the loved ones of injured, ill, or deceased people. [International Journal of Emergency Mental Health, 2008, 10(3), pp. 197-202].*

Key words: *Crisis intervention, death notification, injury notification, crisis communications, announcing bad news*

"Death, you know, is awfully permanent." It was with these words that the famous thoracic surgeon and founder of the Maryland Shock Trauma Center, R. Adams Cowley, began his welcoming talk to the new regional coordinators in 1974. I was one of the five eager Emergency Medical Services coordinators who had recently been selected to help develop the statewide EMS system. Little did I know, at that particular moment, the driving force those words were

for Dr. Cowley and would later become for each one of the coordinators.

Once we had exposures in our work to numerous severe injuries and deaths, Dr. Cowley's words echoed in our thoughts and reminded us that the alleviation of human misery and the saving of lives was our most important mission. Probably because of my training in psychology, another lesson was in store for me. Death, of course, is permanent, as Dr. Cowley warned. That was beyond doubt; no one argued against that fact. I found, however, that the announcements concerning the misfortunes of others also left a permanent

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mark on the minds of the recipients of the bad news. Sometimes it even left its mark on me.

Early in my career experience, I concluded that informing people of terrible things that will scar and distort their lives is among the most unpleasant of tasks. Although I am currently more skillful in providing various types of bad news, the task remains for me a challenging and painful experience. I have long ago given up the idea that further experience will make it less painful. My hope for this article, however, is to pass along some practical guidelines that can make announcements of bad news a more organized approach that mitigates the pain both for the messenger and for the recipients of bad news.

Who Should Provide Bad News?

Some may hold tenaciously to the unsupported belief that only medical doctors or mental health professionals are properly trained to give bad news. In reality, few professionals receive training in their graduate programs to allow them to skillfully provide announcements of painful information. There is evidence, on the other hand, to suggest that caring emergency personnel, as well as many others, are quite capable of making appropriate announcements of deaths, injuries, and other disturbing news. For instance, in a 2005 study, family members who received death announcements from emergency personnel concerning a loved one were asked to evaluate their helpfulness at the scene. Of the 31 families in the study, only one said that more should have been done to help. The majority of the families (81%) felt that paramedics had treated the family professionally and in a supportive and gentle manner (Eckstein, Stratton & Chan, 2005).

The idea that people without professional degrees could be helpful in a crisis is certainly not a new concept. Gerald Caplan (1961; 1964; 1969) accurately predicted long ago that excellent help could be provided by family members, friends, colleagues, and others without advanced academic degrees. His encouragement of family and peer support in crisis situations set the foundation for current Critical Incident Stress Management programs around the world.

General Principles of Crisis Communications

In both World War I and World War II, the receipt of a death notification by telegram or mail, instead of by a personal messenger, must have been a horrible shock. The quotation above from a British standard 1914 military death notification form is evidence of the starkness of such a notification process (British Army, 1914). The notification form does nothing to prepare the recipient to receive the bad news. Furthermore, it provides no support after the announcement of the tragedy. It is only barely adequate in one thing – the actual announcement of bad news.

For the bearer of bad news, there should always be a three-phase approach. Begin with a *lead-up* to the announcement. This is then followed by the actual *transmission* of the news. Finally there must be a *follow-up* phase after the announcement.

The lead-up phase includes the gathering of adequate information regarding the event and its consequences, the preparation of an individual or a team to deliver the news, and the development of a strategy for the delivery of crisis intervention services in the aftermath of the announcement. The lead up also includes obtaining the correct address or delivery site of the news.

The transmission phase of the process includes a brief introduction and initial preparation of the people about to receive disturbing information. Next, carefully selected words are delivered to assure as complete a message as possible. Finally, it is important to provide answers to questions about the circumstances of the disturbing event and the current condition of their loved ones.

The approach you take toward shocked, grieving, and emotionally overwhelmed people in the aftermath of distressing information regarding the serious injury or death of a loved one can leave lasting effects on those who hear your news. Emergency personnel and other crisis workers enter the lives of distressed people when they are especially vulnerable to further duress. If crisis intervention personnel are professional, sensitive, and caring, they do make a significant difference in assisting people through a state of crisis. Emergency personnel and crisis interventionists need common sense, compassion, confidence, and courage as they assist in a crisis. If they act in a haphazard manner, with little regard for the people they should be serving, irreparable psychological harm might be the end result.

From the very moment that the task of informing people of bad news is recognized, assessment skills as well as "people skills" become paramount. It is important to gather information, make plans, and initiate the right care at the right time and under the best circumstances. Messengers must use

their skills in combination with the seven primary principles of crisis intervention. Those principles include simplicity, brevity, innovation, practicality, proximity, immediacy, and expectancy (Aguilera, 1998; Mitchell, 2004). A summary of the seven principles of crisis intervention are presented here for the convenience of the readers:

- Simplicity – When they are in a state of crisis, people respond to simple instructions, not complex procedures.

- Brevity – Most crisis interventions are very short in duration. Some take only a few minutes.

- Innovation – Providers must be creative to manage new situations.

- Pragmatism – Suggestions must be practical if they are to work.

- Proximity – Most effective contacts are closer to operational zones.

- Immediacy – A state of crisis demands rapid intervention.

- Expectancy – The crisis worker sets up expectations of a reasonable positive outcome.

Bad news should be accurate and current. It should be as complete as possible at the time of its delivery. The messenger should be sensitive toward and respectful of the people who are receiving the news. No one should rush through an announcement of disturbing news. Information should be given in small segments and the people receiving the information should be allowed brief pauses between bits of information. These pauses usually allow enough time to absorb one or two sentences before the messenger moves on. Some people refer to this as giving bad news in "bite-sized" pieces. Questions and repetitions or clarifications of information should be allowed at any time during the announcement (Greenberg, Ochsensshlager, O'Donnell, Mastruserio, & Cohen, 1999; Iserson, 1999; Nardi & Keefe-Cooperman, 2006).

The Lead-up

All the pertinent facts of a situation should be available to the person or team delivering the news before anyone approaches the family members or friends. Cell phones and emails can be a problem because friends, distant relatives, or acquaintances may contact the primary family and make un-

authorized, premature announcements that cause great harm. The gathering of information must, therefore, be accomplished quickly. Important, potentially upsetting information regarding a loved one should be as precise as possible. Every reasonable attempt should be made to verify the information before it is given to others. Make sure the names of those involved are correct. Most people remember every detail about a painful announcement. It is best, therefore, if it is right the first time (Smith-Cumberland, 1994; 2007).

If a team approach is utilized for the presentation of the information, the team should briefly meet and determine who will be providing what aspects of the information. It is important to know who is designated as the team's leader. The primary messenger should be identified before the announcement process begins. It is also important to know the crisis intervention strategy for the follow-up segment after the transmission of the information. The overall presentation plan should remain flexible, however, since the circumstances surrounding these announcements are constantly changing.

The Transmission of Information

If many people are gathered with a family, it is usually helpful to ask friends and acquaintances to step outside so that important information might be shared with the family members in a private setting. Sometimes family members request that a specific friend be allowed to stay with the family when announcements are made. This request should be accommodated. Try to make people as comfortable as they can be under the circumstances (Schmidt & Harrahill, 1995).

As harsh as the standard army death notification form discussed previously may be, it still covered many of the key pieces of information that a notification of bad news should contain. The form provides some insight into the information contained within almost any announcement of bad news.

It starts off with an expression of personal sympathy. *"It is my painful duty…"* It then goes on to present the most important facts. "*…to inform you that a report has this day been received from the War Office notifying the death of...*" Next, the form states specific identifying information so as to leave no doubt about the person being discussed in the report. *"Rank…Name…Regiment…Which occurred at…on Date…"* The form adds additional information to complete the announcement and offers a final word of condolences. *"…and I am to express to you the sympathy and regret of the*

Army Council at your loss. The cause of death was 'killed in action.'" The form ends with one sentence providing an address for the family to obtain the soldier's personal effects. It is signed by the records officer and the commanding officer of the soldier who was killed (British Army, 1914).

When you meet a family or an individual who needs information about a loved one, always introduce yourself and your team, if you are working with others. Tell the family members and friends that you have asked them to come together so that you can go over some very important information. Let the people know that you are very sorry to have to bring them some bad news. Go over a description of the events and circumstances that led up to the involvement of their loved one in the incident. Make sure you use the name of the injured or deceased throughout the announcement. The nature of the victim's injuries should be outlined. Remember not to rush; break the information up into smaller, absorbable elements. Avoid excessive details and complicated terms when the announcement is made. If you are reporting a death, the words "died," "dead," or "did not survive" should be used in the announcement. Be sure to express your sympathy.

Most people are a bit shocked by bad news and need a little time to take it all in. Sometimes they have questions as you go along. More details such as medical care thus far or resuscitation efforts can be added after the main announcement is completed. Be supportive if the person expresses emotions while you are making the announcement of painful news. It is advisable to summarize the information at the end of the announcement (Miller, 1996; Smith-Cumberland, 1994; 2007).

Follow-up

Follow-up begins immediately after the conclusion of the announcement of bad news. People may become more emotional or they might appear to be numb or withdraw from the family or friends. Some may become quite loud and express anger and frustration. Others have many more questions and seek answers from the notification team. Do your best to provide any additional information if you have it or if it can be easily obtained. Acknowledge, validate, and reassure people regarding their emotional reactions.

Use the *five T's* to determine the best strategy to assist the people in a state of crisis. Explore the *themes* that are present in the current circumstances. Themes include any

circumstances, concerns, considerations, conflicts, and internal or external influences that will cause a crisis team member to alter either the choice of interventions or the timing of those interventions. Determine the *targets*. Who needs assistance and who does not? Next, select the *types* of interventions that will be most helpful. *Timing* of the interventions is very important. Interventions provided at the wrong time are usually not very helpful. Finally, the appropriate *team* must be chosen to provide the best possible outcome. Sometimes only one person from a team works alone on the announcement. However, it is usually better to use several members of the team to provide services during a crisis.

In the case of injuries, family members and friends want to know the name of the hospital to which the person was taken. They may need assistance in getting to that hospital. In the case of a death, the family may want to see the body or may need information concerning the current location of the body, organ donations, autopsies, and other concerns. In addition, the notification team may need to provide a list of appropriate referrals for additional services.

The emotions and reactions you will most likely encounter after the provision of bad news include shock, denial, anxiety, crying, anger, sadness, guilt, fainting, nausea, worry, and lightheadedness. In some extreme cases, people require the care of emergency medical technicians or paramedics. Find out what resources the family members need. Resources include assistance with child care during the crisis, clergy personnel, other family members, friends, neighbors, and resources for those with special needs. Some people need assistance in notifying other family members and friends. Whenever possible, first requests should be fulfilled.

Do not expect that bad news will always be met with disorganization and dysfunction. Some families actually perform better than expected. You may find them in control and reasonably well organized. They may begin taking steps to manage the crisis immediately after the announcement of bad news. Assist them only as much as they appear to need it, allowing them to manage the crisis in a manner that is most comfortable for them.

It would be a mistake to disregard the impact the loss of a pet can have on individuals or an entire family. Pets, in many ways, are truly an integral part of a person's or a family's social network. For some families, the loss of a pet may be on a par with the loss of a human member of the family. Be

sensitive to such losses and mange them with carefully applied crisis intervention techniques, just as you might with a human victim.

Field emergency medical personnel may complete their support services when the person is delivered to the hospital. Other crisis workers will need to continue their support and, under certain circumstances, follow-up services may continue for several weeks. Family members and friends should have contact information in case they need additional information or in the event that they would need services themselves.

Conclusion

Providing an announcement of bad news is a challenging process and an enormous responsibility. It takes careful thought, preparation, skill, and sensitivity to the needs of others. Following the simple guidelines presented in this article will help to reduce the complexity of bad news announcements. These useful guidelines can also help to reduce the extreme distress that arises in those who receive the announcement. Finally, these comments may enhance the skill of the messengers and mitigate their own distress in this difficult and most unpleasant work.

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Juror Stress:
Symptoms, Syndromes, and Solutions

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Abstract: *As civic duties go, jury service can be among the most stressful experiences that a citizen can undergo. This article describes the common sources of juror stress, including jury summons, jury selection, understanding and coping with complex or disturbing evidence and testimony, jury deliberation, and the pressure to arrive at a just verdict. The article then goes on to delineate a number of intervention models for helping jurors manage stress reactions and prevent the development of more serious traumatic stress syndromes. Finally, some recommendations are offered for professionalizing jury service that would act in the interests of civil and criminal justice. [International Journal of Emergency Mental Health, 2008, 10(3), pp.203-218].*

Imagine you awaken one night with a mysterious pain. You make your way to the nearest emergency room and ask to see a doctor. You're told that, instead, you will be examined by 12 citizens who have been pulled off their jobs and ordered to the emergency room to decide your case. When you begin explaining your symptoms and medical history, someone in the back of the room stands up and objects that your past illnesses and treatments are irrelevant and that this medical decision panel must make their treatment decision based solely on their current examination findings. You're asked a series of yes-no questions and when you try to explain further, are told to only answer the question as it's been asked. After they've finished with you, the 12 citizens retire to a separate room to deliberate your case. When you

try to protest that this is no way to practice medicine, they tell you to feel lucky to live in a country where you can receive a "fair" examination and have your diagnosis and treatment decided by 12 of your peers.

Sound ridiculous? Yet, these kinds of complex life-altering decisions are made every day in courts throughout the United States and many other countries by juries with no more knowledge of the law than the above hypothetical panel has of medicine. While the merit of this kind of justice system is a topic for another venue, this article will focus on what those 12 souls may go though in trying to do the best they can in negotiating the justice system. This article will delineate some of the major stresses and stress syndromes associated with jury service and offer some recommendations for helping jurors cope with the ordeals of their service and the pressures associated with certain kinds of trials.

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Juror Stress: Scope of the Problem

A core feature of the American civil and criminal justice systems is the right of a defendant to a trial by jury. Serving as a juror is considered a civic duty and a citizen's failure to respond to this call may result in judicial sanctions and penalties. Other than the occasional traffic citation, jury service is one of the primary means by which the average, law-abiding citizen comes into contact with the American judicial system. Most jurors take their responsibilities seriously and carry out their jury service to the best of their abilities. But until recently, little consideration has been given to the psychological impact of jury service on the jurors themselves (Butler, 2007; Hafemeister, 1993).

Ironically, much of this attention has come from the observations of judges who have to deal with stressed-out juries on a regular basis and who are subject to their own judicial stresses and challenges (Miller et al., 2007; Zimmerman, 2006), which will be the subject of a future article in this series. On a practical level, heightened awareness of juror stress may result in a shrinking pool of citizens who are willing to report for jury service. As greater numbers of citizens manage to avoid jury service, juries become less and less representative of their communities, leading to a deterioration of public trust and confidence in jury verdicts, making still more people reluctant to serve, and so on, in a vicious cycle. In addition, extreme juror stress levels may compromise their ability to render a fair judgment or impel jurors to make premature decisions, resulting in the appeals of many more verdicts than necessary and, in some cases, the corruption of justice (Butler, 2007; Curridan, 1995; Hafemeister, 1993; Hafemeister & Ventis, 1992; Sturgess, 1990).

The Jury Process

The odyssey of jury service typically begins when a citizen receives a *jury summons*. The very term, "summons" can make the citizen feel like he or she is already guilty of something and conveys to the recipient that this service is not optional; indeed, failing to report for jury duty can result in the citizen being held in contempt of court, possibly fined and jailed, and ultimately being forced to appear. The summons either orders the citizen to report to the courthouse on a specific date or instructs them to call the courthouse over several days to see when their service is required. Some jurisdictions give citizens the option of postponing jury service for a limited period of time.

When arriving at the courthouse, prospective jurors are typically herded into a large auditorium where they are given a brief orientation, by video or live speaker, to the civil and criminal justice systems. They wait to be called for empanelment, which may be almost immediately or at any time throughout the day. In some jurisdictions, if a juror is not empaneled on that day, his or her service is done; in other jurisdictions, they must return day after day until selected for a jury or rejected during jury selection.

Jury selection involves the careful examination, or *voir dire*, of each prospective juror by the opposing attorneys in the case. Ostensibly, the goal is to select jurors who can make an impartial decision, free of personal biases that might taint their careful, objective weighing of the issues. In reality, voir dire often represents a way for attorneys from either side to "stack" the jury with individuals who most likely will be favorable to their case (Kressel & Kressel, 2002). Since a wide range of jury characteristics may affect their thinking about a given case, voir dire questions may range from opinions about points of law ("Do you believe the death penalty is ever an appropriate punishment?") to personal habits or preferences ("How many hours a week do you think is normal for someone to be looking at internet pornography?"). Typically, the initial weeding-out is accomplished by means of a written interrogatory, or questionnaire, and those prospective jurors who pass this first hurdle are then interviewed in vior dire. The law also allows a limited number of jurors to be rejected on a "peremptory" basis, which means the attorney doesn't have to give a reason, and which usually occurs to exclude a juror because of some personal feature such as ethnicity or social background. The acceptance/rejection ratio of jury selection explains the "cattle-call" nature of summoning vast numbers of potential jurors to the courthouse on any given day.

After a jury is empaneled, the case generally begins. Depending on the nature of the case, jurors spend anywhere from a few days to many weeks hearing complex and conflicting testimony from plaintiff and defendant (in a civil case), prosecutor and defendant (in a criminal case), fact witnesses (who have observed or have personal knowledge about something pertinent to the case), and expert witnesses (professionals with specialized training who can render opinions about technical issues of the case). Attorneys naturally try to present evidence that will be most favorable to their side of the case to "sway" the jury (Kressel & Kressel, 2002).

Traditionally, jurors are not allowed to take notes or ask questions and are supposed to process all this material in their heads to prepare for deliberation. Perhaps responding to the realities of human cognition, some jurisdictions now permit limited questions by jurors during the trial in order to help clarify crucial points that they will deliberate on. In most trials, jurors get to go home at the end of each day but are not allowed to discuss the case with anyone. In some high-profile cases, juries may be *sequestered* – literally isolated in a hotel room between court appearances, and deprived of newspapers, TV, or any contact with the outside world that might taint their view of the case.

After testimony and each attorney's closing statements are completed, the jury retires to a separate room for their deliberation, which may take a couple of hours or many days. Since, in most cases, verdicts must be unanimous, this can be an extremely grueling process, as jurors may change their minds several times throughout the deliberations and their decision-making processes may be influenced by anything from new insights on the case to what will get them out of there the quickest. Prior to deliberation, the judge usually provides a set of jury instructions as to which aspects of the case they just heard can be considered and which parts they should disregard; admittedly this kind of cognitive compartmentalization can be extremely difficult to accomplish ("Do not assign any weight to the bereaved mother's spontaneous crying and unsolicited comment about how she misses her murdered daughter.")

At any point in the trial prior to the actual reading of the verdict, the two sides of the case can arrive at an agreement that obviates the need for a jury. A number of juries have been in the position of sweating over a weeks-long trial, spending several more hectic days in heated deliberations, only to be told at the last moment that the case has been settled and "thank you for your service." It is hard to imagine a more frustrating set of circumstances than to have placed one's whole life on hold, to have had one's thoughts and emotions wrenched by days of testimony that ranged from the soporific to the horrific, to have deliberated earnestly and hard, only to be told, often at the brink of a unanimous decision, the judicial version of "never mind." Perhaps the only thing worse are cases where the judge "sets aside" the jury's verdict after it has been read because he or she decides that these 12 citizens could not possibly have reached this conclusion if they had properly considered all the pertinent facts and points of law in the case. In these circumstances, juries

understandably feel like bad little schoolchildren who failed their class assignment. Even where the court accepts the jury's verdict, they know it's not over yet, because most serious verdicts are appealed.

Positive Aspects of Jury Service

Although this article will focus on the negative psychological effects of jury service, to be fair, a number of surveys and studies have found that most American and Canadian jurors view their service positively (Butler, 2007; Casey, 1998; Diamond, 1993). For many citizens, this is the most important thing they have done in terms of having a real impact on their communities. Individuals who may feel that they plod meaninglessly through life and receive scant acknowledgement for their efforts at their jobs or at home are suddenly thrust into a position of trust, treated like adults, and accorded great respect, with the weight of another human being's fate placed in their collective hands. Jurors often emerge with much enhanced respect for the legal system after seeing how seriously and carefully most cases are tried, with learned attorneys in expensive suits vying for their decision through meticulously researched and cogently presented arguments, all parties forced to follow strict rules of evidence under the watchful gaze of an enrobed judge sitting on high. This experience often inculcates in jurors a sense of empowerment and engagement with civic life; in fact, serving on a jury makes people more likely to vote. Many jurors surveyed say they would like to serve again (Butler, 2007; Casey, 1998).

However, some of the positive feelings reported on juror surveys may be the result of rationalization and cognitive dissonance: having been conscripted to legal servitude for days or weeks at a time, suffered loss of income and restrictions in their family time, many jurors may feel compelled to justify to themselves that this all must have been for some greater good in order not to feel like chumps (Butler, 2007). And, as will be discussed below, this positive perception of jury service is far from universal; indeed, from the results of other surveys and studies, one can only conclude that, for many jurors, their service amounts to a descent into hell.

Stresses of Jury Service

Even short of hell, many jurors experience stresses that range from mild to severe. While trials containing complex and/or grisly evidence may be understood to be inherently stressful, even more mundane cases can take a grueling toll.

For all the lip service about their noble mission, courts can be surprisingly unaccommodating to jurors who are often relegated to the bottom of the courtroom pecking order. This may be due to a strong social identification factor: Judges and lawyers share a common level of education, training, and experience; indeed, many judges were once practicing lawyers and career shifts in the other direction are not uncommon either. Thus, they understand that they are in a different social and demographic league than most jurors who tend to come from a more working-class and nonprofessional population – i.e. the type of people who cannot easily get out of jury duty. In addition, the same judges and lawyers tend to interact with one another repeatedly in the same kinds of cases, whereas jurors are here for one case, and then gone. Thus, it is easy for the courtroom "regulars" to unconsciously treat the newcomers as transients who are there to do their jobs and then scram (Butler, 2007; Curridan, 1995).

A survey by the National Center for State Courts (Casey, 1998) asked a large sample of jurors or alternate jurors from a wide range of civil and criminal cases (e.g. robbery, drunk driving, malpractice, and personal injury) to rate the level of perceived stress they experienced from a list of stressors. The top ten sources of stress for jurors serving on non-death-penalty cases were: deciding on a verdict; jury deliberations and discussions; disruptions to daily routines; fear of making a mistake; violent crimes; the jury selection process; crimes against children; answering questions in front of other people; sentencing a criminal defendant; and dissension/differences among jurors. Looking at the top items on the list should remind us that, even in relatively routine cases, most jurors take their responsibilities very seriously and are acutely aware that they are making decisions that will greatly affect people's lives, what Bornstein and colleagues (2005) refer to as the "burden of justice." It is this very sense of responsibility that often makes their jobs so stressful (Hafemeister, 1993).

But how stressful? Most surveys have found that about 40% of jurors report stress levels hovering around the mild to moderate range, but that clinically significant anxiety or depressive disorders are rare (Antonio, 2006; Bornstein, Miller, Nemeth, Page, & Musil, 2005; Casey, 1998; Kaplan & Winget, 1992; Kelly, 1994; Casey, 1998; Shuman, Hamilton, & Daley, 1994). So, even though most jurors aren't actually being "driven crazy" by their ordeal, the stresses of jury service can have a sufficient effect on their daily lives to demand serious attention.

Sources of Juror Stress

Jurors experience stressors from a variety of sources associated with their service. A review of the relevant literature (Antonio, 2006; Bell & Feldman, 1992; Bishop, 1992; Bornstein & Nemeth, 1999; Bornstein et al., 2005; Butler, 2007; Casey, 1998; Diamond, 1993; Fishfader, Howells, Katz, & Terese, 1996; Goleman, 1991; Greene & Bornstein, 2000; Hafemeister, 1993; Haney, Sontag, & Costanzo, 1994; Kelley, 1994; McAree, 2004; Miller, Flores, & Dolezilek, 2007; Mott, Hans, & Simpson, 2000; Rauch, 1992) suggests that these can be divided into two main categories, those associated with the judicial process of jury selection and empanelment, and those associated with the content and conduct of the trial itself.

Court Procedures

Physical setting. The physical environment in various courthouses throughout the country ranges from reasonably comfortable to atrocious. Stress factors cited by jurors include poor temperature controls, limited access to food and bathroom facilities, cramped and overcrowded waiting areas ("cattle pens"), and the inconvenience of getting to and from the courthouse (lack of public transportation, poor parking, courthouse in bad neighborhood).

Payment. For all the high-minded talk of how jurors are a vital component in our system of justice, the daily compensation rate for jurors – typically far below minimum wage – can only be seen as diluting the supposed high regard that the court has for them. "I couldn't get someone to clean my toilets for this kind of money," is a typical complaint. A few jurors have commented that they tore up the check when it came or sent it back with a nasty note.

Life disruption. A near-universal complaint of jurors and prospective jurors is the disruption of work and family schedules necessitated by their service. Under the mantle of civic responsibility, jurors may lose days or weeks from work and have to delegate childcare and other household responsibilities. Although employers, as an expression of good citizenship, are supposed to give their employees days off with compensation to attend jury duty, in most cases the worker absorbs a pay loss. Adding insult to injury, when the term of jury service extends more than a few days, the worker may return to find that his or her job has been filled by someone else.

For the self-employed, the situation can be even worse. Salespeople live by their commissions and most small businesses can't afford to close down for even a few days. Even in medium-sized companies, the worker may not have anybody to take his or her place if he or she is in court; clients and customers may quickly go elsewhere. Some jurors report that they have had their businesses ruined by a lengthy term of service.

And it's not just work. Time away from spouses and children strains family relationships; women jurors especially appear to feel the strain of isolation very acutely. Not being allowed to discuss the case when he or she comes home from court deprives the juror of a main source of tension reduction that most people have for unloading their daily stress, and further marginalizes the rest of the family who see their loved one in distress but are unable to do anything to help them (Feldman & Bell, 1991; Hafemeister, 1993; Slind-Flor, 1992).

As previously noted, in some high-profile cases, to avoid "contamination" of the jury by media, casual conversation, etc., jurors may be sequestered, which essentially amounts to enforced isolation during the trial. Because of state and local budgets, accommodations are rarely first-class. This heightened isolation from work, family, and friends may cause many jurors to feel that they are being treated like "criminals," "POW's," or "terrorists at Guantanomo Bay," as some jurors have put it. It is these conditions that most often lead some jurors to fear they are losing their minds (Antonio, 2006).

But, at least for American jurors, the ordeal is over when the trial ends, at which time they are free to talk, write books, or expound on TV about their role in a famous trial (although most jurors just want to go home and forget it). No such consideration is afforded their northern brethren, as the Canadian Criminal Code makes it an offense for their jurors to ever disclose information regarding jury proceedings. Canadian jurors cite this ban as one of the most difficult things to deal with (Butler, 2007; Hafemeister, 1993). On the other hand, this permanent gag order may free these jurors from the relentless media intrusion that often dogs American jurors in high-profile cases and which often seems designed to provoke a media-worthy lurid reaction from jurors.

For example, after the high-profile Rodney King beating trial, jurors were assailed by the press to the point that local police warned them not to remain in their homes because of all the publicity they were garnering. These jurors felt compelled to defend their decision to friends and family and felt that they were being condemned in the press for the rioting that took place after the verdict. One juror received a bomb threat at her workplace. Another juror bought a gun for protection, while still another slept with an axe. Many jurors compared their experience to having been raped; they suffered anxiety, hypervigilance, tearfulness, exhaustion, sleep and weight loss, and disruption of family relationships. A few of the jurors sought professional counseling, but most suffered in silence (Davis, 1993).

Jury selection process. For many jurors, especially those that value their privacy, filling out detailed questionnaires and answering sometimes very personal questions in front of a group of strangers can be extremely uncomfortable. Many jurors have reported feeling as if they were the ones on trial. For example, in financial fraud cases, lawyers may want to know what the juror's salary is or whether he or she has ever "thought about" cheating on their taxes. In sex-related cases, jurors may be queried about their sexual preferences or whether they have ever "thought about" cheating on their spouse. Simply refusing to answer could technically result in the juror being cited for contempt of court, but few judges would be willing to subject the juror to further duress. More commonly, embarrassed jurors will simply lie and tell the questioning attorney whatever they believe will make the lawyer move on. The result may be the empanelment of a jury containing several members who have been seated under false pretenses, thereby compromising the whole rationale of jury selection.

Perhaps for these kinds of reasons, while American lawyers can question potential jurors to screen out those they don't like during the voir dire process, in Canada this kind of jury selection process is considered prejudicial and all eligible jurors are assigned on a first-come-first-serve basis. The absence of a rigorous juror screening process has been found in surveys to increase stress on those Canadian jurors who are seated (Butler, 2007). It would be an interesting empirical question to see which system is associated with the greatest psychological morbidity and satisfaction with jury service.

Trial Factors

Death penalty cases. Understandably, the decision to find a defendant guilty of a crime warranting the death penalty is one that most American jurors take very seriously,

reflecting the "burden of justice" (Bornstein et al., 2005) that jurors feel more intensely, the more serious the trial (e.g., capital murder vs. grand larceny). In some jurisdictions, the jury determines guilt or innocence in a capital crime and the judge imposes a sentence. In other courts, the jury may first decide on guilt and then deliberate a second time to determine the sentence, usually either death or life imprisonment. Findings from the Capital Jury Project (Antonio, 2006) and other studies have shown jurors who render a death penalty verdict to suffer from a variety of stress reactions, including *posttraumatic stress disorder* (PTSD) at higher rates than those who render a life sentence.

Some jurors describe nightmares that replicate how the victim was killed or that relate to details of the crime scene, many of the images coming from photographs viewed at trial. Some jurors report feeling physically sick during and after the trial. Jurors may express regret at their final punishment decision, often feeling that the wrong decision was reached. In some cases, jurors regret the death sentence; but in a few others they wish death had been meted out instead of life imprisonment. Many jurors who harbor second thoughts post-trial feel they were pressured or "brainwashed" by other jurors to go along with the majority decision: "I should have stuck to my guns, but everybody else was so sure of their side and we all just wanted to get out of there."

Fear of reprisal by the defendant or his cohorts is a common theme reported among jurors serving on capital trials. Many report that the defendant would sit in court and stare intimidatingly at individual jurors during the trial. Nightmares of such possible reprisals by the defendant are commonly reported, more frequently by women. Other jurors are simply afraid of running into either the victim's or defendant's family in or around the courthouse. Some fear wider censure by their own families, friends, and communities for making the "wrong" decision in socially sensitive cases. Most jurors who have served on capital cases are determined not to repeat the experience.

Interestingly, in the Capital Jury Project study (Antonio, 2006), a number of jurors specifically expressed the need for some kind of post-trial counseling and half thought it should be made available by courts themselves. Others took the initiative and sought counseling on their own after the trial had ended, either from a family member, clergyman, or mental health clinician (Antonio, 2006).

Grisly evidence. One of the distressing aspects of mur-

der trials or those where there has been significant bodily injury is the frequent necessity for juries to view gruesome hospital or crime scene photos depicting death and or mutilation, as well as to hear sometimes horrifying testimony of how victims were assaulted, tortured, raped, and/or killed (Bishop, 1992, Boone, 2008). Remember that police officers, criminal attorneys, judges, and specially trained mental health counselors who work with the court system all have years of experience dealing with disturbing evidence, yet, even in these hard-boiled veterans, particularly heinous crimes (often those involving child victims) may evoke destabilizing emotional reactions that require intervention in the form of critical incident debriefing or other mental health contact (Miller, 1998c, 1999, 2006a, 2006b, 2007a, 2007b, 2008a, 2008b, 2008c).

How much greater must the reaction be to this kind of evidence by untrained, inexperienced jurors who are being assailed by grisly evidence throughout the trial. This is frequently compounded by the fact that prosecution and defense counsel each have their own agendas that they may play off the jury. For example, the prosecution may specifically try to shock the jury by literally throwing the exhibit (crime scene photo, bloody clothing, murder weapon) in front of the jury precisely to spur an emotional reaction that will hopefully lead to a conviction (another variation of this is to abruptly display an image of the disturbing exhibit on a huge projection screen in the ominously darkened courtroom). For its part, the defense team will initially try to exclude evidence they consider "inflammatory" or, alternatively, if it is presented, may try keep it exposed as long as possible or present it repeatedly in order to try to desensitize the jury to its presence. Sometimes this works and jurors get used to seeing the bloody knife and the photographic stab wounds lying on the evidence table day after day. But sometimes the tactic backfires and the jurors grow increasingly sensitized, rather than immunized, with each exposure.

Studies are near-unanimous in reporting high rates of anxiety, depression, and PTSD symptoms in jurors sitting on capital murder, aggravated kidnapping, aggravated sexual assault, aggravated assault, and child abuse cases (Antonio, 2006; Feldman & Bell, 1993; Hafemeister, 1993). Some of this may relate to the concept of *vicarious trauma*, in which those who work frequently and closely with victims of violence come to empathically absorb and internalize some of the psychic pain and begin to show PTSD symptoms themselves (Davis & Friedman, 1985; Figley, 1983; Fullerton, Carroll, Ursano, & Wright, 1992; Miller, 1998a, 1998b, 2008c; Moon,

1999; Talbot, Dalton, & Dunn, 1995; White, Lawrence, Biggerstaff, & Grubb, 1985; Yassen, 1995). These kinds of reactions may have implications for adjudication of the case if jurors make extreme decisions based primarily on their emotions rather than on a rational analysis of the evidence, or if they become so numbed to the savagery of the crime through repetitive testimony or evidence presentation that they come to diminish the seriousness of the criminal act in their deliberations (Miller et al., 2007).

Complex Evidence. Another feature of murder trials or other violent felony trials is that they tend to be long and contain vast amounts of complex and ambiguous evidence. In most courts, jurors are forbidden to take notes or ask questions, although some jurisdictions are very recently beginning to allow limited forms of these activities. Thus, the juror is placed in the position of having to process complex technical information and conflicting eyewitness narratives presented by two different sides who are each trying to spin the evidence to the fullest extent that the court will allow, with the juror permitted to take no (or limited) notes and ask no (or limited) questions. Add to this the fact that much testimony is just plain boring or literally incomprehensible and there is evidence that jurors forget a great deal of what they hear in court (Rosehan, 1994). If this were a college course, what grade do you think the jurors would get? Yet, they are charged with the task of taking this information and using it to render what, in some cases, is literally a life or death decision about someone's fate.

Complicating the process is the fact that, in the case of a college course, the students are all more or less equivalent in background in terms of education, training, and native intelligence, and have probably all completed at least some prerequisite coursework for the present class. But jury members come from all walks of life and will have vastly differing levels of sophistication in handling complex testimony and in understanding the legal instructions they're given (Antonio, 2006; Bornstein et al., 2005; Butler, 2007; Miller et al., 2007; Steele & Thornburg, 1991). Because most professional people in their 30s to 50s, as well as most mothers with childcare responsibilities, can probably find some reason to get out of jury duty, most juries will contain a disproportionate number of very young, very old, less educated, and less family-grounded individuals. In deliberations, less comprehending jurors may feel intimidated by seemingly more savvy members who, for their part, may be frustrated with their slower compatriots' failure to grasp their arguments or see things their way.

Indeed, an entire industry of *jury persuasion*, often trafficking under the euphemism of *trial consulting*, has sprung up precisely to capitalize on juries' frequent cluelessness and to help attorneys use this to their own advantage (Kressel & Kressel, 2002; Posey & Wrightsman, 2005; Vinson & Davis, 1996). For example, we know from cognitive psychology and everyday experience that most people make decisions not by carefully weighing evidence and using inductive reasoning to arrive at a conclusion. Rather, they make an immediate judgment which is typically based on emotion and first impressions and lies within their pre-existing frame of reference and comfortable world-view. Then, they selectively scan the available data to cherry-pick information that will self-justifyingly support their original position. Hence, most jurors strive to reach verdicts which do not conflict strongly with the views they've held at the beginning of the trial; that is, they strive to reduce cognitive dissonance (Feigenson, 2000; Nisbett & Ross, 1980; Petty & Ciacioppo, 1986; Singer, 1998; Sunby, 1997).

Thus, lawyers know that it is good trial strategy to build your case around a small number of fundamental principles about which most jurors are surmised to feel strongly and that consequently act as screens or filters to interpret, distort, or reinforce information presented during the trial. Tactically, the more an attorney can frame his or her case in terms of the jurors' own personal experience, the greater the likelihood of winning the case (Kressel & Kressel, 2002; Murphy, Loveland, & Munsterman, 1992; Vinson & Davis, 1996). Finally, human beings form impressions about other human beings more strongly than they do about abstract data. When jurors can understand the content of the testimony, they usually factor this into their decisions. But when the complexity of the subject matter exceeds their comprehension, they rely on the perceived sincerity and persuasiveness of the witness (Cooper, Bennett, & Sukel, 1996).

Today's poor, benighted jurors may be forgiven their blunders if only because the complexity of the world as a whole has changed much in just a few centuries, while the human brain and human nature have not. No less an authority than retired Supreme Court justice Sandra Day O'Connor (2003) has lamented this modern state of affairs:

> The world is a very different place now than it was in 1220 or in 1789 or fifty years ago. We therefore

should not be surprised to learn that aspects of the jury system that worked well in those times work less well today and need some repairs. What should surprise us is that so little of the necessary repair work has been done.

There are three aspects of the jury system that need particular attention. First, *the conditions of jury service*. When citizens are called for jury service, they often view it as a burden rather than a privilege. And for good reason: when they arrive at the courthouse they frequently are treated more like sheep than people, and the system can seem designed to disrupt their lives to a maximum degree. Second, *jury selection*. The process of selecting a jury out of the citizens called for jury service on a particular day has changed from a necessary safeguard against potentially biased jurors to a way for highly paid jury consultants to attempt to ensure a jury favorable to the side paying their fees. And third, *the conduct of the trial itself*. Too often, jurors are allowed to do nothing but to listen passively to the testimony without any idea what the legal issues are in the case, and without being permitted to take notes or participate in any way, finally to be read a virtually incomprehensible set of instructions and sent to the jury room to reach a verdict in a case they may not understand much better than they did before the trial began (O'Connor, 2003, pp. 217-218; cited in Posey & Wrightsman, 2005, pp. 218).

Jury deliberation. This is where it all comes together, where the jurors are supposed to put their heads together and come up with a decision that follows the law and respects the evidence in the case. They have already been instructed that there are specific things they are and are not allowed to include in their thinking about the case; they may or may not understand these rules. A number of surveys have shown that the interactions and dynamics of these 12 strangers, thrown together from diverse cultures and walks of life, with widely varying cognitive skills and personalities, can often be the biggest source of stress for jurors during the trial. While many jury deliberations proceed tolerably, and in some instances may even be enjoyably challenging, others are described by jurors as the worst experience they've ever had (Antonio, 2006; Butler, 2007).

The types of stresses during jury deliberation can be multiple and can range from little personal irritations from another juror's mannerisms or tone of voice, to a particularly obnoxious, ignorant, or intimidating juror who just ticks everybody else off and makes the process so much more unpleasant. Not to be overlooked is the physical setting, with poorly ventilated jury chambers resembling sweaty locker rooms after a few hours. The deliberation process itself can be contentious and the juror who evinces a minority opinion may find him- or herself reviled and alienated for "not letting us get on with this." Some jury deliberations have reportedly almost broken into fistfights, and breakdowns in decorum with inadvertent or intentional spewing of stereotypes and prejudices are not uncommon, as the mounting stress brings out the ugly side of the deliberators (Bornstein et al., 2005; Butler, 2007; Casey, 1998).

Juror Stress: Symptoms and Syndromes

Butler (2007) points out that if a research committee were to propose a study on the human stress response that incorporated the factors reviewed above, they would no doubt be fired from their university and banned from research for the rest of their lives. Another, perhaps more germane, way to look at it is that the kind of working environment that many jurors are subjected to during their service would be strictly illegal in all regulated American public and private organizations, and discovery of such conditions would subject the organization to civil penalties and criminal prosecution.

Juror stress symptoms can be conceptualized along three dimensions: (1) symptom type; (2) symptom severity; and (3) symptom time course.

Symptom Type

Juror stress symptoms tend to replicate those reported more generally in the stress and trauma literature (Antonio, 2006; Bell & Feldman, 1992; Bornstein et al., 2004; Butler, 2007; Casey, 1998; Costanzo & Costanzo, 1994; Davis, 1993; Feldman & Bell, 1993; Kaplan & Winget, 1992; Kelley, 1994; Shuman et al., 1994) and include the following:

Physical symptoms. Impaired sleep, headaches, heart palpitation, high blood pressure, cutaneous reactions (hives and rashes), ulcers, impaired sexual functioning, muscle tension, tremors, chest pain, faintness.

Psychological symptoms. Intrusive recollections, night-mares, emotional numbing and detachment, anxiety, depression, increased alcohol consumption.

Symptom Severity

Juror stress appears to show the standard *dose-response ratio* seen with other stressors, that is, the greater the level of stress, the more severe the symptoms (Butler, 2007). For example, jurors serving on "traumatic" trials, including rape, murder, and aggravated kidnapping, were found to experience more severe symptoms than jurors on "non-traumatic" trials such as burglary or drug possession (Shuman et al., 1994). In particular, the jurors on traumatic trials were many times more likely to experience depression (Miller et al., 2007).

Symptom Time Course

In the Capital Jury Project (Antonio, 2006), jurors' stress reactions were found to occur in three main stages: during the trial; immediately after the sentence was announced; and in the days, weeks, or months after the trial ended.

During the trial. Interestingly, only a few of the jurors reported that the full impact of their jury experience was felt while the trial was occurring; most jurors seemed to go "on automatic" to function while the trial was in progress. The major source of stress at this time was determining the actual punishment decision. Other stressors included having to view disturbing crime scene evidence and the isolation of not being able to speak to their families about the case.

Immediately after the trial. In many cases, the stress response came as a "delayed reaction" right after the trial was over. Most of the jurors in this category reported crying at some point, either from the strain of their recent ordeal or out of sheer relief that it was over. Two female jurors in this sample were concerned about the effect the verdict would have on the victim's family.

Days, weeks, or months after the trial. Most of the jurors reported that serving in a capital murder trial affected them long after the trial ended. Some jurors experienced changes in their relationships and lifestyles. Many reported difficulty forgetting what they heard or saw during the trial, and a few reported classic symptoms of PTSD, including nightmares, intrusive recollection, and emotional numbing (Antonio, 2006).

Alleviating Juror Stress

Several authorities have proposed recommendations for making the juror system less stressful and more humane, based on their analyses of juror responses to surveys and general experience (Antonio, 2006; Bornstein et al., 2005; Casey, 1998; McAree, 2004; Miller et al., 2007; Nordgren & Thelen, 1999). I have divided these recommendations into procedural measures and clinical approaches.

Court Procedural Measures

These issues relate to changing the courtroom setting and the conditions of jury service (Antonio, 2006; Bornstein et al., 2005; Casey, 1998; McAree, 2004; Miller et al., 2007; Nordgren & Thelen, 1999) and include the following:

Improve jury notification and reporting for service. Provide sufficient time for prospective jurors to respond to jury summons. Many courts now provide the option of deferring jury service one or more times, as long as the summonee reports within a specified period of time (usually about 6 months). Giving jurors time to arrange their affairs provides a sense of control that may increase juror cooperation and motivation to participate. Provide basic information with regard to how to respond to the summons, where to report, directions, relevant phone numbers, etc. Provide safe transportation and security escort between the courthouse and transportation (parking lot, bus stop). Remember, anything the court can do that makes it easier, not harder, for jurors to report for jury duty will increase compliance rates. Consider adjusted compensation rates for self-employed jurors or jurors whose employers will not compensate the worker for his or her service time.

Explain the trial process. All too often, the initial orientation to the legal system consists of a short, prepackaged video played on a screen in a busy auditorium that may be all but incomprehensible to most of the stressed and harried audience in the pre-panel "cattle call" room. Felons' confessions may be thrown out if police cannot affirmatively demonstrate that the suspect made a knowing and informed waiver of his or her Miranda rights at the time of arrest. Similarly, considering that people's legal fates are at stake, shouldn't prospective jurors be required to demonstrate that they understand the relevant law and legal procedures? Judges should take the initiative to explain things to the jurors in a clear, understandable fashion and solicit their feedback with regard to their understanding.

Also, give jurors a head's-up as to what to expect in general from the trial on which they are being selected to serve. Obviously, the nature of the trial, whether criminal (murder, robbery, rape, drug possession) or civil (personal injury lawsuit, contract dispute, family law case), should be explained. Many jurors state that they would have liked to have been forewarned that the trial could include gruesome photographs, foul language, pornographic material, and/or graphic descriptions of criminal acts. This may be contested by some judges and attorneys who are leery of discussing any type of evidence that has not yet been determined admissible. Additionally, many attorneys may actually be counting on the emotional shock value of certain evidence to sway jurors' opinions and don't want them desensitized by previous discussion; other attorneys may not want to "tip their hand" about sensitive forthcoming evidence. Courts should strive to work out some compromise solution that preserves the rules of evidence while assuring that jurors will be in a proper mental state to hear the case.

Facilitate the jury selection process. One aspect of the trial system that should be clearly explained is the necessity for attorneys to ask jurors probing questions during voir dire. This should include an explanation of the purpose of the voir dire examination, an explanation of the difference between peremptory challenges and challenges for cause, introductory information on the particular case, an estimate of how long the trial may last, and an indication of whether the jury will be sequestered and, if so, for how long and why.

Be sensitive to jurors' privacy concerns. Responses from jurors indicate that some judges and attorneys may view voir dire as a fishing expedition to gain as much information as possible about each juror rather than just enough information to determine if a juror can be fair and impartial. Questions about mental illness, substance abuse, extramarital affairs, job and salary history, or past run-ins with the law may be shrugged off by some potential jurors but shocking to others. Many jurors may be understandably concerned about who will get their personal information or will have access to court records. Any juror questionnaires should be collected at the end of the selection process and the procedures for assuring juror privacy should be explained.

Basic, commonsense recommendations include reducing waiting time, providing comfortable accommodations, and endeavoring to treat prospective jurors with the kind of respect the court pays lip service to when intoning the sacred civic duty to uphold our system of justice.

Maintain control of the courtroom and trial process. When people are under pressure in an unfamiliar environment, they want the grownups to be in charge. Jurors report that much of their stress occurs when they perceive the judge as losing control of the courtroom. Intimidating, bickering, or grandstanding attorneys should be reined in, and TV cameras should be removed if they interfere with the trial process. Loud or obtrusive witnesses or courtroom audience members should be quieted or ejected. Taking control doesn't mean being a tyrant; judges should always be civil with attorneys, jurors, and witnesses, but they should make it clear that they will tolerate no breaches of procedure or decorum in their courtroom. Control also means keeping the trial process humming along so things don't bog down; ironically, boredom is often as much a threat to juror concentration as overstimulation. Finally, in high-profile cases, jurors should be given some guidance on how to deal with the media.

Modulate the presentation of disturbing evidence and testimony. As noted above, viewing grisly evidence or listening to emotionally disturbing testimony is reported by many jurors as being among the most stressful aspects of their service. Although gruesome evidence is typically associated with criminal trials, civil trials involving claims of negligent injury or medical malpractice often contain their share of hideous material. I recall testifying in one civil case where the plaintiff's claim of developing PTSD after seeing a loved one killed in a traffic accident was bolstered by full-color accident scene photos detailing what the speeding vehicle had done to the victim's head and body. Again, the purpose of preparing juries for disturbing testimony is not necessarily to lessen the import of the criminal or civilly negligent act, or to bias their view of the evidence in any way, but simply to alert them that such potentially disturbing material is coming. Indeed, juries who are shocked and overwhelmed by blatantly violent or pornographic material may be less capable of rendering a fair decision.

Allow greater juror participation in the trial process. Under traditional trial procedures, jurors are expected to play a passive role, quietly listening and absorbing the presented evidence and testimony in preparation for their deliberations. Recalling the point made at the beginning of this article, in no other field – medicine, law enforcement, emergency services, business and industry, government, the military – are critical decisions made in the context of deliberate restriction of relevant information. While certain aspects of a legal trial are

unique, such as the importance of controlling bias, research on juror decision making increasingly shows that this passive role – no note-taking allowed, no questions asked by the jury – is unnatural and uncomfortable for most jurors, hindering their ability to remain objective, to concentrate on evidence and testimony, and to integrate new, unfamiliar material; just imagine trying to pass a high school or college course under these conditions. Conversely, studies show that juror comprehension and satisfaction are increased if jurors are allowed a more active role in trials (Cooper et al., 1996; Dann, 1993; Heuer & Penrod, 1994; Rosehan, 1994).

Accordingly, many courts are now permitting limited note-taking by jurors and the asking of limited questions. The latter usually takes the form of having the juror write the query on a piece of paper which is then passed to the judge for review. If he or she determines that it is an appropriate question, the judge will then read it to the witness (or sometimes have the bailiff or court reporter read it). In my experience, this has almost always occurred in the context of expert witness testimony, where the jury has a legitimate question concerning some technical matter that the expert has just expounded upon. Given that jury verdicts may well be determined by their understanding of such complex material, anything that will increase their understanding should well serve the purposes of a fair and just verdict.

Facilitate jury deliberations. Arguably, the jury deliberation process is the most critical aspect of juror activity in the trial because it is here that the fate of the stakeholders is decided. Most jurors rank the process of deciding on a verdict and the fear of making a mistake among the top sources of stress in their trials. One problem often cited is their lack of a clear understanding of the judge's jury instructions, and research has demonstrated generally low comprehension of juror instructions in general (Greene & Bornstein, 2000; Steele & Thornburg, 1991). Accordingly, it is crucial for judges to ascertain that their juries understand the relevant instructions.

After days of listening to complex, confusing, disturbing, and/or boring testimony, just throwing a group of strangers into a room and expecting them to arrive at a just decision may be more a reflection of naive optimism than reality. The conduct of jury deliberations can range from polite and civil to something resembling a dog fight. Most jurors report that they would have liked some guidelines for their deliberations. Especially in tense criminal trials or where jurors are having difficulty getting along, judges should be prepared to

provide some guidelines for cooperative and collaborative deliberation, such as listening to one another's points without interruption, disagreeing respectfully, and not taking arguments about the case personally. Business people take hours of courses and training seminars on decision-making processes, conflict resolution strategies, and how to conduct productive meetings (Miller, 2008d) – shouldn't juries be given some guidance on this as well? If jury sequestration is a possibility in this trial, prepare jurors for this in advance, from the outset of jury selection.

Clinical Measures

The following recommendations entail more of an interface between judicial and mental health professionals in terms of providing specific interventions to help jurors cope with stress. There are some things that judges and court personnel can do; other approaches require the direct or consultative role of a qualified mental health professional (Antonio, 2006; Bienen, 1993; Bornstein et al., 2005; Casey, 1998; Dabs, 1992; McAree, 2004; Miller et al., 2007).

Pre-trial interventions. This is the proactive aspect of juror stress management. The purpose of pre-trial interventions is to prepare jurors ahead of time for the stress they may experience during the course of a trial. These measures include informal discussions or prepared educational modules about the potential effects of stress, how to recognize symptoms, and how to utilize a range of coping techniques. The techniques themselves are familiar from stress management applications in other fields, such as law enforcement and emergency services (Miller, 2008a, 2008b).

Juror stress debriefing. Sometimes it may not be clear how stressful a trial has been until it has ended, at which time appropriate follow-up mental health services may be required (Goleman, 1991). Although court-sponsored services for crime victims exist in all 50 states (Miller, 2008c) and psychological services for law enforcement have existed in most jurisdictions for decades (Miller, 2006b), prior to 1990 there were few institutionalized programs through the courts for providing any kind of mental health services for jurors (McAree, 2004). Following several highly-publicized trials containing horrific evidence, including the Jeffrey Dahmer serial cannibalism trial, the trial of the Oklahoma City bombers, and the Pam Basu trial, in which a mother was dragged and mutilated during a carjacking, courts have begun offering psychological services to jurors (Bell & Feldman, 1992;

Feldman & Bell, 1991, 1993; Hafemeister, 1993; Hafemeister & Ventis, 1992), largely in the form of one or more clinical varieties of *critical incident stress debriefing* (CISD) approaches, part of the larger domain of *critical incident stress management* (CISM), familiar to most readers of this journal (Everly & Mitchell, 1997; Miller, 1998c, 1999; Mitchell & Everly, 2003).

Developed in the field of public safety and emergency services, the debriefing model has now been applied to a wide range of crises, including crime victimization, natural disasters, and victims of terrorism (Miller, 1998c, 2008c). As developed in the emergency services field, CISD debriefing is a peer-led, clinician-guided process, usually consisting of one or more mental health professionals and one or more peer debriefers, i.e. fellow police officers, firefighters, paramedics, or crisis clinicians who have been trained in the CISD process and who may have been through critical incidents and debriefings in their own careers. The purpose of the debriefing is to normalize and detoxify the immediate traumatic stress reactions being experienced by the subjects and to strengthen resistance to further psychological disability. This is done through a semiformal seven-stage process, including the introduction, fact, thought, reaction, symptom, education, and reaction phases, designed to ease the process of ventilating distress, but then reseal psychological stability and encourage natural healing, aided, if necessary, by follow-up referral to additional mental health services.

Recent applications have expanded the use of CISD techniques with civilian groups. Bell & Feldman (1992) and Feldman & Bell (1991, 1993) developed a post-trial debriefing model specifically for jurors and other court personnel that is essentially similar to the crisis debriefings utilized for victims of crimes, natural disasters, or similar traumas. In general, effective debriefing sessions reduce stress, offer information on mental health services for those who might need it, provide closure, promote confidence in the judicial system, and enhance satisfaction.

As with most interventions, controversy exists. Bornstein and colleagues (2005) conducted a study that measured jurors' stress before and after a post-trial debriefing and found that, while jurors overwhelmingly said that they found the debriefing intervention helpful, their measured stress levels and symptom indices were similar at pre- and post-debriefing. Juror stress levels were lower at one month post-trial regardless of whether they had received the debriefing service or not. This, in fact, is an intriguing finding that runs through the stress debriefing efficacy literature:

participants frequently say it helps, but formal measurements of distress or symptoms remain unchanged (Arendt & Elklit, 2001).

As with stress debriefing in other contexts, a major part of the problem with using this intervention with jurors probably relates to the appropriateness of its application; mental health clinicians who advise the courts should guide court officials to use this technique only where it is legitimately needed (Casey, 1998). For example, for trials that involve relatively low levels of stress, jurors may need only general discharge instructions from the trial judge prior to being dismissed. In general, informal meetings with the trial judge can provide a sense of closure for the jurors. In more stressful trials, the judge may choose to hold a more lengthy discussion with the jurors or bring in a mental health professional to conduct a formal debriefing. This may be the case in particularly gruesome trials or those which attract a great deal of media attention. However, surveys indicate that some judges like to handle these sessions on their own, only rarely calling in a mental health professional (Bornstein et al., 2005; Casey, 1998; McAree, 2004). Other judges seem to recognize that this is out of their league and are only too happy to find a mental health professional who will take over – if there are any available who do this kind of work (Miller et al., 2007).

Some recommendations for optimizing the juror debriefing session (Bornstein et al., 2005; Miller et al., 2007) include:

- Consider the best time of day for the debriefing. The afternoon the trial ends may leave jurors feeling drained; all they want to do is go home. Set up a separate day for the session, perhaps giving jurors a few days to recoup.

- Make the jurors feel comfortable. Debriefing should be voluntary and there should be no stigma attached. Nothing that goes on in the session should be on the record – the trial is over; this is solely for the jurors' well-being.

- Unlike public safety professionals, jurors may not quite know how to proceed, so prime the conversational pump to get people talking, but maintain control over the discussion, so that it helps, not hurts. Encourage productive venting, not unhealthy spewing or accusing. Keep the focus on the positive.

- Positive focus includes normalizing juror stress. This should be conceptualized as a normal reaction by

normal people to an abnormally challenging situation. Reassure the jurors that they did their best at a difficult job in making a crucial decision.

- Cover any lingering questions jurors may have. Address concerns about safety and fears of retribution. Help jurors deal with the media. Seek juror feedback as to how things could be improved in the future so that they feel part of the solution.

In cases where the judge suspects that jurors are experiencing significant stress or showing symptoms of a serious mental disorder, they can refer the juror to a qualified mental health professional for more individualized counseling – again, courts should be proactive in identifying clinicians in the community who can serve as resources for these services.

Combined interventions. One criticism that has been leveled against debriefing-type interventions is that their standard, one-size-fits-all format lacks the flexibility to deal with diverse types of people and problems. While the CISM model continues to expand and adapt to new challenges, Nordgren & Thelen (1999) have developed a multifaceted intervention program they call *Graduated Jury Stress Management* (GJSM) which contains five intervention levels that are administered according to the stress level of the individual juror. Although GJSM is designed to be a post-trial intervention, some aspects of it (i.e. written instructions) could also be adapted as a pre-trial intervention:

- *Level 1: Basic Information.* Jurors who have not yet evinced any problems simply receive written educational materials about stress reactions and potential coping strategies.

- *Level 2: Stress Management Instruction.* This applies to jurors with mild stress levels. The judge individually gives these jurors basic stress management information along with the standard post-trial discharge instructions.

- *Level 3: "Flexible Defusing."* Jurors with moderate stress receive a 15-20 minute debriefing during which a mental health professional explains normal stress reactions, offers coping strategies, and assesses individual jurors to determine if further clinical services are necessary.

- *Level 4: "Jury Stress Debriefing."* This intervention is adapted from the CISD model commonly utilized

with emergency workers and is applied to jurors who are showing significant levels of stress.

- *Level 5: Individual Psychotherapy.* This may range from a few sessions to ongoing treatment and is intended for jurors who are showing extreme stress reactions and/or clinical symptoms of a mental disorder. Not uncommonly, these may have been jurors who had difficulties in functioning prior to the trial and the trial stresses have exacerbated their preexisting or dormant psychopathology.

Clearly, Nordgren & Thelen's GJSM (1999) appears to formalize the stages of intervention that most clinicians would apply to the treatment of traumatic stress cases. But, as effective as these proactive and responsive clinical measures might be, and as best we may try to make procedural changes within the existing American jury system, perhaps real efforts to increase accuracy and efficiency and reduce stress within the jury system can only come when more fundamental changes are considered.

Conclusions and Recommendations

Based on a review of the literature and my own clinical and forensic experience, the following recommendations for improving the civil and criminal justice systems in the United States are offered.

Let judges judge. Just as we maintain strict training and credentialing criteria for authorizing people to call themselves doctors and attorneys and to practice medicine and law, we should do the same for those who practice jurisprudence; we should let the judges judge. Many countries already do this. In some court divisions, such as family court, judges, not juries, often decide cases. In many other cases, defendants have the option of waiving a jury trial and opting for a *bench trial*, which is having the judge hear the case and render a verdict.

Utilize professional jurors. Okay, even doctors have assistants to perform routine clinical tasks and lawyers use paralegals for similar purposes because there just aren't enough physicians and attorneys to go around. But these paraprofessional staff still receive some degree of training and certification to do what they do. So why not recruit reasonably intelligent and educated citizens on a voluntary basis, provide them with specialized training in the law, decision-making, and interpersonal skills, and credential them as *Certified Jurors* or some such appellation.

There could even be board-certified subspecialties within the Certified Juror field, such as "certified medical juror," "certified mental health juror," "certified business-economics juror," "certified industrial-mechanics juror," and so on. The next step would be to compensate them for their service (just as medical assistants and paralegals get paid a fair wage) and utilize them as part of a rotating pool of professional jurors who can objectively decide cases with a basic prerequisite of knowledge and training both in the law and in the subject matter of the case.

Meanwhile, professionals within the legal system, and the mental health clinicians who advise them, must strive to make jury service as efficient, accurate, and comfortable as possible. Whether in the emergency room or the courtroom, people's lives are at stake, in one way or another. We must assure that those who are called to make the crucial decisions are afforded the proper conditions to do so in a manner that serves justice.

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A Systematic, Integrated Behavioral Health Response to Disaster

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Abstract: *The behavioral health aspects of disaster have not historically been addressed as a priority in emergency preparedness planning. The overwhelming evidence of significant to severe psychological consequences of disaster has remained in the shadows compared to the more widely televised dramatic physical destruction and trauma. However, the aftermath of September 11, as well as 2005's Hurricane Katrina and 2008's Hurricane Ike disasters reminded the country that the psychological footprint of disaster easily dwarfs the more visual physical footprint. Disaster behavioral health is now recognized as a major public health concern and a national issue that deserves a logical, systematic, proactive approach within the structure of the National Incident Management System (NIMS) and Incident Command Structure (ICS; Fojt, Cohen, Wagner, 2008). With increased commitment, collaboration, and organization we can better utilize our qualified yet limited behavioral health resources, meeting the predictable needs of future disasters' survivors, communities, and responders. [International Journal of Emergency Mental Health, 2008, 10(3), pp. 219-224].*

Key words: *disaster behavioral health, plan, asset typing, all hazards, assessment, triage, Incident Action Plan (IAP), National Incident Management System (NIMS), Incident Command System (ICS), National Response Framework (NRF), Emergency Support Functions 8 (ESF 8), emergency management*

Recent Experiences with Natural Disasters

The Gulf Coast of the United States, with its history of numerous natural disasters, inevitably imparts ample exposure to disaster situations and a keen set of first hand experiences chock-full of disaster management mishaps and successes.

In 2004, Florida was bombarded with four major hurricanes in a 50-day period: Charlie, Frances, Ivan, and Jeanne. The rain, wind, and threats of storm surge found residents caught between removing the shutters from their windows, and reinstalling them within days for the next storm looming off Florida coastlines. Exhaustion, frustration, and anger, in addition to the physical damage caused by the storms, impeded survivors' ability to respond to the repeated challenges. For many survivors the deep unhealed wounds and scars still linger today. Disaster relief was stymied, moving in to assist but then evacuating to safer ground in response to the threat of the next encroaching storm.

Quite predictably, Hurricanes Katrina, Wilma, Rita, Gustav, and Ike left in their wake a similar pattern of physical

and psychological destruction. Responders, who included emergency first responders, repair personnel, catastrophe adjusters from insurance companies, volunteers, and survivors' families and friends, became secondary disaster survivors as well. Tempers flared, anger ensued, and many relationships unfortunately fell victim to the psychologically destructive consequences of the storms.

With compounding evidence of the heavy toll people face in times of disaster, it is clear that a systematic, comprehensive approach to disaster behavioral health issues is timely and necessary. We now know through experience and empirical evidence that human resiliency can be enhanced through preparation, timely accurate information, and access to crisis intervention services offered by trained personnel.

So, the good news is that many of the critical services and working components of a disaster behavioral health response that can minimize psychological distress already exist. The challenge internationally is to now create a framework to efficiently and effectively manage the delivery of these services. What follows is an example of the creation and development of just such a program.

The Consortium

The Florida Crisis Consortium (FCC) was formed in the aftermath of the 2004 hurricane season. Comprised of representatives from the state of Florida's Department of Health, Department of Children and Families, Department of Education, several universities, faith-based organizations, the American Red Cross, Florida Crisis Response Team, Green Cross, Critical Incident Stress Management (CISM) of Florida, community based mental health agencies, private industry and other interested stakeholders, this group is all-inclusive and has held an open invitation policy since its inception.

The goals of the Consortium were to collectively construct a disaster behavioral health plan that would eventually become part of the State's Comprehensive Emergency Management Plan (CEMP). The plan needed to be consistent with the National Incident Management System (NIMS), the National Response Framework (NRF), and work within the Incident Command Structure (ICS). Asset-typing of teams (the universal identification of team members' skill sets, experience, and training), credentialing standards, and protocols were developed to support the structural processes. Obviously, the plan needed to be constructed with collaboration and input from all interested stakeholders. Account-

ability, backfill plan, clear operational protocols and defined lines of authority were established. Funding was essential for sustainability; it was secured through the State of Florida's Emergency Management Department, Emergency Support Function 8 (ESF 8), Public Health and Medical. It took roughly two years to complete the first approved plan for statewide applications. Like any plan, the need to refine and adjust is anticipated with utilization and review provisions.

The Florida Disaster Behaviorial Health Response Plan

The intent of the plan is to mitigate the adverse effects of disaster-related trauma by promoting and restoring psychological well-being and daily life functioning in affected individuals and communities. And like other preventive mental health interventions, it is aimed at providing supportive human contact as close to the time of impact as possible.

The plan encompasses the psychological, social, behavioral, and educational-related supports required to facilitate recovery. It provides a framework for the following activities:

- All hazards planning for disaster events,

- Responding to the immediate impact of a disaster event, and

- Assisting residents and visitors in recovering from the impact of a disaster.

Research shows that the majority of people are resilient, and following a disaster they will return to pre-event psychological functioning within a relatively short time. Outreach, early psychological support, and referrals can assist disaster survivors to meet new challenges, offering them assistance in their recovery process and returning them to pre-disaster performance and functioning levels.

The public will require information on how to recognize and cope with the short and/or long term risk of sustained stress caused by a disaster or arising from its effect. An informed public is better able to respond and cope with the stresses associated with a disaster.

Individuals with special needs, especially those with preexisting mental illness and substance abuse disorders, older individuals, children and adolescents, or people with disabilities may be more prone to experience severe stress reactions and adverse outcomes than other populations.

The plan creates regional behavioral health consultants to work with communities to develop local capacity, and creates regional disaster behavioral health teams to respond, at the request of local jurisdictions, by assessing behavioral health needs resulting from an incident and managing the behavioral health response.

At the heart of the plan are the disaster behavioral health teams, one located in each of seven regions throughout the state, all overseen and coordinated by an Operations Director and Clinical Director, functioning out of the state Emergency Operations Center (EOC; or other remote location as weather and other conditions dictate). These teams provide a multi-tiered response, as they consist of personnel with escalating levels of experience and training. Each team has three advanced or specialty responders, two licensed mental health professionals, and a primary and backup team leader. Team composition was decided upon after comprehensive literature review, communication with other governmental entities and non-governmental organizations (NGOs), and much discussion as to just what personnel assets —in terms of skills, experience and knowledge — were required to get the job done. Another innovative addition to the traditional mental health response model is the adoption of a triage matrix for assessment, much like that traditionally used in pre-hospital care by emergency medical services.

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│                   Table 1.                     │
│  Regional Disaster Behavioral Health Assessment │
│    Team (RDBHAT)Type II team composition:       │
│                                                │
│  2 – Team Leader Level (primary and secondary)  │
│  2 – Licensed Mental Health Professionals       │
│  3 – Advanced Providers                         │
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Florida's statewide disaster behavioral health plan, operational since November, 2006, encompasses pre-incident education and coordination with local EOC and other emergency services providers; selection of experienced candidates with the right skills; training and preparation of those personnel; support of accurate assessment and triage; and provision of effective post-incident support and psychological crisis intervention, to include referral options and follow-up.

Coordinating the Plan

Requesting an assessment team begins at the county level, often referred to as the local level. In emergency management all disasters begin and end at the local level. When a disaster occurs and local mental health resources are exhausted, the Incident Commander can request additional assistance through Emergency Support Functions 8 (ESF 8) at the local EOC. The local ESF 8 representative then makes a request to the state EOC through their ESF 8 desk. At that point a Regional Disaster Behavioral Health Assessment Team (RDBHAT) is mobilized by the Operations Director in consultation with the Clinical Director to respond to the staging area within 24 hours of the request. With the support of the state EOC, supplies and other needed necessities are transported to the staging area for the teams to become operational as soon as possible. Within the first full day of being onsite, the RDBHAT will conduct an assessment of the targeted population, an assessment of the current state of local, indigenous mental health facilities and other service providers, brief with local authorities, make recommendations to the local ESF 8 representatives, and submit an Incident Action Plan (IAP) to the Operations Chief. The IAP will outline the recommendations for behavioral health services with measurable objectives and request Disaster Behavioral Health Teams (DBHT) as needed to provide the services.

Once the teams are on the ground the RDBHAT switches roles and becomes an oversight and management team. The RDBHAT is responsible for briefing all incoming teams— whether state-sponsored, NGO's such as the Red Cross, or faith-based volunteers—by providing assignments consistent with the assessments that they had conducted; assisting in the coordination and management of logistics; conducting end of day briefings; and monitoring team members for exposure and compassion fatigue. Prior to demobilization, the RDBHAT may recommend and/or conduct assessments and interventions aimed at health and wellness of all deployed team members. The intention is to monitor and ensure safety of all those who come to help.

Post-incident, RDBHAT collects all the data from the responding teams to compile a report to the State on the number of survivors, number of survivors assisted, worked hours, costs, and other pertinent information that may be useful in the after-action phase. The FCC then reviews the

reports to develop revisions to the Plan, based on lessons learned. A Post Action Staff Support (PASS) meeting — a variation on the theme of a debriefing for the debriefers – will also be scheduled for all team members participating in the deployment.

Small-scale Initial Test

The first opportunity to deploy a Plan-coordinated disaster behavioral health assessment team was Ground Hog Day, 2007, when three tornados ripped through central Florida, claiming 21 lives and creating $10 million in property damage. The tornados took many by surprise, striking in the early morning hours on Friday, February 2, 2007, while many were still in bed asleep. One tornado reached level EF 3, as winds between 160-165 mph were clocked.

One community in the path of the tornado, made up of approximately 65,000 residents, suffered extensive damage. The local fire department made its request through the local ESF 8 representative for a team to respond. In less than 24 hours, a RDBHAT team was on the ground conducting the initial assessment. By the next morning it was decided that this RDBHAT team could provide the needed services and that they did not need to request any other disaster behavioral teams to come in. The Team worked 12-14 hours a day, conducting one-on-ones, crisis management briefings, and distributing information on stress management following disasters. The Team stayed in constant contact with the local ESF 8 representatives and their RDBHAT Operations Director. This ensured maximum utilization of resources and continuous communication between the field and the EOC. The deployment completed operations at the end of the fourth day.

The Post Action Staff Support (PASS) meeting was held three weeks later. The Team that deployed (with the exception of one member) and the Operations Director attended the PASS. One of the State's Clinical Directors conducted the meeting. This same group contributed to the After Action Report.

Observations & Findings

The After Action Report revealed several important findings:

- The time to establish relationships with other agencies involved in community mental health is before disasters occur.

- Mental health professionals must have a good working knowledge of the Incident Command System and obtain the FEMA IS 100 and IS 200 courses prior to deployment.

- Documentation and Incident Action Plans are mission critical.

- The need for equipment, such as computers, satellite phones, wireless internet connections, and pre-printed materials, should be given equal importance regardless of the perceived scope of the event. Although all these had been procured in advance, because of the small size of this event, not all support services were activated and the items were not delivered to the team that needed them. In preparation for a hurricane, for example, delivery to the staging area would have occurred in advance.

- No matter how big or small an event the RDBHAT needs to attend a Post Action Staff Support Program (PASS) post deployment. Arranging a convenient time for the PASS is difficult once the Team members return home because of the pile-up effects of being gone.

- Overall, the plan worked!

Conclusion

Our world is dynamic with unknown future challenges that we currently cannot even imagine. To be prepared for whatever comes before us is a daunting assignment. It requires a meeting of the minds to plan strategies that will work to preserve the health and well-being of our citizens, our neighbors, and our responders. For multiple partners to develop a plan that will provide the greatest good to those impacted by disaster requires a broad understanding of emergency management "systems" and an overarching need to blend expertise in two entirely different fields — emergency management and mental/behavioral health. And because we now know that the psychological and emotional aftereffects of disasters can leave a footprint that may be 50 times the size of the footprint left by the physical consequences, the time to address these disaster behavioral health strategies is now.

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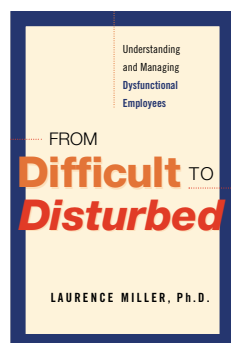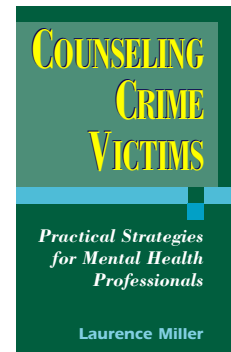
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Selected Annotated Journal Resources

Kristina Perry Lloyd, MS and Ian D. Goncher, MS

Hepp, U., Moergeli, H., Buchi, S., Bruchaus-Steinert, H., Bernd, K., Sensky, T., & Ulrich, S. (2008). Post-traumatic stress disorder in serious accidental injury: 3-year follow-up study. *The British Journal of Psychiatry, 192***, 376-383.**

TYPE OF ARTICLE

- Longitudinal

OBJECTIVE/PURPOSE OF THE ARTICLE

- To determine the prevalence of PTSD and sub-threshold PTSD 3 years post-accident.

- The authors sought to identify long-term predictors of PTSD in a sample of severely injured accident survivors, using the Clinician-Administered PTSD Scale (CAPS).

- The authors aimed to describe changes in PTSD severity and identify different courses of PTSD symptoms.

- The authors intended to study the association of comorbid symptoms of anxiety and depression over time.

PROCEDURE

Participants

- Participants (*n* = 135) were recruited from the Department of Traumatology at Zurich University hospital, and were there between January 1996 and June 2000.

- All patients qualifying for the study had sustained accidental injuries that caused a life-threatening or critical condition requiring referral to the intensive care unit.

- Additionally, individuals were required to meet the following criteria to be included in the study:

- Age 18-70 years

- Fluent in the German language to participate in the clinical interview and complete questionnaires

- Clinical condition severe enough to allow participation in the clinical interview within 1 month of the accident.

- An Injury Severity Score (ISS) of 10, and a Glasgow Coma Scale (GCS) score of 9 were required

  o Patients were excluded if they had any serious somatic illness, had been under treatment for any mental disorder immediately prior to the accident, had shown clinical signs or symptoms of mental disorders that were unrelated to the accident, had been referred due to attempted suicide, or were victims of a violent assault.

Procedure

- Patients referred to the intensive care unit following injury were consecutively screened over a period of 18 months.

- The initial interview was performed an average of 13 days (s.d.=7, range 3-29) after the accident.

- Follow-up interviews were performed 6, 12, and 36 months after the patient's accident.

- A total of 90 participants participated in all four interviews.

Measures

- Assessment of PTSD symptoms was made using the Clinician Administered PTSD Scale (CAPS) which is a structured interview encompassing the DSM-IV criteria. Additionally, the authors used the Impact of Events Scale (IES) to assess PTSD symptoms. The IES is a fifteen item self-rating questionnaire comprising two subscales (Intrusion and Avoidance).

- Additionally, the Symptom Checlist-90-Revised (SCL-90-R) was used to assess a broad spectrum of psychological complaints.

- Patients' social networks and recent life events were assessed using a questionnaire complied from a revised version of the Social Network Index, an adapted version of the Social Support Questionairre, and the Inventory for Determining Life-Changing Events.

- Biographical protective and risk factors for the development of psychological and psychosomatic disorders were determined in a semi-structured interview based on a compilation of established factors. Each item was scored as present (1) or not present (0). The most predominant factors were low-SES of parents (51%), severe physical disease of one parent (37%), contact wit social services (29%), age difference between siblings less than 18 months (21%), and chronic marital problems of parents (19%).

- Antonovsky's Sense of Coherence questionnaire (SOC) was used to measure participants' resiliency to stress and capacity to cope with stressful events. The SOC used was the 29-item full version. Higher scores indicate that participants have a greater capacity to handle stress, find it worthwhile to rise to meet the challenges they may face, and perceive stressful events as predictable and explicable.

- The active, problem-oriented coping scale of the Freidburg Questionnaire of Coping with Illness (FQIC) was used in this study.

- The 14-item self rating Hospital Anxiety and Depression scale (HADS) was used to assess anxiety and depression in medical patients.

- The subjective appraisal of the severity of the accident was rated by the patients on a Likert scale ranging from 1 (very slight) to 5 (very severe).

- For the assessment of the life threatening nature of the accident, patients were asked whether they thought their life was at risk during or after the accident.

RESULTS

- There was no significant correlation between ISS and the patients subjective appraisal of the event (threat to life: Pearson $r = 0.07$; accident severity: Pearson $r = 0.06$). Experiencing the accident as life-threatening was reported by 21 patients (23%).

- At baseline 5 participants (6%) met all criteria for PTSD (except the duration criteria) and 19 (21%) met criteria for sub-threshold disorder. At 6 months 3 participants (3%) were diagnosed with full PTSD and 8 (9%) with sub-threshold disorder. At 1 year 2 participants (2%) were diagnosed with full PTSD and 10 (11%) were diagnosed with sub-threshold disorder. Three years after the accident 4 participants (4%) met criteria for full PTSD and 9 participants (10%) for sub-threshold disorder. At some point during follow-up, 32 patients (36%) met the criteria for either full or sub-threshold PTSD.

- Mean CAPS scores were used to indicate severity of PTSD symptoms over time. The mean CAPS score at baseline was 18.9 ($SD = 15.0$, range 0-79), 10.9 ($SD = 13.4$, range 0-57) at 6 months, 13.4 ($SD = 15.6$, range 0-64) at 1 year, and 10.6 ($SD = 15.2$, range 0-60) at the three year follow-up, indicating a relatively low overall PTSD symptom level in this sample.

- Predictors of PTSD at three years were examined using a prediction model the authors had established for the 1-year follow-up. For the multiple regression analysis, complete data for 89 participants were available. The authors model remained largely stable over time explaining 32% of the variance of PTSD symptoms 1-year post-accident ($n = 89$, $r = 0.63$, $r^2 = 0.32$, $p = < 0.001$) and 23% at 3-years post accident ($n = 89$, $r = 0.57$, $r^2 = 0.23$, $p = < 0.001$). Biographical risk factors and the IES Intrusion subscale contributed significantly to the prediction; however, patient's sense of threat to life and active problem-oriented coping (FQCI), significant at one year, no longer was a predictor.

- To search for variations in the natural course of PTSD symptoms the authors concentrated on patients with a CAPS score of 30 or more at any measurement time (28%, $n = 25$). The authors identified three types of PTSD course using the following procedure. First, there was a separation of patients showing an initial increase in PTSD symptoms (increasing group $n = 10$) from patients showing an initial decrease in PTSD symptoms (decreasing group; $n = 15$) in the first 6 months post-trauma. Next, they subdivided the group with an initial decrease into a group scoring above 30 on the CAPS at 2 weeks only ($n = 8$) and a group of patients with a secondary increase of CAPS score above 30 later on (delayed increase group; $n = 7$). The three groups of PTSD courses and the re-

maining less symptomatic group did not differ with regard to age ($F = 0.49$, $df = 3, 86$, $p < .056$) and gender ($\chi^2 = 2.08$, $df = 3$, $p < 0.56$).

- Post hoc analyses revealed that the increasing group and the delayed increasing group represented a homogenous subset of means compared with the decreasing group and patients who never scored above 30 on the CAPS. Accordingly the increasing and delayed increasing group reported significantly more stress due to recent life events assessed (t-tests, all $p < 0.001$) than the decreasing group combined with the group scoring less than 30 on the CAPS.

- At the 1 year assessment, 84 of the 90 patients (93%) completed the HADS. Seven patients (8%) scored above the cut-off level of 7 points for possible depression. Patients diagnosed with full or sub-threshold PTSD were more likely to have scores above the cut off for depression (Fisher's exact test, $p < 0.01$). Fifiteen (18%) patients scored above the cut off for possible anxiety disorder. Patients diagnosed with full or sub-threshold PTSD were more likely to have scores above the cut off for anxiety (Fisher's exact test, $p < 0.001$). At 1-year the CAPS correlated significantly with the HADS depression (Pearson $r = 0.61$, $p < 0.001$) and the HADS anxiety (Pearson $r = 0.71$, $p < 0.001$) at the same assessment.

- At the 3 year follow-up, HADS data were available for 87 patients (97%). Nine patients (10%) scored above the cut-off level of 7 points for possible depression. Again, Patients diagnosed with full or sub-threshold PTSD were more likely to have scores above the cut off for depression (Fisher's exact test, $p < 0.001$). Seventeen (19%) patients scored above the cut off for possible anxiety disorder. Patients diagnosed with full or sub-threshold PTSD were more likely to have scores above the cut off for anxiety (Fisher's exact test, $p < 0.001$). At 3-years again the CAPS correlated significantly with the HADS depression (Pearson $r = 0.77$, $p < 0.001$) and the HADS anxiety (Pearson $r = 0.80$, $p < 0.001$)

- At 3-years six patients (7%) reported pharmacological and/or psychotherapeutic treatment related to the accident. Of these, four were diagnosed with PTSD or sub-threshold PTSD at any assessment.

CONCLUSIONS/SUMMARY

- The relatively low incidence of PTSD is remarkable considering the severity of the injuries sustained by the participants.

- This finding is congruent with several other studies examining PTSD rates after severe injury.

- PTSD becomes less predictive at 3-year follow-up. However, the author's model explained 32% of the variance at 1-year compared with 23% at 3-years, illustrating the relative stability of the disorder.

- The findings underscore the importance of assessing prevalence rates, as well as the individual's clinical course.

- Co-morbid anxiety and depression scores suggest that it is important not to only focus on PTSD, and be sure to examine non-specific psychiatric conditions related to a severe accident.

LIMITATIONS

- The restriction of the sample to include only German speaking participants limits the external validity.

- The decrease of the variance explained from 32% to 23% at 3-year follow-up may reduce the clinical relevance of the model.

- The low level of PTSD symptoms in the sample might limit the prediction model with populations with higher PTSD rates.

- The grouping of biographical risk factors form 0-17 assumes that the higher the number the higher the risk. This does not take into consideration the full impact these different factors may have. The biographical risk factors assessed in this study were general psychosocial risk factors in childhood predicting psychological health in the long term, not specifically the development of PTSD.

Goldman, R. L., Radnitz, C. L., & McGrath, R. E. (2008). Posttraumatic stress disorder and major depression in veterans with spinal cord injury. *Rehabilitation Psychology, 53*(2), 162-170.

TYPE OF ARTICLE

- Exploratory Factor Analysis

OBJECTIVE/PURPOSE OF THE ARTICLE

- This study explored the relation between posttraumatic stress disorder (PTSD) and major depressive disorder (MDD) in veterans with spinal cord injury and to compare those results with results found in veterans who had sustained other traumatic injury.

PROCEDURE

Participants

- A total of 173 male veterans and 1 female veteran were recruited from services at Veterans Affairs Medical Centers in the New York metropolitan area between 1993 and 1995.
- 124 participants had traumatic spinal cord injuries (SCIs) and were recruited from inpatient and outpatient SCI services.
- An additional 50 participants were recruited from orthopedic services and rehabilitation medicine services. These individuals had sustained other traumatic injuries, comparable to those of the veterans with SCI, and were used as a comparison group.
- Mean age of the participants was 49.3 years ($SD = 14.3$).
- Fifty-four percent of participants identified themselves as White, 33.9 % as African American, and 12.1 % as Latino.
- Of the 174 participants, 69 had a history of combat exposure, 51 served in combat theaters but were never directly involved in combat, 53 had military experience that did not include serving in a war theater, and 1 participant's information was unavailable.
- 38.5 % of the sample were married, 30.5 % were divorced or separated, 27 % were single, and 4 % were widowed.
- Among those participants diagnosed with SCI, 57.3% were tetraplegic and 42.7% were paraplegic.
- The most common source of the injury was motor vehicle accidents (37.0%), followed by falling (27%), non-military violence (12.1%), sports accidents (7.5%), other traumatic injuries (5.7%), combat violence (5.6%), military non-combat violence (4.0%), and medical or surgical injuries (1.1%).
- Participants injuries had occurred on average 18.46 years ($SD = 19.8$) prior to their recruitment for the study.
- For those diagnosed with both MDD and PTSD, the mean time since injury was 15.13 years ($SD = 18.3$).

Procedure

- Analyses were based on data that were collected over a period of 18 months.
- Before participants were recruited, researchers were trained to administer the Structured Clinical Interview for DSM-III-R (SCID) and Clinician-Administered PTSD Scale (CAPS).
- Interrater reliability estimates obtained after 13 CAPS interviews, yielded 100% agreement between raters diagnosing current PTSD, and 92% for lifetime PTSD diagnosis.
- Diagnoses of PTSD were assigned only in cases were there was consensus on both the CAPS and the SCID. Agreement between instruments was reached in 93% of the cases for current PTSD and 89% for lifetime PTSD.
- To recruit participants, research assistants approached persons with SCI and/or other traumatic injuries and asked if the would participate in the study. After a complete description of the study, informed consent was gathered. Twelve volunteers were excluded due to scoring below cut-off on the Mini-Mental State Examination (MMSE) and 1 was excluded due to incomplete data.
- Those not excluded were given the SCID and CAPS. The Beck Depression Inventory (BDI) and personal history form were administered in writing or by interview.

Measures

- Authors used the personal history form to gather demographical information and data related to the trauma.
- The BDI was used to assess depression. The BDI was used because of its wide acceptance as a reliable and valid tool.
- Posttraumatic stress was assessed using the Impact of Events Scale- Revised two months and six months after the event.
- The CAPS was used to assess current and lifetime PTSD prevalence. Test-retest reliability estimates for the CAPS range from .77 to .96 and a coefficient á= .94.
- The MMSE was used to screen for possible cognitive impairment that may interfere with the ability to understand and accurately answer questions.
- The SCID was used to assess current and lifetime psychiatric diagnoses. The authors used the SCID, Non-patient Vietnam Version to measure the presence or absence of PTSD symptoms. Reliability estimates of the

SCID have been shown to be comparable to those of other diagnostic interviews, with overall weighted kappa values of .61 for current disorders and .68 for lifetime diagnoses.

RESULTS

- To examine the relationship between PTSD and MDD in persons with SCI, the authors conducted three different analyses.

- Pearson correlations were computed to examine the relation between corresponding items (i.e., anhedonia, impaired sleep, and concentration problems) from the PTSD and MDD modules of the SCID, BDI, and CAPS. The mean correlation value for those symptoms endorsed as part of a current diagnosis in the total sample was 0.35, 0.33 for those with SCI, and 0.49 for person without SCI.

- The authors implemented an exploratory factor analysis of the items from the CAPS and BDI. The authors used a parallel analysis to determine how many factors to retain on the basis of preliminary principal components analysis. This resulted in retaining two factors for both non-SCI and SCI samples. The authors then used principal –axis factor analysis with varimax rotation to determine factor loadings.

- The authors selected a cut-off of .40 for loadings to identify the items that best characterized each of the two factors.

- For the SCI group, the first factor loaded ≥ .40 on 19 of the 21 BDI items. The second factor loaded ≥.40 on 14 of the 17 CAPS items. The BDI item that corresponds to indecisiveness and the CAPS item that corresponds to foreshortened future loaded on both factors. Neither factor loaded on the above criterion for the following items work ability and weight loss (BDI), psychogenic amnesia, irritability or outburst of anger, and exaggerated startle response (CAPS). This two-factor structure suggests that in those with a SCI, MDD and PTSD are the two distinct reactions to trauma.

- The factor loadings on those without SCI were more complicated. Specifically some items did not load on the same factor as did other items from their respective scales, some did not load on either of the two factors, and some loaded on both factors.

- Five of the CAPS items loaded on the first factor with the majority of the BDI items, whereas four of the BDI items loaded on the second factor with the majority of the

CAPS items. Therefore, in participants who have experienced a non-SCI traumatic injury, MDD and PTSD represent two independent reactions, but are not as distinct as in individuals with SCI.

- Pearson correlations were computed between the four factors to determine if the factor structure was consistent across the two samples. Examining the same factor across samples yielded (r = .62 and .63). Within population correlation between factors were (r = -.68 and -.76).

CONCLUSIONS/SUMMARY

- Results suggest that the overlapping symptoms in PTSD and MDD do not fully explain the co-morbidity among individuals with traumatic injury.

- MDD and PTSD represent two independent reactions following trauma in those individuals who have experienced either a non-SCI or SCI.

- The results show that symptom endorsement across measure is inconsistent.

LIMITATIONS

- There were a relatively small number of participants who were co-morbid with PTSD and MDD, which detracts from the robustness of the findings.

- Injuries occurred on average 18.46 years prior to recruitment, which raises the question that some of the participants may have manifested PTSD symptoms at an earlier time, and the symptoms may have remitted by participation.

- Additionally, 40% of the participants had combat exposure, whereas 30% served in combat theaters but were never directly involved in combat. Thus, a portion of the sample may have been subjected to additional traumas. Also, there is possibility that participants experienced other types of traumatic events before their SCI, such as crime victimization or child abuse.

- Participants may have experienced earlier traumas distinct form SCI injury.

- Participants were largely male veterans receiving care form Northeastern Veterans Affairs Medical Centers in urban, suburban, and rural settings. This calls into question if these finding can be generalized to other SCI populations.

Neuner, F., Onyut, P. L., & Ertl, V., Odenwald, M., Schauer, E., & Elbert, T. (2008). Treatment of posttraumatic stress disorder by trained lay counselors in an African refugee settlement: A randomized controlled trial. *Journal of Consulting and Clinical Psychology, 76*(4), 686-694.

TYPE OF ARTICLE

- Randomized controlled trial

OBJECTIVE/PURPOSE OF THE ARTICLE

- This study examined whether trained lay counselors can carry out effective treatment of posttraumatic stress disorder (PTSD) in a refugee settlement.

PROCEDURE

Participants

- A team of 12 research assistants were recruited from the refugee community, 50% were Somalian and 50% Rwandan. They were trained in a six-week course in principles of quantitative data collection and interviewing techniques.
- The sample consisted of 1,442 refugees randomly chosen using cluster sampling. Of this group, 884 refugees fulfilled DSM-IV criteria of PTSD. Finally, 277 individuals were chosen due to their close proximity to the research base in the settlement.

Procedure

- Analyses were based on data that were collected over the years 2003 and 2004.
- Participants were randomly assigned to a narrative exposure therapy (NET) group, trauma counseling (TC) group, or a no-treatment monitoring group (MG).
- Participants were approached by their counselors at their home and informed of the protocol with all refugees agreeing to participate.
- Participants who received treatment were reassessed 3 and 6 months later by the same local research assistants who had done the interviews for the survey and were blind with respect to the particular treatment condition.
- Individuals in the MG group were retested at 6 and 9 months.

- At 9 months the baseline psychopathological status of the participants in all three groups was assessed by a group of five expert interviewers who were not previously involved in any aspect of the trial.
- Nine refugees from the community (5 women, 4 men) with a mean age of 27 years were trained as counselors. Eduacation level of the counselors varied from primary school (*n* =1), secondary school (*n* =7), to university educated (*n* =1). Three of the trainees had lifetime PTSD, and two had current PTSD. These five trainees received NET treatment by the trainers as part of their education.
- Trainees were educated in a 6-week course on general counseling skills. The trainees were educated on all approaches used in the study. The trainers were all postdoctoral and doctoral-level personnel from the University of Konstantz, Germany, the aid organization Vivo, and Mbarara University of Science and Technology, Uganda.
- The head of the Ugandan Counseling Institute developed the TC treatment.
- Trainee counselors received intensive supervision for both approaches before allowed to work autonomously with participants.
- Both treatment types were conducted for 6 sessions (2 sessions per week) that were between 1 and 2 hours in length.
- In each protocol, the first session always included psychoeducation about the nature and prevalence of PTSD symptoms and what treatment would entail.
- NET was carried out as outlined in the NET manual.
- The TC condition was applied as a flexible treatment approach that combines a combination of a variety of counseling methods that can be implemented at the therapists' discretion. A main principle of TC was to relate current problems to past traumatic experiences. Additional skills included, non-directive active listening, problem solving, the exploration of coping skills, and grief interventions.

Measures

- The authors used a previously developed sociodemographical survey to assess nutritional, educational, and socioeconomic, displacement, and general demographic information.
- Traumatic experiences were assessed through a check-

list of 31 different types of traumatic events. The number of different experienced and witnessed types of traumatic events was used to estimate severity of trauma exposure.

- Posttraumatic Stress Diagnostic Scale (PDS) was used to assess PTSD diagnosis and severity. The wording of the PDS had to be adapted to during the translation process to ensure semantic equivalence across languages. In the author's translation, the sum score reached a retest reliability of 0.87 over a 2-week period.

- Physical symptoms were assessed using a checklist with six illnesses and symptoms that had been present more that 25% in a previous survey.

- The DSM-IV diagnosis of PTSD was assessed with the PTSD section of the CIDI. Trained local translators assisted in linguistically adapting this measure. The interview was conducted by Ph.D.-level psychologists or graduate students who had been extensively trained in PTSD assessment with the CIDI and other instruments.

RESULTS

- In the NET group, 4 participants (3.6%) dropped out or refused treatment. In the TC group, 22 participants (19.8%) did not complete therapy. The difference was significant, $\chi^2(1, N = 222) = 14.12, p = < .001$. Drop out did not differ significantly from treatment completers on any variable (all $ps => .20$).

- For the PDS sum score, a mixed-effects model was calculated with the PDS sum score as a dependent variable; participant as random effect; and treatment, time, nationality, Time x Treatment, and Nationality x Treatment as fixed effects. There was a significant main effect of time $F(2, 254) = 292.7, p < .001$), and nationality $F(1, 220) = 55.8, p < .001.$, with Somalians showing higher symptoms severity than Rwandans.

- The Nationality x Treatment and Time x Treatment interactions were not significant ($p = 0.87$, and 0.63 respectively).

- A contrast analysis using a Bonferroni-Holm adjustment of significance level revealed that participants improved from pretest to posttest $F (1, 254) = 463, p < .001$, but posttest and follow-up did not differ significantly $F (1, 254) = 0.4, p = .06$.

- To test the hypothesis of a superiority of both treatment groups in comparison to the MG group, the authors performed further analysis using the PDS sum score as de-

pendent variable. A mixed-effects model was calculated using participant as random effect, and treatment, time, and nationality, Time x Treatment, and Nationality x Treatment as fixed effects. There were significant main effects of time, $F(1,112) = 188.7, p < .001$, and nationality $F(1, 277) = 48.0, p < .001$, with the Somalians showing greater symptom severity than the Rwandans. Nationality x Treatment was not significant, $p = .67$. The Time x Treatment effect was significant $F(2, 112) = 6.03, p < .01$.

- A contrast analysis of the Time x treatment interaction, each treatment was compared to the MG group. Using a Bonferroni-Holm correction of significance level, TC was superior to the MG group $F(1,112) = 8.2, p = .0008$. NET was also superior to the MG group $F(1,112) = 8.2, p = .005$.

- Estimation of clinical significance of treatment effects was examined by inspecting the PTSD diagnosis made by experts at follow-up. In the NET group, 69.8% of participants no longer met criteria for PTSD, in the TC group 65.2% no longer had PTSD; however, only 35.8% were free of diagnosis in the MG group. Differences between the three group were generally significant $\chi^2(2, N = 108) = 6.3, p < .042$. Additionally the difference between the NET group and the MG group was significant $\chi^2(1, N = 53) = 5.7, p < .017$, as was the difference between TC and MG, $\chi^2(1, N = 65) = 4.4, p < .036$.

- To estimate the changes in physical health symptoms, the authors calculated a sum score of the number of physical health symptoms experienced in the last year for baseline and the follow-up time point. Using a mixed model including the factors participant as random effect and treatment, time, nationality, Time x Treatment and Nationality x Treatment as fixed effects, there were significant effects of nationality, $F(1,116) = 6.60, p = .01$, and a significant interaction of Time x Treatment, $F(2,116) = 4.60, p = .01$.

- In a contrast analysis of the Time x Treatment interaction, TC was superior to MG, $F(1,112) = 5.56, p = .02$, and NET was superior to MG, $F(1,116) = 9.17, p < .01$.

- Chi-square tests were calculated for the pretest and follow-up prevalence rates for each physical symptom. A significant treatment effect was found for cough, diarrhea, and fever. The effect of flu, pain, and headache was not significant.

CONCLUSIONS/SUMMARY

- Results suggest that over a period of 6-9 months, the groups that received active treatment developed statistically and clinically better on scales of PTSD than did non-treated monitoring group.

- Results indicate that it is possible to treat war-related PTSD in refugee populations and that effective psychotherapy can be carried out by trained lay counselors after only 6 weeks of training.

- Physical health improved through psychotherapeutic intervention at a refugee camp under deficient hygienic and health-care conditions.

- Given the high-need for treatment in war-affected population, this approach might provide a possible answer to the urgent mental health problems of war-afflicted areas.

LIMITATIONS

- A high number of participants could not be located for follow-up examinations.

- Randomization resulted in a significantly different group comparison with regard to nationality.

- Due to the laborious nature of the translation and validation of useful instruments, only physical health and PTSD were examined. Future research should include measures of depression.

Bryant, R. A., Moulds, M. L., Guthrie, R. M., Dang, S. T., Mastrodomenico, J., Nixon, R. D., Felmingham, K. L., Hopwood, S. (2008). A randomized controlled trial of exposure therapy and cognitive restructuring for posttraumatic stress disorder. *Journal of Consulting and Clinical Psychology, 76*(4), 695-703.

TYPE OF ARTICLE

- Randomized controlled trial

OBJECTIVE/PURPOSE OF THE ARTICLE

- This study sought to understand the effects of combining imaginal or in-vivo exposure and cognitive restructuring to decrease PTSD symptoms.

- Supportive counseling was added to treatment conditions that did not have a full complement of treatment components so that therapy time and specified treatment components were matched across conditions.

- The authors hypothesized that combining imaginal exposure, in-vivo exposure and cognitive restructuring would be the most effective treatment combination for PTSD.

- The authors also hypothesized that combining imaginal exposure and in-vivo exposure would be more effective than either of the exposure treatments individually.

- Finally, that authors hypothesized that in-vivo exposure would be more effective than imaginal exposure.

PROCEDURE

Participants

- Participants ($n = 90$) were civilian trauma survivors who were referred to the Westmead Hospital Traumatic Stress Clinic over a 4-year period after a nonsexual assault or motor vehicle accident and displayed PTSD for a minimum of three months.

- Individuals with psychosis, organic brain syndrome, substance dependence, current suicidal risk, and inability to speak English were excluded from the study.

- Additionally, individuals were required to be between the ages of 18 and 59 years.

Procedure

- Participants were assigned to one of the treatment groups using a stratified sampling process based on gender, trauma type, and PTSD score.

- Every three months the allocation procedure was amended to ensure that gender, trauma type, and PTSD severity remained balanced across conditions.

- Participants were assigned to an imaginal exposure group ($n = 31$), an in-vivo exposure group ($n = 28$), an imaginal exposure and in-vivo exposure group ($n = 31$) or an imaginal exposure, in-vivo exposure and cognitive restructuring group ($n = 28$).

- Ninety participants completed treatment and 84 participants completed the six-month follow up assessment.

Measures

- PTSD diagnosis was made using the Clinician Administered PTSD Scale (CAPS) which is a structured interview encompassing the DSM-IV criteria. The CAPS has been determined to have good sensitivity and specificity as well as good test-retest reliability.

- Additionally the Beck Depression Inventory (BDI), the Impact of the Event Scale (IES), and the State-Trait Anxiety Inventory-State Scale (STAI) were used to assess further psychopathology.

- The Catastrophic Cognitive Questionnaire (CCQ) is self-report measure that assesses catastrophic thinking about emotional reactions, somatic sensations, and mental processes.

- Individual therapy was conducted by one of six masters-level clinicians who were trained to use treatment manuals and weekly supervision. Eight-100 minute therapy sessions were conducted with structured homework assignments.

- In the imaginal exposure group, participants were instructed to provide a narrative of their trauma that was written in present tense that focused on the sensory and affective response to the trauma. Participants were instructed to rehearse the procedure on a daily basis. Monitoring forms were used to ensure homework completion. Each therapy session included 40 minutes of imaginal exposure, 50 minutes of supportive counseling, and 10 minutes of homework assignments.

- In the in-vivo group, sessions focused on creating a hierarchy of feared situations and establishing prescribed homework to approach and remain in feared situations until the participants anxiety decreased by 50 percent. Participants were instructed to rehearse the exercise daily. Each therapy session consisted of 25 minutes of in-vivo exposure, 65 minutes of supportive counseling, and 10 minutes of homework assignments.

- In the combined imaginal and in-vivo exposure group, both a narrative of the traumatic event and a hierarchy of feared situations was used. In each therapy 100 session, 40 minutes were devoted to imaginal exposure, 25 minutes to in-vivo exposure, 25 minutes to supportive counseling and 10 minute to homework assignments.

- In the combined imaginal, in-vivo exposure group, and cognitive restructuring group participants were taught to identify dysfunctional, unrealistic, and catastrophic thoughts about their traumatic experiences, themselves, and their future. Participants were required to monitor their thoughts and affective states daily and to modify those thoughts using Socratic questioning, probabilistic reasoning, and evidence-based thinking. Each session was comprised of 25 minutes of cognitive restructuring, 40 minutes of imaginal exposure, 25 min-

utes of in-vivo exposure, and 10 minutes of homework assignments.

- Audiotapes of 70 therapy sessions were randomly selected to ensure treatment adherence.

RESULTS

- One-way analysis of variance indicated no differences between treatment groups.

- Individuals who dropped out of treatment had higher CAPS scores $t(1, 116) = 4.02$, $p < .01$, and higher BDI scores $t(1, 116) = 2.50$, $p < .05$ when compared to those who completed treatment.

- The ANCOVA on post-treatment responses indicated a main effects for CAPS, $F(3,113) = 4.20$, $p < .01$. Post-hoc Tukey comparisons indicated that the imaginal exposure, in-vivo exposure and cognitive restructuring group scored lower than the other groups on CAPS scores ($p < .05$).

- With regard to follow-up analyses the ANCOVA indicated a main effect for CAPS, $F(3,113) = 4.43$, $p < .01$. Post hoc Tukey comparisons indicated that the imaginal exposure, in-vivo exposure and cognitive restructuring group scored lower than the other groups on CAPS scores ($p < .05$).

- At post treatment there were no significant differences in rates of PTSD in the imaginal exposure group, the in-vivo exposure group, combined imaginal exposure and in-vivo exposure group.

- At follow-up, there were fewer participants with PTSD in the imaginal exposure, in-vivo exposure and cognitive restructuring groups when compared to the imaginal exposure group, in-vivo exposure group and combined imaginal exposure and in-vivo exposure group $\chi^2(1, N = 103) = 12.42, p < .01$

- With regard to secondary measures, separate ANCOVAs indicated no significant main effects at post treatment.

- At follow-up, ANCOVA's indicated significant main effects for IES-Intrusions, $F(3,113) = 4.19$, $p < .05$; IES-Avoidance, $F(3,113) = 3.45, p < .05$; BDI, $F(3,107) = 2.83$, $p < .05$; CCQ $F(3,107) = 2.83$, $p < .05$. Post-hoc Tukey comparisons indicated that the combined imaginal exposure, in-vivo exposure, cognitive restructuring participants scored lower than did each of the other groups on IES- Intrusions ($p < .05$), IES-Avoidance ($p < .05$), BDI ($p < .05$), and CCQ ($p < .05$).

- Participants in the combined imaginal exposure, in-vivo exposure, cognitive restructuring group displayed large to moderate effect sizes on most measures, while participants in the imaginal exposure or in-vivo exposure group showed small to moderate effect sizes.

CONCLUSIONS/SUMMARY

- Combining imaginal exposure, in-vivo exposure, cognitive restructuring resulted in a greater treatment effect for PTSD and depressive symptoms than exposure alone.
- This finding contradicts earlier studies discounting the additive effects of cognitive restructuring.
- Imaginal exposure, in-vivo, and the combination of imaginal exposure and in-vivo exposure were found to be equally effective when treating PTSD symptoms.

LIMITATIONS

- The sample size was modest for a design that incorporated four types of treatment and a larger sample size may have revealed more differences between the treatment groups.
- There was no assessments of the degree to which the assessors were blind to the treatment group of participants.
- The delineation between exposure treatment and cognitive treatment may be somewhat artificial and not an accurate reflection of common clinical practice as practitioners use the two methods in combination rather than one or the other.
- No assessment for comorbid disorders was completed.

Seery, M. D., Silver, R. C., Holman, E. A., Ence W. A., Chu, T. Q. (2008). Expressing thoughts and feelings following a collective trauma: Immediate responses to 9/11 predict negative outcome in national sample. *Journal of Consulting and Clinical Psychology, 76*(4), 657-667.

TYPE OF ARTICLE

- Longitudinal

OBJECTIVE/PURPOSE OF THE ARTICLE

- This study tested the relations between immediate post trauma expression and two year longitudinal mental and physical health outcomes in a nationally representative sample following a collective trauma (terrorist attacks on September 11, 2001). Specifically, does the lack of expression after a collective trauma represent resilience or vulnerability?

PROCEDURE

Participants

- Over the two-year period that data were collected, 2,138 respondents participated in this study.
- Participants ranged in age from 18 years to 91 years with a median of 48. Also, 50.6 % were women.
- Seventy three percent of participants identified themselves as White, 10.6 % as Hispanic, 9.4% as Asian, 9.4% as African American and 7.2% as Asian.
- The median household income was $40,000 - $49,000.
- Sixty-one % of the sample was married, 15% was divorced or separated, 16% was single, and 7% was widowed.
- The median number of physician diagnosed physical ailments pre 9/11 was 3, with 14.7% of participants reporting being with depression, anxiety, or both.
- Over four % of participants reported direct exposure to the attacks, 63.5% reported live media exposure and 32.4% reported no live exposure.

Procedure

- Prior to September 11, 2001 a pool of participants was generated from a nationally representative sample using traditional probability methods (random digit dialing). The pool was created for a variety of surveys to be completed, unrelated to 9/11.
- Participants were provided an Internet connection and Web TV in exchange for completing three or four short surveys.
- Upon entry to the panel, participants completed a survey of mental and physical health that assessed if they had ever been diagnosed by a physician for a physical or mental health disorder.
- On September 11, 2001 participants were emailed the prompt, "If you would like, please share your thoughts on the shocking events of today."

Measures

- Two variables were created from the above-mentioned response: 1) a dichotomous measure of whether or not participants responded, 2) a measure of the length of the response based on the number of words.

- Participants completed the Brief Symptom Inventory in order to assess for generalized anxiety six months, 12 months, 18 months and 24 months after September 11, 2001.

- Posttraumatic stress was assessed using the Impact of Events Scale- Revised two months and six months after the event.

- The Posttrauma Stress Disorder checklist was completed at 12 months, 18 months, and 24 months post September 11, 2001.

- Physician diagnosed physical and mental ailments were assessed 12 and 24 months using the same measure completed upon joining the panel.

- Participants were also assessed regarding their degree of exposure to the terrorist attacks and placed in the direct exposure category (seeing or hearing the attacks in person or having a close relationship with someone targeted), live media exposure category (watching the attacks on television live as they occurred), or no live exposure category (seeing video replay or learning of the attacks after they occurred).

- An index of physician diagnosed mental health problems was created as was an index of physical ailments.

- Acute stress was assessed using the Stanford Acute Stress Reaction Questionnaire two weeks after September 11, 2001.

- Coping strategies were assessed two weeks after the event using the Brief COPE.

- World beliefs about benevolence and meaningfulness of the world were assessed using a modified version of the World Assumptions Scale between two and twenty-four months post 9/11.

- Lifetime exposure to stressful events was assessed by asking participants if they experienced any of 37 negative events (e.g. child abuse, divorce) and if so, what age the event(s) occurred.

- Participants completed the Ten-Item Personality Inventory in order to assess the Big Five personality domains.

RESULTS

- All analyses controlled for demographics (gender, ethnicity, age, income, marital status, and education), degree of exposure to the attacks and pre September 11, 2001 mental and physical health history.

- A logistic regression was used to identify predictors of reading the open-ended prompt which indicated that older respondents (odds ratio [OR] = 1.32; confidence interval [CI] = 1.18, 1.46), widowed respondents as compared to married respondents (OR = 1.46; 95% CI = 1.01, 2.13), respondents who lived 100 – 500 from the World Trade Center (OR = 1.88; 95% CI 1.26, 2.82), respondents who lived 500-1,000 miles from the World Trade Center (OR = 1.48; 95% CI = 1.00, 2.18), compared with those who lived within 25 miles, and respondents with a higher number of pre-9/11 physical difficulties. Women (OR = 0.82; 95% CI = 0.69, 0.99) and high-income respondents (OR = 0.87; 95% CI = 0.78, 0.96) were less likely to respond.

- A generalized estimating equation was used to assess predictors of attrition over the two-year period of data collection. Participants who were least likely to miss assessments were older participants (OR = 0.83; 95% CI = 0.78, 0.88), respondents with a high school degree (OR = 0.73; 95% CI = 0.61, 0.88), some college (OR = 0.82; 95% CI = 0.67, 0.99), and a college degree or higher (OR = 0.76; 95% CI = 0.63, 0.93).

- A logistic regression analysis was used in order to determine who would respond to the prompt. Younger respondents (OR = 1.23; 95% CI= 1.08, 1.39) as well as respondents with higher 9/11 physical health diagnoses (OR = 1.2; 95% CI = 1.06, 1.35) were more likely to respond to the prompt.

- With regard to length of response, women wrote significantly longer responses than did men (ß = 0.258) and respondents with more pre 9/11 physical diagnoses (ß = 0.069)

- Compared with participants who elected not to respond to the open ended prompt, participants who did respond reported a higher number of posttraumatic stress symptoms from two to six months (Z = 3.20, p < .01) and 12 to 24 months (Z = 3.81, p < .001) post 9/11 even after controlling for degree of exposure.

- Among participants who responded to the open-ended prompt, longer responses were associated with generalized distress from six to 24 months and more diagnosed

physical disorders at 12 to 24 months (Generalized Distress $Z = 2.01$, $p < .05$; Diagnosed Physical Disorders $Z = 3.93$, $p < .01$) regardless of the degree of exposure.

- Significant interactions emerged between participants who were within 25 miles of exposure and those who were further away and responded with posttraumatic stress symptoms 12 to 24 months posttrauma ($\beta = -0.570$).

- Among participants who lived closer to the World Trade Center, those that responded to the prompt exhibited poorer mental health over time that did those who chose not to respond (from two to six months: $\beta = 0.67$ from 12 to 24 months; $\beta = 0.72$, $p < .01$).

- In linear regressions, participants who chose not to respond to the prompt were compared to those who responded to the prompt. Results indicated that participants who did respond indicated seeking more emotional support ($\beta = 0.17$, $p < .01$) and venting more ($\beta = 0.19$, $p < .01$) than participants who did not respond to the prompt.

- Responding to the prompt ($\beta = 0.16$, $p < .01$) and writing longer responses ($\beta = 0.089$, $p < .01$) was associated with higher levels of distress two weeks post 9/11.

CONCLUSIONS/SUMMARY

- This study highlights the importance of allowing individuals to choose if they want to express their feelings and the degree that they choose to express themselves rather than compelling them to do so.

- Results from this study contradict the common assumption that choosing not to express one's thoughts and feelings in the immediate aftermath of a collective trauma is harmful and indicative of vulnerability to future difficulties.

- Reluctance to express one's feelings appears to suggest resilience rather than pathology.

- Greater expression suggested higher levels of distress and predicted subsequent mental and physical health problems over time.

- Identifying individual willingness to express feelings is a key component after a collective trauma.

LIMITATIONS

- The criteria used for assessing mental health problems pre 9/11 was dichotomous (diagnosis vs. no diagnosis) and therefore lacks sensitivity.

- Only the physical health measure was administered both pre and post 9/11.

- Measures used were self-report thus relying on respondents. Ideally, self-report information could be corroborated.

Monson, C. M., Gradus, J. L., Schnurr, P. P., Young-Xu, Y., Price, J. L., & Schumm, J. A. (2008). Change in posttraumatic stress disorder symptoms: Do clinicians and patients agree? *Psychological Assessment, 2,* **131-138.**

TYPE OF ARTICLE

- Longitudinal

OBJECTIVE/PURPOSE OF THE ARTICLE

- This study measured the longitudinal association between clinician and patient ratings of posttraumatic stress disorder (PTSD) over the course of two different randomized clinical trials.

- The authors hypothesized an association between clinician and patient measures over time. However it was expected that the clinician scale would reveal greater changes than the patient scale.

- Additionally, it was hypothesized that there would be a greater association between the clinician and patient measures for patients in the trauma focused group therapy condition and the cognitive processing condition as compared to the wait list control and the present centered group due to the different emphases on symptoms.

PROCEDURE

Participants/Procedure

- Participants were recruited from two different randomized trials of veterans with chronic PTSD.

- Trial one

  o Three hundred and sixty male Vietnam veterans who were diagnosed with combat related PTSD were recruited from 10 Department of Veterans Affairs Medical Centers from across the United States. Most participants were approximately 50 years old, Caucasian and have post-high school education. Approximately half were married and approximately half were unemployed. Trauma has occurred approxi-

mately 25 years prior to the study.

o Participants were randomly assigned to either trauma-focused group therapy or present-centered group therapy.

o The trauma-focused group therapy included psychoeducation, identification of coping resources, exposure and cognitive restructuring related to members' war zone scenes, and relapse prevention for gains made during treatment.

o The present-centered trauma group included psychoeducation, the impact of posttraumatic stress on relationships and problem solving as well as processing current experiences within sessions.

o Both treatments consisted of 30 weekly sessions followed by five monthly booster sessions.

o All participants were assessed using the Clinician Administered Posttraumatic Stress Disorder Scale (CAPS) and the PTSD Checklist before treatment, following treatment, and following completion of booster sessions.

o A portion of participants were also tested at 18 months and 24 months post therapy.

- Trial two

o Sixty veterans (54 men, six women) with military related PTSD.

o Seventy eight percent had served in Vietnam. Most were Caucasian, were in their mid 50's and had post-high school education. Nearly two thirds were married and two thirds were unemployed.

o Approximately 80% of the traumas were combat-related with the remaining having experienced non-combat sexual trauma (17 percent), and physical assault (3 percent).

o All traumas occurred 15 years prior to the study.

o Participants were randomly assigned to receive Cognitive-Processing Therapy or be assigned to a waiting list.

o Cognitive-Processing Therapy utilized a 12 session manualized cognitive behavioral approach with the primary focus on cognitive interventions for PTSD.

o All participants were assessed using the Clinician Administered Posttraumatic Stress Disorder Scale (CAPS) and the PTSD Checklist before treatment, after six sessions or three weeks of waiting, after treatment or six weeks of waiting and 1 after completion of sessions or after 10 weeks of waiting.

Measures

- The CAPS was used to assess current clinician rated posttraumatic stress severity. It is a semi-structured clinical interview that measures the frequency and intensity of symptoms as outlined in the *DSM-IV-TR*. A total score is created by summing the score of each of the 17 items. Possible scores range from 0 to 136. Cluster subscales scores are generated by summing the scores in each cluster that are linked to the *DSM-IV-TR* clusters.

- On the Posttraumatic Stress Disorder Checklist participants rate the degree to which they are bothered by each of the Posttraumatic Stress Symptoms as listed in the *DSM-IV-TR* on a Likert-type scale (1 = *not at all*, 5 = *extremely*). Items are summed to create a total score that can range from 17 to 85. Cluster subscales scores are generated by summing the scores in each cluster that are linked to the *DSM-IV-TR* clusters.

RESULTS

- A linear mixed effects modeling for longitudinal analysis was used.

- Separate analyses were conducted for each study.q

- The hypothesis that there would be greater association between clinician and patient scores from the trauma-focused therapy group as compared to scores between clinicians and patients from the present-centered group was not supported.

- For both studies, the unstandardized coefficients indicate that for each change of one point on the PTSD Checklist corresponds to a 1.28 to 1.50 change in the same direction on the CAPS.

- For both studies the standardized coefficients indicate that for every standard deviation change in the PTSD Checklist there was a total change of 0.75 to 0.82 standard deviations change in the total Clinician Administered Posttraumatic Stress Disorder Scale.

- The standardized coefficients for the subscales indicated that for every standard deviation of change on the PTSD Checklist there is a 0.65 to 0.84 standard deviations change on the CAPS.

- There was a significant difference in the magnitude of change between the total PTSD Checklist and the total CAPS in the Trauma-Focused group therapy and Present-Centered Group Therapy that appears to be related to Hyperarousal.
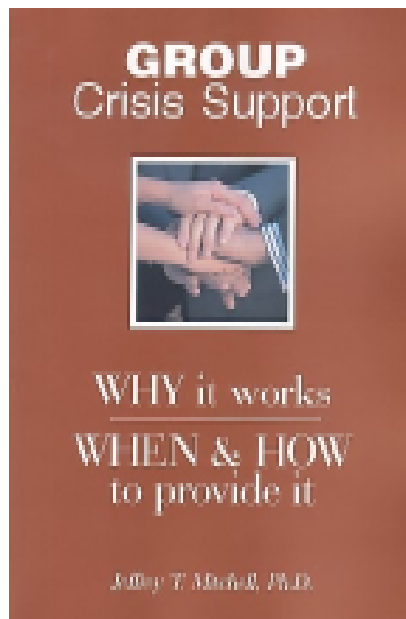
CONCLUSIONS/SUMMARY

- Overall, analyses indicated significant longitudinal associations between clinician and patient ratings of Posttraumatic Stress Disorder over the course of treatment as well as over the course of time.

- Findings suggest that the chronicity and severity of PTSD reduce the accuracy of self-report measures.

- Findings also suggest that veterans report improvement regardless of secondary gain (e.g., disability payments).

LIMITATIONS

- All participants were receiving treatment at the Department of Veterans Affairs Medical Center and therefore these results may not generalize across all treatment settings or with other populations.

- Reported symptomatology was not assessed to ensure accuracy with regard to the presence of PTSD.

- Both studies were conducted by overlapping investigators who received the same training on the CAPS.

BOOK REVIEW

By Laurence Miller, PhD

Surviving the Street: Officer Safety and Survival Techniques
By Gerald W. Garner (2005)
Springfield, IL: Charles C Thomas

When I was in high school, a friend and I decided it was time we toughened up, so we purchased a thin drugstore paperback called *Teach Yourself Karate.* I was skeptical: can you really learn a complex martial arts technique by reading a book? But my friend was determined and we spent many hours emulating and practicing the kicks, chops, thrusts, and blocks described and illustrated in that slim tome. I eventually lost interest but he went on to take real-life martial arts training, ultimately earning a black belt and becoming a karate instructor himself. Years later, he told me that he had really learned only the rudimentary basics of karate from that book, but that "it gave me the foundation, the knowledge – and that was something I could build on."

So, as a law enforcement instructor, I'm often asked if practical police skills – especially ones that may have potential life-and-death consequences – can be learned from a book or a course. The answer is that these sources give you the foundations, the background knowledge, the accumulated wisdom. Going on to practice and train in simulations and real-life settings will give you the expertise. If this weren't true, there'd be no need for textbooks, professional journals, or other training materials in any field.

But of course, we need *good* training materials, especially when the trainee's very life may depend on getting it right the first time. Here is a volume so richly packed with practical, useful information, that you could literally rip out any page at random and teach a class from it. *Surviving the Street* is informed by an easygoing, confident style and readability that reflects the consummate career experience of a seasoned, senior law enforcement trainer who has earned his chops and street cred the old-fashioned way: by being out there and living it. Yet, the author doesn't talk down to his

readers and suffused though the text is a palpable concern for officer safety and welfare. Gerald Garner, Chief of the Fort Lupton, Colorado Police Department, is a real-world commander, responsible for the lives and safety of real men and women, and he takes this charge seriously.

Introductory chapters describe the different types of dangers inherent in police work, including not-so-obvious threats that the rookie officer might overlook or disregard. The basic principles of police officer safety on the street are then outlined and expanded in subsequent chapters. From the perspective of a police psychologist, I was pleased to note the careful attention to behavioral indicators of danger, verbal and nonverbal, and the guidelines offered for responding to these clues.

Individual chapters discuss how to approach suspicious persons and situations; carrying out safe and proper personal, car, and building searches; vehicle contacts, traffic stops, and high-speed pursuits; proper handling of arrestees and prisoners; dealing with intoxicated, mentally disordered, and other out-of-control subjects; crime-in-progress calls; crowd control and civil disturbances; domestic violence incidents; drowning, fire, hazmat, and other rescue situations; and what to do when confronted with criminal action while off-duty. An important closing chapter deals with the crucial role of law enforcement administration in fostering a culture of safety within police agencies.

As is probably unavoidable in a book of this scope, certain topics are covered more spottily and cursorily, such as hostage negotiation and terrorism. Also, although the author does provide a section on "Additional Officer Safety Reading," the nerdy professor in me would have liked to see a more academic reference section, if only to be able to track

down the sources of many of this book's outstanding ideas and applications. Obviously, however, a large part of this volume's content comes from the author's own experience and encyclopedic practical knowledge base as an officer, commander, and trainer, so it's probably an unfair quibble to expect the kind of owlish documentation that characterizes the writings of the desk-and-armchair crowd.

So can you learn street survival skills from a book? Or law, medicine, psychology, aircraft piloting, sports, music, or any other complex field of knowledge? No, not entirely, and the author makes a clear disclaimer that the lessons outlined in this volume must be supplemented by continuing education, training, and experience. But good manuals, written by knowledgeable and experienced practitioners in all these fields, enable you to assimilate the necessary practical wisdom so that when you go on to the training exercises, and ultimately to actual life-and-death street encounters, you won't feel like you have to follow a script; your law enforcement style and technique will seem natural and unforced, like an accomplished musician playing a well-mastered piece and improvising creatively.

Surviving the Street is the best source in one package for valid, practical, and immediately applicable street survival skills and safe patrol policing tactics to date. It can be readily adapted for police academy courses on this subject and should be on the bookshelf of every law enforcement officer, from rookie to brass.

Talk, Listen, Connect:
Deployments, Homecomings, Changes

Sesame Workshop
Download at: http://archive.sesameworkshop.org/tlc/

Sesame Workshop, the nonprofit educational organization behind the popular children's show Sesame Street, and Wal-Mart Stores, Inc., have produced a bilingual, multi-media kit for military families with children between the ages of 2 and 5 years old.

According to recent news articles, the military has deployed approximately 33,000 service members to Afghanistan and 155,000 to Iraq (unclassified estimates), plus thousands of additional service members are deployed throughout the world, including within the US at duty stations far from their homes and families. Consequently, thousands of families are dealing with issues surrounding deployments, homecomings, and changes within the family.

The videos in this kit employ the celebrated and loved Sesame Street characters to address these significant issues. Interspersed with the memorable cast are military family members sharing their experiences. Filled with the familiar sights and sounds of Sesame Street, the videos are likely to captivate young children and other family members. Although the focus is on younger children, there are valuable lessons for teens and caretakers as well.

The videos and songs focus on three topics: deployments, homecomings, and the changes which may occur when a military parent returns from deployment with an injury, whether the injury is visible or not. A separate set of videos reaches out to caretakers. Labeled "For Grown-Ups," these videos offer practical suggestions, such as helping the family remain connected via "long-distance hugs" through letters, email, and video links.

The kit is available through two sources. If you are associated with the military, you may obtain the complete kit through Military One Source at www.militaryonesource.com, after registering on the site. The kit contains two DVDs, in English and Spanish, plus a poster, and four colorful postcards to send to the deployed military parent. In addition, the kit contains a 20 page, bilingual magazine containing helpful information and recommendations to assist children in dealing with deployments and homecomings.

If you are not associated with the military, the same materials are available from the Sesame Workshop at http://archive.sesameworkshop.org/tlc/. The videos may be downloaded or streamed from the site, and the magazine is available in pdf format.

Also available for download from the Sesame Workshop website are a 12 page facilitators guide and a 5 page supplement to the facilitators guide. These tools can be used by family readiness groups, child care facilities, medical facilities (including rehabilitation), schools, and other programs providing support to military families. The guides highlight important messages, story summaries, family activities, questions to promote discussion, and additional resources.

This is a fun-filled, well-produced, and well-researched set of materials designed for a target population under a great deal of stress. Military family members, mental health professionals, medical staffs, clergy, and educators who work with military families will find these materials very useful.

The Association of Traumatic Stress Specialists is an international multidisciplinary organization founded to educate and professionally certify qualified individuals actively engaged in crisis intervention, trauma services and response, and the treatment and healing of those affected by traumatic stress. The Certification Board represents individuals who have practical experience in providing direct support to trauma victims and survivors.

MEMBERSHIP BENEFITS

- Three Membership Options: Agency/Team, Student/Retiree, and Individual
- Reduced Certification and Re-Certification Fees
- International Board Certifications Options for Eligible Application and Recognition as a Certified Trauma Responder (CTR), Certified Trauma Specialist (CTS), and Certified Trauma Services Specialist (CTSS)
- Comprehensive ATSS Membership Directory and Code of Ethics
- Trauma Lines Quarterly ATSS Newsletter
- Conference and Training Discounts
- Continuing Education Recognition from Professional Associations for ATSS-Sponsored Training and Education Events
- Affiliation with an International Professional Network of Skilled Trauma Specialists
- One Vote in ATSS Organizational Elections
- Opportunities to Network with Other Specialists
- Reduced Subscription Rates to the Quarterly *International Journal of Emergency Mental Health*
- Web Site Links to the Information You Need

Agency, Organization, or Team Membership Benefits
- All of the Above-Listed Individual Member Benefits Apply
- Conference and Training Discounts for Five Individuals
- Reduced Certification Fees for Staff and Volunteer Agency Representatives

MEMBERSHIP APPLICATION

- ❑ $ 70.00* **Individual Membership** Dues For One Year
- ❑ $ 35.00* **Student/Retiree Membership** Dues For One Year
  Please provide proof of student status
- ❑ $175.00* **Agency Membership** Dues For One Year

International Journal of Emergency Mental Health (optional)
- ❑ $ 60.00* **Domestic Subscription**
- ❑ $ 90.00* **International Subscription**
- ❑ $ _____ **Donation** Contributions or gifts to ATSS may be deductible as charitable contributions for income tax purposes. All dues are deductible by members as an ordinary and necessary business expense.
- $ _____ **TOTAL** *PAYABLE IN U.S. FUNDS ONLY

Agency/Organization Applicant _____

Agency Contact _____

Individual Applicant _____

Address _____

City/State _____ Zip _____ Country _____

Email _____ Phone _____

I am interested in (please check all that apply):
- ❑ CTR (Trauma Responder) ❑ CTS (Trauma Treatment) ❑ CTSS (Trauma Services)

METHOD OF PAYMENT

Check, PO or Money Order Enclosed (Payable to: ATSS). Check or PO # _____

Credit Card: ❑ MasterCard ❑ Visa ❑ Discover ❑ AMEX
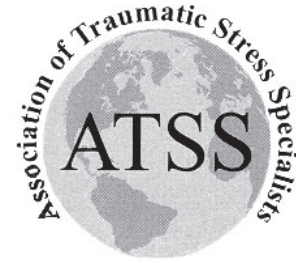
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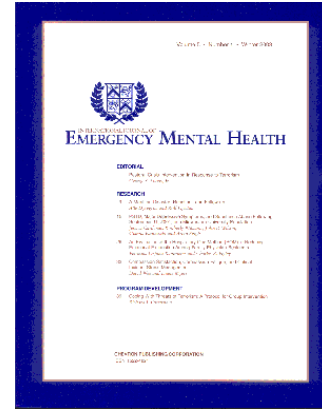**Office Manager**
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