

Running Head: Response to Disaster

**First do no harm, and then do some good: Science and professional responsibility
in the response to disaster and trauma**

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Victim traumatology

There is little question that mental health practitioners have the primary ethical obligation of *Primum Non Nocere*: First Do No Harm. This obligation is most directly applied to acts of commission for which the public will incur significant cost and/or damage. The obligation, however, also applies to acts of commission where there is evidence that the purported benefits of a treatment are absent, or where there is an absence of evidence that the treatment is beneficial.

The field of “traumatology” has rapidly expanded since 1980 when PTSD was first listed as a diagnosable anxiety disorder. The rapid expansion of this field has occurred because of the “victim status” of those diagnosed, the pain and suffering experienced, the apparent refractory nature of the disorder, and often compensable consequences of the diagnosis. However, many trauma treatments that purport to be novel and extraordinary are based on little more than personal testimony and vivid case studies (Herbert, Lilienfeld, Lohr, Montgomery, O’Donohue, Rosen, & Tolin, 2000; Lohr, Hooke, Gist, & Tolin, 2003). In this context, there has arisen a genre of treatments collectively called the Power Therapies (Devilley, 2005; Figley, 1997) that promise rapid, strong and lasting effects. Because they are prescriptive, structured, and time-limited procedures, they may mimic the formalities of Cognitive-Behavioral Therapy (CBT) and serve as alternatives to cognitive-behavioral interventions for trauma-related problems. Thus, a comparison of the evidence base for CBT and Power Therapy is warranted.

Evidential warrant

Treatments that do good: Cognitive-Behavioral Therapies for PTSD

Exposure-based treatments are predicated on the notion that deliberate exposure to feared stimuli facilitates habituation of conditioned stimuli and extinction of the fear response. An early controlled efficacy study of exposure for PTSD used imaginal exposure with combat veterans. Compared with a wait list, exposure produced greater reductions in PTSD symptom severity on both standardized measures and clinicians' ratings (Keane, Fairbank, Caddell, & Zimering, 1989). Similar results were reported by Brom, Kleber, and Defares (1989) using Systematic Desensitization for civilian PTSD symptoms. A treatment combining imaginal and *in vivo* exposure was superior to supportive counseling and wait list for sexual assault PTSD (Foa, Dancu, Hembree, Jaycox, Meadows, & Street, 1999; Foa, Rothbaum, Riggs, & Murdock, 1991).

Cognitive therapy (CT) has received less empirical study than has exposure, although two RCTs suggest that it can be helpful. Tarrrier, Pilgrim, Sommerfield, Faragher, Reynolds, Graham, & Barrowclough (1999) compared CT with imaginal exposure for mixed civilian trauma; both groups showed significant and comparable symptom reduction. In another study, CT superior to a wait list and to relaxation training, and comparable with combined imaginal and *in vivo* exposure (Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1998). Anxiety management training (AMT) refers to an assortment of cognitive and behavioral strategies designed to help reduce symptoms of anxiety, irritability, and hyperarousal. These techniques include relaxation training, breathing retraining, psychoeducation, self-instruction, communication training and cognitive therapy. AMT packages have been compared with exposure in two RCTs. Foa et al. (1991) showed that AMT reduced symptoms of PTSD, although the effects were slightly less than were those produced by combined imaginal and *in vivo* exposure. In a later study, Foa et al. (1999) compared exposure, AMT, their combination,

and a wait list using assault victims. AMT produced decreased symptoms of PTSD as shown by standardized measures. Thus, there appears to be substantial evidence to consider CBT as an efficacious treatment for trauma-related disorders (Chambless, Baker, Baucom, Beutler, Calhoun, Crits-Christoph, et al., 1998).

Pretention To Science-Based Practice

Pseudoscience

Despite the availability of efficacious treatments, evidence-based practice for trauma victims confront two substantial threats: Pseudoscience and junk science. The difference between science and pseudoscience is not categorical or distinct, but a number of features can help us to identify pseudoscience: 1) the goal of promotion of an idea or product through persuasion, 2) misappropriation of constructs and concepts from allied disciplines to provide the trappings but not the substance of scientific inquiry, 3) opposition to skeptical inquiry regarding claims, 4) avoidance of rigorous tests of claims, and 5) absence of self-correction in tests of claims (Herbert et al., 2000). One fundamental difference between science and pseudoscience is based on the concept of falsifiability (Lakatos, 1970; Popper, 1959). Empirically supported practices build upon scientific theory and state the terms under which data would falsify the theory. It is the adherence to empirically sound methods providing for falsifiability that is absent from pseudoscientific promotion. Moreover, widespread promotion and marketing of such practices may be a tell-tale sign that the practices lack scientific merit (Herbert et al., 2000).

Junk Science

Junk science is not incompatible with pseudoscience, but it is distinguished by its means of promotion. This includes both a good deal of expert legal testimony (Huber, 1991; McCann, Shindler, & Hammond, 2003; Park, 2000) and promotion of popular psychology in the mass

media (Wilson, 2003). The former involves the dissemination of expert opinions that do not meet judicial standards of scientific evidence; the latter involves dissemination based on fad and entertainment value. The common thread within pseudoscience and junk science is persuasion and promotion rather than constructive criticism and the growth of knowledge (Lakatos, 1970). Trauma and victims' services are vulnerable to both forms of dissemination (Sommers & Satel, 2005).

Harms To Be Done By Pretention To Science

Harms that can be perpetrated need not be directly imposed on the person seeking help. Indeed, a treatment may be merely innocuous and ineffective. If an ineffective treatment is promoted and delivered as if it were effective, the individual may spend time, energy, and financial resources that could otherwise be spent on treatments that have greater evidential warrant. If this happens, the individual has incurred an "opportunity cost." Moreover, if the individual views the experience as a waste of resources, he or she may be reluctant later to seek services that possess greater evidential warrant.

However, harm can sometimes be more direct. Harmful effects can be multi-dimensional: symptoms may worsen, new symptoms may appear, concern for extant symptoms may worsen, and dependency on therapy may develop. Some treatments may make certain symptoms better but others worse. Decrements in functioning may be reported by some individuals and not others. Finally, treatments may produce harm in relatives or friends of clients in addition to clients themselves. For example, Recovered Memory Treatments may produce memories that result in false allegations of abuse by others.

Power Therapies & Questionable Treatments

Opportunity Cost

Junk Treatments

Traumatic Incident Reduction (TIR)

TIR (Gerbode, 1989) is derived from Dianetics (Hubbard, 1985), which is the mental health application of Scientology. Repeated visual re-experience of traumatic memory under conditions of safety and concentration is alleged to be the process by which the emotional content of such memories is altered (Gerbode, 1989). Valentine and Smith (2001) reported the only randomized controlled trial of the efficacy of TIR. Participants were 123 female correctional inmates who were randomly assigned to either a waitlist control condition or the TIR protocol. Analyses of verbal reports of distress revealed a non-significant trend in favor of TIR at the end of treatment and a larger significant difference between conditions. However, the waitlist control design allows only for the control of measurement and historical artifact. Nonspecific factors such as expectation of improvement, allegiance and enthusiasm of therapist, and merely receiving treatment permit only the most limited conclusions: TIR may be more efficacious than no treatment, but it is unproven against extant effective interventions.

Thought Field Therapy (TFT).

TFT (Callahan, 1995) has been applied to a variety of anxiety disorders including PTSD. The treatment theory asserts that small bioenergetic perturbations (disturbances, blockages, or imbalances) at specific points along the energy meridians cause negative emotions. Physical palpation (tapping) provides physical energy that is transformed into the energy of the meridian system, which then removes or transforms the blockages. The treatment is applied with a number of procedural variations called "algorithms." The algorithms consist of a series of activities that are followed in prescriptive fashion, with different algorithms for different emotional problems such as PTSD. Clients are palpated with two fingertips (or tap themselves) on a variety of points

on the face, hands, and body while staying attuned to the thought field. Following the palpation, the individual takes a deep breath, rolls the eyes, and hums a happy tune. The algorithm may be repeated a number of times.

There is but one, uncontrolled, published study - in which TFT was applied to traumatic memories but not to PTSD per se (Carbonell & Figley 1999). Treatments included TFT, Eye Movement Desensitization and Reprocessing, Visual-Kinesthetic Disassociation and Traumatic Incident Reduction. Clients at a trauma treatment center were non-randomly assigned to one of the four treatments based on the next available treatment practitioner. The authors reported that those who received TFT experienced reduced severity on subjective reports of emotional discomfort and standardized questionnaire indices of PTSD symptoms. However, there were no formal statistical tests performed, and there was no control group with which to compare TFT.

It appears that the scientific research on TFT and its derivatives is minimal in quantity and quality despite the wide claims of effectiveness for trauma symptoms made by its promoters (Callahan, 1995; Gallo, 1998). Despite the fact that there are no adequately controlled clinical trials of TFT, the treatment has been marketed extensively through the Internet and has been promoted on numerous television talk shows (Gaudiano & Herbert, 2000), and through both the American Psychological Association and the Australian Psychological Society. Thus, the most obvious sign of TFT as pseudoscience is the over-promotion of the treatment relative to the available evidence.

Eye Movement Desensitization and Reprocessing (EMDR)

EMDR is a structured, prescriptive, and time-limited treatment designed to alter the affective and semantic content of memory images developed as a consequence of emotional or

physical trauma (Shapiro, 2001). EMDR has acquired its popularity in part because of its relationship to behavior therapy, and the relationship is not coincidental. Indeed, the use of the term “desensitization” is not a semantic accident. Wolpe (1990) argued that EMDR was only a variant of Systematic Desensitization, and recognized behavior therapy experts were involved in the early promotion and dissemination of EMDR (e.g., Marquis, 1991). In 1992, an EMDR special Interest Group was established within the Association for Advancement of Behavior Therapy (AABT, now ABCT).

Qualitative reviews and meta-analyses of peer-reviewed EMDR outcome studies have consistently found that there is overwhelming evidence that eye movements are neither a necessary nor useful component of the general clinical protocol (e.g., Devilly, 2002; Lohr, Lilienfeld, Tolin, & Herbert, 1999; Davidson & Parker, 2001); there is strong and consistent evidence that EMDR is better than no treatment and ineffective treatments, but no more effective than other treatments that use some aspect of exposure therapy (Deville, 2002; McNally, 1999); and there is growing evidence that a cognitive-behavioral treatment including exposure is superior to EMDR for long-term effectiveness (Deville & Spence, 1999; Taylor, Thodarson, Maxfield, & Fedoroff, 2003). In sum, “what is effective in EMDR is not new, and what is new is not effective” (McNally, 1999, p. 619.)

Harm Done

Critical Incident Stress Debriefing (CISD)

CISD is designed to prevent PTSD symptoms among individuals exposed to extreme stressors, such as emergency service personnel. It is a single-session procedure typically conducted in groups by therapists trained in the specific protocol. It is intended to be administered within 24 to 72 hours of the traumatic event (McNally, Bryant, & Ehlers, 2003).

Litz, Gray, Bryant, and Adler's (2002) meta-analysis of RCTs of CISD versus no treatment or alternative control conditions yielded an effect size of $d = -.11$ (*negative .11*) for PTSD symptoms. Equally important, two controlled studies provide evidence that CISD may exert harmful long-term effects. Bisson, Jenkins, Alexander, and Bannister (1997) found that burn victims assigned to CISD showed significantly higher PTSD and anxiety symptoms at a 13 month follow-up than did assigned to an assessment only control condition. Mayou, Ehlers, and Hobbs (2002) showed that vehicular accident victims who received CISD exhibited significantly higher levels of psychopathology and travel anxiety than individuals in an assessment only control condition three years after treatment. Current research theorizes that high satisfaction rates associated with CISD, having received the intervention, is more related to cognitive dissonance, that the move to re-label the intervention as CISM (Management) is, at best, misleading and that a stepwise approach to intervention using proven approaches is probably best (Deville, Gist & Cotton, in press).

Recovered Memory Therapy (RMT)

There are no randomized controlled trials of the effects of RMT. However, there is considerable evidence that therapist prompting, guided imagery, and hypnosis can sometimes produce subjectively compelling but false memories (Lynn, Lock, Loftus, Krackow, & Lilienfeld, 2003). Specifically, there are numerous reports of adult clients reporting histories of childhood sexual abuse, satanic ritual abuse, and space alien traumatic abductions following recovered memory methods. Moreover, data from recovered memory legal claims filed in Washington State reveals that suicidal ideation increased nearly 7-fold over the course of therapy, and hospitalization increased nearly 5-fold (Dineen, 2001).

Grief counseling

Studies of grief therapy for individuals who have suffered serious loss of loved ones suggests harmful effects, at least among those experiencing normal bereavement reactions. Neimeyer (2000) conducted a meta-analysis of 23 controlled studies of grief therapy and found only a small mean effect size of $d = .13$. Moreover, Neimeyer found that 38% of the people who received grief therapy would have achieved superior end-state functioning if they had been assigned to the no treatment control condition, suggesting the possibility of iatrogenic effects among a sizeable subset of individuals.

Professional Issues

Dissemination vs. Promotion

Despite little evidence of efficacy, many clinicians and practitioners obtain training in these treatments and then apply them in the clinical setting. Grief counseling has become a cottage industry in the mental health field. About 25% of doctoral-level therapists regularly use one or more recovered memory techniques to uncover suspected child sexual abuse (Polusny & Follette, 1996; Poole, Lindsey, Memon, & Bull, 1995). Counselors who administer CISD probably number in the thousands. For example, following the September 11th, 2001 terrorist attacks, one purveyor of CISD based in Atlanta sent CISD therapists to 200 companies in New York City (McNally et al., 2003).

The dissemination of efficacious treatments has become a recent goal of cognitive-behavioral therapists (AABT, 2001). However, it is important to distinguish promotion from dissemination. The goal of promotion is pecuniary persuasion, whereas the goal of dissemination is education. The distinction, however, is too frequently lost in the clinical marketplace (Lohr, Meunier, Parker, & Kline, 2001) The promotion of clinical pseudoscience often fails to acknowledge boundary conditions of theory and limitations of application. Questionable

techniques are often popularized as panaceas in the popular media long before they are subjected to experimental tests of efficacy (Herbert et al., 2000; Gaudiano & Herbert, 2000).

Ethics

The practice of pseudoscience in clinical psychology raises major ethical implications for the mental health profession. For instance, the preamble to the American Psychological Association Ethical Principles and Code of Conduct (1992) states that psychologists work to develop a valid and reliable body of scientific knowledge based on research. The General Standard (1.06) states that psychologists rely on scientifically and professionally derived knowledge when making judgments. Thus, some authors (Singer & Lalich, 1996) have argued that the use of techniques that are not based on scientific knowledge perpetuates unethical behavior. For example, the Arizona Board of Psychologist Examiners (1999) placed sanctions on the practice of a psychologist who used TFT as his principal therapeutic modality, and foremost among the reasons for the Board's action was the psychologist's inability to substantiate his advertised claims of effectiveness (American Psychological Association, 1996).

Ethical obligations also apply where there exists evidence that treatment efficacy is due to factors other than the specificity of the treatment. Given such circumstances, the clinician has the obligation to inform the client that the specific features of the treatments (e.g., eye movements) are inert components of the clinical procedure. In this way, clients can make informed decisions about participating in treatments for which evidential warrant is lacking. Finally, practicing clinicians must keep abreast of the research on the efficacy and effectiveness of those treatments to which they have formed professional allegiances to avoid doing harm and use practices that are known to be specific and effective in order to do some good.

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