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FAMILY SYSTEMS THERAPY AFTER OPERATION DESERT STORM WITH EUROPEAN-THEATER VETERANS

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We describe a quasi-experimental trial of time-limited family therapy with veterans and families of veterans who served in Europe, outside the war zone, during Operation Desert Storm (ODS). Family systems therapy was provided both to individuals and conjointly to couples or families during the acute postwar readjustment period. The intervention adapted strategies from structural, strategic, intergenerational, and behavioral family therapies in a brief-treatment protocol for systemic stressor resolution. Veterans given family system therapy were able to resume functional levels of psychosocial adjustment and reduce the risk of long-term (chronic or delayed) psychosocial impairment. Based on these preliminary findings, controlled evaluation of family systems therapy appears warranted for indi-

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viduals and families exposed to subtraumatic stressors such as wartime non-war-zone military deployment.

Thousands of forgotten soldiers serve outside the war zone during every war, often experiencing severe separation and readjustment stressors that may lead to psychological and relational difficulties (Beckman, Marsella, & Finney, 1979; Bey & Lange, 1974; Decker, 1978; Hillenbrand, 1976; Hunter, 1988; Kelley, 1994; Rienerth, 1978). Following Operation Desert Storm (ODS), many military personnel who served outside the war zone reported suffering stress-related psychological, vocational, and family systems impairment (Baker, Campbell, Dyrenforth, Grace, Koruna, Lieneck, & Wesch, 1992; Peebles-Klieger & Klieger, 1993). We describe a quasi-experimental evaluation of the effect of family systems therapy (FST) delivered soon after ODS to veterans who had been deployed in Europe outside the Persian Gulf war zone. Our goal was the secondary prevention of potential long-term impairment (Figley, 1993; Hobfoll, Spielberger, Breznitz, Figley, Folkman, Green, Milgram, Candler, Sarason, & van der Kolk, 1991).

METHOD

Educational outreach was provided to Army and Marine veterans of ODS and their families on a large-group basis (Ford, Shaw, Sennhauser et al., 1993), including approximately 250 soldiers who had been deployed to Europe. More than 10% of these European-theater veterans requested additional family systems therapy (FST), a higher rate than has been reported as a result of outreach even to survivors of catastrophic trauma (Lindy, Grace, & Green, 1981). All veterans and families requesting FST were given immediate treatment and assessed through a pretest, posttest, and one and a half month follow-up. Randomized assignment to a wait list or comparison treatment control was not feasible in this pilot study, but a quasi-control group and posttest-only group were assessed to rule out as many threats to the internal validity of the study's findings as possible.

Participants

Three samples of veterans and family members were included in the study. Self-report data assessing stress response symptoms, psychosocial adjustment, and marital/family adjustment were obtained from: (1) 26 European-theater ODS veterans who requested FST; (2) 13 European-theater ODS veterans and family members who did not request FST but were willing to participate in repeated testing on the same schedule as the FST group *(quasi-controls);* and (3) 62 other European-theater ODS veterans, from the same military units, who did not request FST, assessed 15–18 months after ODS demobilization *(posttest only).* The three groups were comparable demographically except that FST participants were significantly more likely than quasi-control or posttest only participants to be female ($\chi^2 = 12.6$; $df = 2$; $p = 0.002$). Study participants were: 59% males and 41% females; mean age = 36.7 ($SD = 9.1$; range 20–59); 86% Caucasian, 7% black, 4% Latino, and 3% Asian; median education level = 15 years (11% high school graduates, 47% with a partial college education, 20% college graduates, and 21% with an advanced degree); 61% enlisted soldiers and 39% officers; 32% medical professionals and 68% support personnel; 17% with prior war-zone military experience (i.e., Vietnam, Panama, Grenada); 16% married, 12% divorced, 2% widowed, and 69% single.

MEASURES

All participants completed psychometrically documented self-report measures of: (1) intrusive and avoidant stress response symptoms, assessed using the impact of events scale (IES) (Horowitz, Wilner, & Alvarez, 1979); (2) symptoms of anxiety and depression assessed using the general health questionnaire (GHQ) (Goldberg & Hillier, 1979); and (3) family adjustment assessed using the family APGAR (Smilkstein, Ashworth, & Montano, 1982). Since not all veterans had participating family members, only veterans' scores on measures are reported. The IES and GHQ are widely used as brief indices of stress symptomatology and psychological adjustment. Participants in current couple relationships provided a global marital satisfaction rating (MSGR) on a seven-point scale ranging from "highly satisfied" to "highly dissatisfied" (Heyman, Sayers, & Bellack, 1994).

FST participants completed all measures at intake, again in a posttest in their final FST session, and during a one and a half month follow-up. Quasi-controls were assessed at the same time intervals as FST participants. Posttest controls completed all measures once, 15–18 months after ODS.

Family Systems Therapy

FST addressed the systemic effect of non-war-zone wartime military stressors in a time-limited format (i.e., one to five sessions; $M = 3.8$; $SD = 1.7$), in sessions 90–120 minutes long over a two- to eight-week period. The study authors (two psychologists, one psychiatrist, one psychiatric nurse practitioner, and three MA interns) were randomly assigned to serve together as co-therapy teams on a rotational basis.

FST was done with a veteran and his or her nonveteran spouse in 10 cases, with a veteran and his or her multigenerational family in eight cases, and with an individual veteran in eight cases. Presenting problems and treatment goals were defined in a therapist-guided but client-centered approach at the outset. The approach included psychoeducation about trauma and its expectable effects, and cognitive restructuring to challenge and empathically reframe "extreme beliefs," strengthening personal schemas of trust, safety, efficacy, and self-esteem. Family-of-origin patterns were explored by genogram to clarify and reframe family rules and myths that affect the ODS experience and to identify functional and problematic family rules, rituals, and myths (Scaturo & Hayman, 1992). Structural systemic interventions were used to restore generational boundaries and functional family coalitions and roles (Figley, 1993). Strategic (paradoxical) prescriptions were used to enhance family members' sense of choice and control (J. Haley, 1985). Discordant, detached, or enmeshed marital or parental communication patterns were identified and experientially reworked (S. Haley, 1978). All family members were helped to develop a shared explicit narrative of the ODS experiences that continued to be the most troubling (Pennebaker, 1993).

Therapist postsession ratings with demonstrated interrater reliability confirmed the fidelity of actual treatment with these FST guidelines. All treatment components were implemented in each case, typically in the following sequence: first a client-centered therapeutic orientation, followed by psychoeducation and cognitive restructuring, family genogram, structural/strategic intervention, and closure through a consensual family narrative.

Table 1
Pretest, Posttest, and Six-Week Follow-up Scores for FST versus Quasi-Control and Posttest-Only Groups

Outcome Measure	Group	*n*	Pretest	Posttest	Six-Week Follow-Up
IES Intrusion	FST	24	22.00 (6.54)	15.33 (9.16)	11.50 (9.14)
	Quasi-control	13	12.00 (6.22)	11.31 (9.24)	8.39 (8.38)
	Posttest only	62	—	—	12.47 (11.34)
IES Avoidance	FST	24	18.29 (5.04)	9.58 (6.17)	9.08 (6.76)
	Quasi-control	13	8.77 (7.78)	5.23 (6.41)	7.00 (6.63)
	Posttest only	62	—	—	7.24 (8.28)
GHQ	FST	24	9.33 (7.08)	4.42 (4.26)	4.54 (4.14)
	Quasi-control	13	4.85 (4.38)	5.54 (4.98)	3.62 (5.92)
	Posttest only	62	—	—	3.79 (5.18)
APGAR	FST	24	6.54 (2.21)	7.79 (2.60)	7.71 (2.51)
	Quasi-control	13	8.23 (3.09)	8.31 (3.30)	6.62 (2.26)
	Posttest only	62	—	—	7.90 (2.71)
MSGR	FST	19	4.79 (1.48)	5.26 (1.49)	5.42 (1.35)
	Quasi-control	10	4.85 (5.70)	5.25 (1.09)	4.80 (1.23)
	Posttest only	57	—	—	5.32 (1.35)

Scores are presented as mean values for each group at each testing, with standard deviations in parentheses.

RESULTS AND DISCUSSION

A one-way multivariate analysis of variance (MANOVA) showed that the FST group was significantly more distressed than ODS veterans who did not seek treatment at pretest ($F[7,24] = 3.875$; $p = 0.006$), as shown by the GHQ, IES intrusion, and IES avoidance scores (univariate $F[1,30] = 5.41, 16.69, 14.99$; $p = 0.026, 0.000, 0.001$, respectively; see Table 1). A substantial proportion of participants in both the treatment-seeking and control groups initially showed evidence of clinical-level distress. GHQ scores were at or above the clinical cutoff of 5 for more than 75% of FST and 50% of quasi-control veterans. IES intrusive symptom levels in the FST and control groups were comparable to those in survivors of civilian trauma (Joseph, Williams, & Yule, 1993) and in bereaved psychiatric outpatients (Horowitz et al., 1979).

Clinically, we observed signs of complicated stress reactions and unresolved bereavement, including:

- Intense frustration ("I just can't keep solving problems for everybody else when I don't get any help from them with my own needs!");
- Shock ("I can't believe it's all over so fast, and I'm left with so many problems to deal with at my job and at home!");
- Guilt ("Why did so many innocent people have to die or have their lives ruined?");

- Loss ("I missed my family when I was away, but now I miss the friends I made in Europe.");
- Betrayal ("I worked my heart out to do my job in Europe, and now I come home to find I'm a stranger in my own family!"); and
- Alienation ("All that destruction—what did we really accomplish?").

Therefore, timely preventive and therapeutic intervention appeared essential to address the family systemic impact of non-war-zone ODS deployment and readjustment (Figley, 1993; Hobfoll et al., 1991).

Veterans and their families reported experiencing a variety of significant stressors during and after ODS deployment. Several months of anticipatory anxiety accompanied the Iraqi invasion of Kuwait in August 1990, along with numerous "false starts" (apparent mobilizations that were followed by abrupt stand downs), which disrupted family relationships, work, recreation, and community involvements. The Reserve and National Guard personnel with whom we worked were expected to simply put civilian life on hold without social or financial assistance from the military. Deployment to Europe occurred abruptly, followed by several weeks of disorganized regrouping and a blackout that precluded communication between soldiers and their families. Soldiers deployed to Europe underwent months of boredom ("Hurry up and wait!") interspersed with brief periods of frenzied activity (e.g., being called upon to set up new medical units from scratch within 72 hours). They feared being singled out as Americans or soldiers by angry crowds of war protesters or terrorists, and they were demoralized when treated by career military personnel as "second-class citizens" because of their Reserve or National Guard status. Many were either required to perform jobs well beyond their prior civilian or military expertise (e.g., a staff nurse called on to create and administer a surgical trauma unit) or relegated to positions much inferior to their prior work (e.g., a nurse assigned to serve as bartender). All had a constant dread of receiving a flood of casualties should a major ground war actually occur.

After months of separation, most soldiers abruptly were returned from Europe to civilian status with no advance warning. Most returned to face a host of deferred financial, vocational, parental, and marital pressures. Spouses and families had been virtually cut off from communication with the soldier. Of necessity, family members had realigned their roles (e.g., parentified children, one parent filling both parental roles, grandparents serving as surrogate parents). Families had developed new unspoken rules (e.g., "Us against the world") and rituals (e.g., spending free time together rather than in individual activities) that reconstituted the generational hierarchy and family structure while reifying the absence of the soldier. Secrets often were kept by the soldier or other family members (e.g., extramarital affairs or emotional breakdowns). The soldier's return then unavoidably further destabilized the already altered family system. All family members struggled with issues of power, intimacy, and shame ("How could I have left my family to deal with these pressures?"). Veterans and family members alike often felt burned out and entitled to a period of respite that was neither financially nor emotionally possible for them.

We conducted a repeated-measures MANOVA, with a within-subjects factor (*time of testing*: pretest, posttest, or follow-up) and a between-subjects factor (*treatment:* FST versus quasi-control), to evaluate treatment outcome. A significant effect emerged for *time* ($F = 4.3$; $df = 12,24$; $p = 0.001$) and the *treatment* x *time* interaction ($F = 3.0$; $df =$

12,24; $p = 0.01$). Univariate ANOVAs testing the time factor showed that all groups had significantly reduced GHQ and IES scores, but not MSGR or APGAR scores, for the pretest-to-posttest interval (F [1,35] = 7.2, 16.6, 17.0; $p = 0.01$, 0.000, 0.000, for GHQ, IES-I, and IES-A' respectively) but not the posttest-to-follow-up interval. Univariate ANOVAs for *treatment* x *time* revealed significant interaction effects in the pretest-to-posttest interval for all variables (F[1,35]) = 7.0, 7.2, 6.0, 5.5, 7.8; $p = 0.01$, 0.01, 0.05, 0.05, 0.01, respectively, for the GHQ, IES-I, IES-A, MSGR, and APGAR), but not for the posttest-to-follow-up interval. A one-way between-subjects MANOVA was conducted to compare the FST group *at follow-up* with the posttest-only group; it showed no difference between the groups on dependent measures (F[7,57] = 1.20; $p = 0.317$).

Given the pattern of sharp decreases in stress and psychiatric symptomatology by FST participants, the clinical significance of therapeutic outcome was estimated using Jacobson and Revenstorf's (1988) methodology. Based on cutoffs derived from published data comparing clinical with normative samples, participants could be classified as "clinically impaired" on the GHQ (< 5), IES-I (< 18), or IES-A (< 17). Most (22 of 26, or 85%) FST participants were assessed as clinically distressed in at least one of these measures prior to therapy, compared with 46% of the quasi-control group and 31% of the posttest-only group ($\chi^2 = 22.2$; $df = 2$; $p = 0.001$). By contrast, most FST participants no longer scored as clinically impaired on any measure at posttest after FST (only 6 of 26, or 23% scored as impaired) and at follow-up (4 of 26, or 14%).

Although clinical significance norms are not available for the family APGAR and MSGR, the FST group increased their family cohesion and marital satisfaction to high levels, comparable to those of veterans who did not seek treatment (the posttest-only group). By contrast, the quasi-control group showed a *decline* in both family cohesion and marital satisfaction to levels somewhat lower than those achieved by the FST group at posttest and at follow-up.

Overall, the brief FST intervention was associated with clinically significant sustained reductions in stress and psychiatric symptomatology and gains in family systemic adjustment. The use of two control samples provides support for the tentative conclusion that FST was a causal factor in the positive change evidenced by FST clients. Quasi-control participants showed only marginal change from pretest to follow-up, including deteriorated family functioning. Time alone, or unmeasured maturational or interpersonal factors (e.g., helpful conversations with friends or co-workers) may account for the gains reported by FST clients, but no such change was seen in the quasi-control group. Anecdotally, FST participants described therapy as helping them to understand the personal and familial impact of ODS stressors in a systemic framework and thus to better cope with stressors by using skills for communication, mutual support, and problem-solving.

The FST gains also may be artifacts of measurement or expectancy biases. However, the comparability of the FST group's scores at follow-up to the posttest-only group's scores suggests that FST helped participants to move from clinically severe impairment to a more stable and positive long-term level of post-stressor adjustment. The discrepant time frame of assessment—FST follow-ups were conducted approximately six months before posttest-only assessments—makes the comparison inexact. However, given a documented trend (Green, 1993) of substantial decline in symptomatology in the 16–18 month period following exposure to life stressors, the persistent stress symptoms of many posttest-only veterans suggest that without FST many treatment-seeking participants may have remained

seriously impaired. Moreover, the use of empirically derived cutoffs demonstrated a clear shift for most FST participants from clinical distress to nonclinical functioning. Furthermore, if FST fosters positive expectancies, then this may be more an intrinsic curative factor than an artifact.

In contrast to more individually focused interventions with ODS veterans (e.g., Perconte, Wilson, Pontius et al., 1993), FST shows promise as a preventive and therapeutic intervention for the many thousands of soldiers, veterans, and families who are now, and will be in the future, serving on the periphery of military combat operations. FST also may offer a modality for timely brief intervention by marital and family therapists with the many forgotten civilians and family members who experience major life stressors or trauma vicariously or witness its aftermath directly (e.g., when a family member is killed or severely harmed) in the wake of disaster, severe accidents, criminal victimization, or abuse. The results of the present study, although only tentative due to the quasi-experimental design, are sufficiently promising to warrant more definitive randomized controlled studies of FST in the wake of major life stressors or trauma.

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