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Results: The Journal of Nervous and Mental Disease Trauma, Change in Strength of Religious Faith, and Mental Health Service Use Among Veterans Treated for PTSD

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Abstract

One of the most pervasive effects of traumatic exposure is the challenge that people experience to their existential beliefs concerning the meaning and purpose of life. Particularly at risk is the strength of their religious faith and the comfort that they derive from it. The purpose of this study is to examine a model of the interrelationships among veterans' traumatic exposure, posttraumatic stress disorder (PTSD), guilt, social functioning, change in religious faith, and continued use of mental health services. Data are drawn

from studies of outpatient (N = 554) and inpatient (N = 831) specialized treatment of PTSD in Department of Veterans Affairs programs. Structural equation modeling is used to estimate the parameters of the model and evaluate its goodness of fit to the data. The model achieved acceptable goodness of fit and suggested that veterans' experiences of killing others and failing to prevent death weakened their religious faith, both directly and as mediated by feelings of guilt. Weakened religious faith and guilt each contributed independently to more extensive use of VA mental health services. Severity of PTSD symptoms and social functioning played no significant role in the continued use of mental health services. We conclude that veterans' pursuit of mental health services appears to be driven more by their guilt and the weakening of their religious faith than by the severity of their PTSD symptoms or their deficits in social functioning. The specificity of these effects on service use suggests that a primary motivation of veterans' continuing pursuit of treatment may be their search for a meaning and purpose to their traumatic experiences. This possibility raises the broader issue of whether spirituality should be more central to the treatment of PTSD, either in the form of a greater role for pastoral counseling or of a wider inclusion of spiritual issues in traditional psychotherapy for PTSD.

There is widespread agreement among therapists and researchers of posttraumatic stress disorder (PTSD) that one of the most pervasive difficulties experienced by persons who have trouble coping with trauma is a loss of meaning or purpose to life that is often experienced as a weakening of religious faith (e.g., Calhoun and Tedeschi, 1999; Decker, 1993; Janoff-Bulman, 1992; Lifton, 1988). Further, although there are a few exceptions (e.g., Oglan-Hand, 1993; Rowgh, 2000), the literature clearly documents a significant inverse association between strength of religious faith and severity of PTSD symptoms (e.g., Astin et al., 1993; Calhoun et al., 2000; Davis et al., 1998; Drescher and Foy, 1995; Klingler, 1999; Murad, 1991; Phan and Kingree, 2001; Racklin, 1998; Saunders, 1999). Paradoxically, although traumatic exposure often has a weakening effect on religious faith, it can also lead to its strengthening (Calhoun et al., 2000; Drescher and Foy, 1995; Lawson et al., 1998; Racklin, 1998). Some writers have suggested that such a strengthening effect may come from embracing the redemptive role that suffering is accorded by many religions (Frankl, 1962; Janoff-Bulman, 1992) or from accepting the invitation to spiritual growth that trauma poses by virtue of its destructive effects on existing ideas of meaning and purpose (Calhoun and Tedeschi, 1999; Decker, 1993). However, answers to the meaning and purpose of life are only one of the potential benefits of religious faith. There is also the social support from fellow believers that is available from attending religious services and participating in religious activities (e.g., Allport and Ross, 1967; Gorsuch and McPherson, 1989).

Both the search for meaning and the search for social support could be motivations for veterans' continued interest in pursuing mental health services.

Mental health services involve intensive interpersonal interactions with therapists and fellow patients that could satisfy both needs. We hypothesize that veterans who have undergone a weakening of religious faith experience the weakening as a loss of meaning and/or social support that they seek to recapture in mental health treatment.

In this article, we use structural equation modeling to evaluate a model of the interrelationships among veterans' traumatic combat exposure, PTSD, guilt, social functioning and change in religious faith as a way of accounting for the extensiveness of their use of VA mental health services. Structural equation modeling is an extension of multiple regression analysis that is well suited to the evaluation of a set of postulated sequential relationships. Statistically, the extension involves the simultaneous solution of the set of equations expressing the interrelationships among variables and the use of all available information in deriving each of the parameter estimates in the model (Bollen, 1989; Hayduk, 1987; James et al., 1982). Conceptually, the extension involves the specification of a model of sequential linkages that serves as a map for the selection of variables to be included in each equation.

In our model, we posited that killing others oneself and failing to prevent the death of others are two combat experiences that play a major role in generating PTSD and guilt. Research has consistently found that greater combat exposure is associated with greater severity of PTSD (e.g., Kulka et al., 1990; Laufer

and Frey-Wouters, 1988). Further, killing others oneself and failing to prevent the death of others are two specific combat experiences that are particularly associated with PTSD and guilt (Fontana et al., 1992; Fontana and Rosenheck, 1999). We posited, further, that the experiences of killing others and failing to prevent death, along with PTSD and guilt, would weaken religious faith. There have been many studies reporting a weakening of religious faith after a wide range of traumatic exposures (e.g., Barton and LaPierre, 1999; Grant, 1999; Lawson et al., 1998). Weakened religious faith, PTSD, and guilt, in turn, are each posited to lead to greater interpersonal violence, less interpersonal closeness, and difficulty holding a job in civilian life. Deficits of this nature in social functioning have been found by Jamal and Badawi (1993), Kulka et al. (1990), and O'Brien (1982). Finally, we posited that weakened religious faith, PTSD, guilt, interpersonal violence, less interpersonal closeness, and inability to hold a job would each lead to more extensive use of VA mental health services (Kessler et al., 1999; Pearce et al., 2002; Ronis et al., 1996; Switzer et al., 1999).

METHODS

Subjects

The subject sample consisted of 1,385 veterans who provided data for intensive evaluations of the Department of Veterans Affairs specialized outpatient PTSD programs (N = 554) and specialized inpatient PTSD programs (N = 831). Data collection was conducted between September 1989 and December 1991 for the outpatient programs (Fontana and Rosenheck, 1996) and between November 1991 and January 1994 for the inpatient programs (Fontana and Rosenheck, 1997). Subjects were consecutive admissions to six outpatient programs and 10 inpatient programs. The participating programs obtained informed consent. Ninety-five percent of the veterans served in Vietnam, and 5% served in World War II and/or Korea. They averaged 45.4 (SD = 5.9) years of age, with 12.9 (SD = 2.2) years of education. Forty-three percent were currently married. Ethnically, 73.6% were white, 18.3% were African American, and 8.2% were of other ethnicity. Almost all veterans (94%) were diagnosed with PTSD. Comorbidly, 39% were diagnosed with an affective disorder, 3% with a bipolar disorder, 2% with schizophrenia, 42% with alcohol abuse, and 23% with drug abuse. Eighty-nine percent of the sample said that they were raised as Christians: 37.6% as Catholics and 51.5% as Protestants.

Six and one-half percent said that they were raised to believe in some other religion, and 4.3% said that they were not raised to believe in any religion.

Schedule of Data Collection

At the time of program admission, an independent evaluation assistant used standardized instruments to survey each veteran's demographic and military background, symptoms, and social functioning with a structured interview. Then the assistant surveyed service use for each veteran by structured interview 12 months later.

Measures

Veterans' demographic characteristics included age, military service era, ethnicity, education, and marital status. Their traumatic exposure was measured by their clinicians' judgments of the combat experiences that were distressing them (Fontana et al., 1992). At the time that the program evaluation was conducted, several consultants and field staff felt very strongly that direct inquiry into these experiences to the veterans themselves might be disruptive of clinical rapport, particularly because of the implications of personal responsibility and the fact that data collection was conducted at the beginning of treatment. Therefore, instead of formally questioning veterans on the psychological meaning of their combat experiences, we used a technique that had been devised for the rating of serious life events by clinicians (Weiss et al., 1984). Clinicians were asked to indicate whether each of 11 experiences was distressing and/or disabling to each veteran currently based on all information from the structured interviews. This technique had the compensatory advantage of capitalizing on clinical acumen and insight into those experiences that were currently distressing and/or disabling veterans.

The 11 experiences were collapsed into four roles that veterans played in their occurrence. For purposes of the present study, we selected the two roles that maximized personal responsibility in their occurrence: killing others (AGENT) and failing to prevent the death of others (FAILURE). AGENT was composed of three experiences: killing others (80.4%), enjoying the excitement of killing others (38.9%), and participating in atrocities (41.7%; $M = 1.34$; $SD = 1.04$; range = 0 to 3). Four experiences comprised FAILURE: failing to fulfill duties or responsibilities (53.9%), accidentally contributing to the death of a buddy (34.9%), inability to effectively treat and save the wounded (35.7%), and the death of a buddy (87.8%; $M = 1.74$; $SD = 1.08$; range = 0 to 4).

Change in religious faith (FAITH) was measured as the difference between two items, one referring to the present time and the other to the time the veterans went into the military. Positive values indicated a strengthening of faith and negative values a weakening of faith. Each item asked, "How much was/is religion a source of strength and comfort to you?" on a 3-point scale (0 = none; 1 = a little; 2 = a great deal). At the time veterans went into the military, 38.4% said that religion was a great source of comfort to them, and 25.2% said that religion was no source of comfort ($M = 1.13$; $SD = .79$; range = 0 to 2). At the present time, 39% said that religion was a great source of comfort, and 32.8% said that religion was no comfort ($M = 1.06$; $SD = .85$; range = 0 to 2). The similarity of these percentages at each point in time, however, masks the change that veterans ascribed to religion as a source of comfort. When the difference in comfort between the two questions was calculated for each veteran, 24.4% indicated that religion had become a greater source of comfort, and 29% indicated that religion had become less of a source of comfort. There was no significant difference between Catholics and Protestants in the amount of comfort they said they derived from religion at the time they went into the military, and there was no significant difference in the change in comfort they reported from one time to the next.

Posttraumatic stress disorder was measured by the Mississippi Scale for Combat-Related PTSD (Keane et al., 1988; $M = 113.79$; $SD = 17.22$; range = 39 to 150), and GUILT was measured by the Laufer-Parsons Guilt Inventory for combat-related experiences (Laufer and Frey-Wouters, 1988; $M = 84.14$; $SD = 26.64$; range = 28 to 140). Five items that mentioned guilt were deleted from the Mississippi Scale to eliminate content overlap with the Laufer-Parsons Guilt Inventory. A scale for measuring VIOLENCE was taken from the National Vietnam Veterans Readjustment Survey (Kulka et al., 1990; $M = 10.41$; $SD = 6.54$; range = 0 to 32). The number of persons that veterans felt close to (PERSONS) was measured as the sum of people nominated in the following categories: parents, grandparents, brothers/sisters, spouse/live-in partner, children, other family, other veterans, friends other than veterans, and mental health professionals ($M = 9.53$; $SD = 7.35$). The longest JOB held by veterans was measured in months by the question, "How long was your longest full-time job?" ($M = 7.77$; $SD = 6.58$; range = 0 to 45).

Extensiveness of mental health services was measured by the number of outpatient treatment SESSIONS that veterans reported attending in VA psychiatric programs over the course of 1 year ($M = 42.63$; $SD = 45.78$; range = 0 to 297). This 1-year period was defined as 12 months after the first session for those initially admitted to an outpatient program and 12 months after discharge from the hospital for those initially admitted to an inpatient program. Thus, pursuit of mental health services consisted of psychiatric outpatient sessions attended over a 12-month period for veterans in both outpatient and inpatient treatment.

Data Analysis

The data analysis proceeded by estimating the model for the goodness of fit to the data according to the recommendations of Hu and Bentler (1999) for the comparative fit index and the standardized root mean square residual. Significant (p

FIGURE 1. Model of the effects of trauma, PTSD, guilt, social functioning, and change in religious faith on the use of mental health services.

Path coefficients are presented as standardized regression coefficients to facilitate their comparison across different paths. As such, they are most comparable with correlation coefficients. Noncausal associations among variables are represented by two-headed arrows. The small arrows that are attached to each variable but do not proceed from another variable indicate the disturbance for that variable (that is, the proportion of variance for that variable that is unaccounted for by the model).

The data were checked for outliers in terms of extreme contributions to multivariate kurtosis, with no cases requiring deletion. Missing data, however, required that 379 cases be omitted from estimation of the model. The sample size for estimation was therefore 1006. t-Tests conducted on model variables revealed that omitted veterans reported feeling close to significantly (p

Parameter estimation was conducted by generalized least squares because the multivariate kurtosis was less peaked than normal (Mardia, 1970). The CALIS procedure of the SAS software package, version 6.12 (SAS Institute, 1989), was used to estimate model parameters on the covariance matrix. Before estimating the model's parameters, the data were rescaled to normalize the distributions of some variables and make the SDs of all variables comparable in magnitude. Conditioning the data in this manner is recommended to obviate problems in estimation (Hatcher, 1994).

RESULTS

We proceeded with model estimation by first determining the fit of the model to the data. In addition to the posited paths for the model variables presented, we also included a dummy variable representing the inpatient versus outpatient status of the samples. Paths were specified between this variable and all other variables because the samples differed significantly on some of the variables. Paths are not diagrammed for this dummy variable, however, because it was included for control purposes rather than for substantive purposes. The χ^2 for the model was 34.32 (8; $N = 1006$; p

Among the paths in Figure 1, the following are key for delineating the major avenues between the change in religious faith on the one hand and other variables on the other. As posited, AGENT and FAILURE weakened the comfort derived from religious FAITH after military service. Consistent with our expectations, this effect was both direct and mediated by GUILT. Finally, GUILT and comfort from weakened FAITH each contributed independently to more extensive participation in VA mental health SESSIONS. It is noteworthy that, contrary to our expectations, social support and functioning (PERSONS, VIOLENCE, and JOB), although influenced by GUILT and FAITH, did not play a significant role in the number of SESSIONS attended.

DISCUSSION

Feelings of personal responsibility for killing others and for failing to prevent the death of others are two sets of traumatic experiences that often accompany combat exposure. Both typically contribute to guilt and, as shown by data presented here, also contribute to a weakening of religious faith. Further, as we expected, their effects on religious faith were also mediated by guilt.

The absence of significant paths from PTSD and social functioning to use of mental health services suggests that veterans' pursuit of these services appears to be driven more by their guilt and the weakening of their religious faith than by the severity of their PTSD symptoms or deficits in their social functioning. That is, veterans' motivation for continued pursuit of mental health services does not appear to be primarily greater symptom relief or more social contact. Rather, the specificity of paths to the number of therapy sessions from guilt and change in religious faith suggests that a primary motivation of veterans' continuing pursuit of treatment is their search for a meaning and purpose to their traumatic experiences. In this regard,

they appear to be looking to their therapists and, perhaps, the VA system as a whole to provide the answers and a sense of belonging to a larger whole that is no longer being fulfilled sufficiently by their religious faith.

The possibility that veterans' continued pursuit of mental health services is driven in part by their search for meaning raises the broader issue of whether spirituality should be more central in the treatment of PTSD. Until the past few years, the professional literature dealing with the treatment of PTSD had mentioned spirituality as a concern only sporadically and, even then, very tersely. There have been isolated articles from a spiritual perspective advocating the Twelve Step approach (Brende, 1993) and sweat lodges for Native Americans (Silver and Wilson, 1988), but these are notable as exceptions. All VA medical centers have chaplaincy services, and these services were frequently involved in long-term inpatient PTSD treatment programs, many of which have now closed (Rosenheck and Fontana, 2000). Chaplaincy services, however, have rarely been a component of VA outpatient programs. In fact, the paucity of data concerning the workload for pastoral counseling provided for veterans with PTSD, in general, illustrates the marginality of chaplaincy services within PTSD treatment programs. Among the psychiatric disorders, however, the particular expertise of pastoral counselors would seem to be especially relevant to the needs of people with PTSD, because challenges to peoples' beliefs concerning the meaning and purpose of life are common sequelae of exposure to trauma, and these beliefs are rooted inherently in existential issues that are at the center of religion and spirituality.

Another alternative that could be pursued in addition to pastoral counseling would be for therapists themselves to become more involved in dealing with patients' spiritual concerns in psychotherapy. Several writers have called attention to the potential for psychological and spiritual growth that is presented by exposure to traumatic events (Calhoun and Tedeschi, 1999; Decker, 1993; Pargament, 1997). In their coverage of psychological growth in general, Calhoun and Tedeschi (1999) have included a thoughtful and pragmatic discussion of the ways in which traditional psychotherapy can be broadened to encompass spiritual growth. However, they and others (e.g., Decker, 1995) have cautioned that inclusion of spiritual matters into therapists' practice of psychotherapy cannot be accomplished by viewing spirituality as just one other content domain to be addressed like any other.

Many of the difficulties faced by therapists with respect to veterans' wishes to discuss spiritual issues parallel those posed by veterans' wishes to discuss participation in atrocities (Haley, 1974). Haley pointed out that atrocities are "illegitimate" war activities that carry justifiable moral consequences. As such, the stress responses they generate cannot be understood in the same way as "neurotic" responses to "legitimate" war activities. She argued that therapists need to use a different model of treatment to deal with these experiences.

Similarly, existential questions are qualitatively different from questions of interpersonal and social dysfunction in that the resolution of existential questions requires examination of the bases for moral judgments. Examination of these bases almost always leads beyond the immanent (natural) reality to a transcendent (supernatural) one.

Exploration of spiritual issues may be facilitated greatly when therapists have an understanding of the religious or spiritual belief systems of their patients. The greater the therapists' understanding, the more successfully they may be able to work with patients within the patients' own religious and spiritual constructions of the world. Exploring spiritual issues with patients is fraught with ambiguities and potential pitfalls. There is often a fine line between communicating one's own beliefs and imposing them, and therapists are justifiably wary of imposing their own religious or spiritual beliefs on their patients (e.g., Calhoun and Tedeschi, 1999; Decker, 1995). Defining the line that separates communication from imposition is particularly complicated in cases where therapists believe that patients' beliefs are inimical to their psychological health—for example, when patients believe that their traumatic experiences represent God's punishment or abandonment of them (Calhoun and Tedeschi, 1999; Pargament, 1997). Further, before addressing patients' spiritual issues, it may be very beneficial to therapists to have addressed existential questions on their own, because confronting these issues can be as painful and unsettling to therapists as it is to patients (Yalom, 1980).

Several limitations of this study must be acknowledged. First, the data are limited to those from veterans. The nature of their traumatic exposure, combat, is different in many ways from the traumatic exposure of civilian samples. Furthermore, the veterans in the current samples were all pursuing treatment from the VA. Veterans tend to feel a special entitlement to care and assistance from the VA that few people feel from other institutions (Rosenheck, 1986). Generalizability of our findings to other samples and other treatment systems, therefore, cannot be assumed without further research. Second, the data are retrospective in nature. Although some variables can be ordered unambiguously with regard to their historical sequence, correctness of the ordering of the postmilitary variables depends on the theoretical soundness of our model. Third, even if variables are ordered unambiguously and correctly, it is possible that recall bias might have affected the recollection of variables or introduced connections among them that are altered from the time of their occurrence.

Finally, although many paths in our model are statistically significant, the magnitudes of the effects are generally small in terms of the amount of variance for which they account. It is possible that a more extended representation of spirituality or a more extensive measurement of the use of pastoral counseling services would yield stronger associations among the variables, and that inclusion of such variables would strengthen the ability of the model to account for patients' use of treatment services.

In conclusion, this study makes one of the few empirical contributions to the burgeoning literature regarding the inclusion of spirituality in the panoply of domains that can be affected adversely by traumatic experiences. If, as we suspect, one of the reasons that veterans continue to seek mental health services is to obtain answers to existential questions concerning the meaning and purpose to their traumatic combat experiences and their subsequent lives, mental health services should consider addressing spiritual losses an integral part of treatment.

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