The Compassion Fatigue Scale: Its Use With Social Workers Following Urban Disaster

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Abstract

Objective—The present study has two goals: to assess the difference between secondary trauma and job burnout and to examine the utility of secondary trauma in predicting psychological distress.

Method—The data come from a survey of social workers (*N* = 236) living in New York City 20 months following the September 11 terrorist attacks on the World Trade Center (WTC).

Results—Social workers' involvement in WTC recovery efforts is related to secondary trauma but not burnout. Analyses also reveal that both secondary trauma and burnout are related to psychological distress after controlling for other risk factors.

Conclusion—This study supports the importance of compassion fatigue as a risk factor for social workers counseling traumatized clients and its association with psychological problems.

Keywords

compassion fatigue; secondary trauma; vicarious trauma; burnout; posttraumatic stress disorder; stress-process model; scale development

During the past 20 years, most studies related to psychosocial stressor exposures have tended to focus on individuals seeking social support and coping assistance when dealing with a negative or traumatic life event (Aneshensel, Pearlin, & Schuler, 1993; Pearlin, 1989; Thoits, 1995). Less often has been a concern for those who give social support (e.g., emotional or informational) or coping assistance (e.g., raising self-esteem or self-efficacy) to others. Although studies have shown that providing social support in these situations can be highly stressful (Ohaeri, 2003; Schulz et al., 1997), relatively little research has focused on formal caregivers (e.g., social workers, therapists, child protection workers, paramedics etc.) and their social support efforts on behalf of traumatized clients (Figley, 1995). Yet, social support and coping assistance are the kinds of care these workers provide in clinical and organizational settings.

Past researchers have raised concerns about the mental health status of service professionals who work with AIDS patients (Wade, Beckerman, & Stein, 1996), oncology patients (Simon, Pryce, Roff, & Klemmack, 2006), the elderly (Leon, Altholz, & Dziegielewski, 1999), child welfare clients (Bride, Jones, & MacMaster, in press; Bride, Jones, MacMaster, & Shatila, 2003; Conrad & Kellar-Guenther 2006; Daley, 1979; Dane, 2000; Jayaratne, Chess, & Kunkel, 1986; Rycraft, 1994), emergency room clients (Somer, Buchbinder,

Peled-Avram, & Ben-Yizhack, 2004), clients who have committed suicide (Ting, Sanders, Jacobson, & Power, 2006), child sexual abuse victims, and social workers working with a variety of clients (Bride, Robinson, Yegidis, & Figley, 2004; Deighton, Gurris & Taue, 2007). Bride (2007) concludes that social workers engaged in direct clinical practice are likely to be secondarily exposed to traumatic events through their work with traumatized populations, and that a significant minority (15%), likely meet the diagnostic criteria for posttraumatic stress disorder (PTSD), conclusions that are consistent with an earlier report by the same author (Bride, 2004) and with Siebert's (2004) finding that 19% of social workers in North Carolina meet study criteria for depression. The first step in addressing the mental health consequences of working with traumatized clients is to develop an easily administered valid and reliable screening tool which can identify those most at risk for secondary trauma, other psychological problems, and job burnout.

Generally, individuals working in the caring professions often attempt to alter the behaviors and emotions of their clients by providing emotional support (e.g., empathy), strategies for coping with emotional states, or by providing cognitive management skills (Boscarino, 1997; Francis, 1997; Thoits, 1986). Within the context of formal caregiving, providing therapy to clients who have survived a traumatic event can be particularly stressful (Figley, 1995). Many investigators have described how therapists who work with traumatized clients often show signs of psychological distress, such as PTSD, as a result of these interactions (Bride, 2007; Figley, 1995; Nelson-Gardell & Harris, 2003; Schauben & Frazier, 1995).

Despite findings suggesting that therapists can exhibit symptoms consistent with PTSD (Adams, Boscarino, & Figley, 2006; Boscarino, Figley, & Adams, 2004; Bride, 2007; Jenkins & Baird, 2002), past research on the consequences of working with traumatized clients for therapists has had several limitations. First, there has been a lack of conceptual clarity about what constitutes secondary trauma and how this syndrome differs from other adverse work outcomes, such as job burnout (Jenkins & Baird, 2002). The adverse psychological impact of working with clients who experienced psychological trauma (e.g., sexual and physical abuse, military combat, or community disaster) has been described under a variety of terms: vicarious traumatization, secondary traumatic stress, and compassion fatigue (CF; Jenkins & Baird, 2002). Second, there are a number of secondary trauma-related scales in use, employing dissimilar conceptualizations and measurement methods (e.g., Bride et al., 2004; Figley, 1995; Gentry, Baranowsky, & Dunning, 2002; Stamm, 2002). Some of the scales contain 30 or more items, making them less useful for identifying social workers at risk for psychological difficulties (e.g., Gentry et al., 2002; Stamm 2002). In addition, the psychometric properties of these scales are not always discussed. If social workers at risk for secondary trauma and job burnout are to be identified, then a reliable, valid, and easily administered measure is necessary. Third, research studies thus far have neither fully incorporated Figley's original conceptualization of secondary trauma and CF (Figley, 1995, 2002b) nor selected predictor variables within a conceptually valid research framework, such as the stress process (Thoits, 1995) or other validated model of stress adaptation (Boscarino, Adams, & Galea, 2006). Fourth, many of the studies assessing secondary trauma do not have random samples (e.g., Conrad & Kellar-Guenther, 2006; Wee & Myers, 2003), making generalizations to larger populations problematic. Finally, many of these studies do not relate secondary trauma or CF to psychological distress. Although secondary trauma and job burnout are important problems for the retention of social workers in critical caregiving positions, the psychological problems from caregiving is, in our view, an equally important issue of concern.

We address some of these limitations in the past research by describing secondary trauma drawing on Figley's (1995, 2002b) discussions of CF and the stress process model (Pearlin, Lieberman, Menaghan, & Mllan, 1981; Thoits, 1995). We also discuss how secondary

trauma and job burnout are different concepts and how each is related to working with traumatized clients. Third, based on our description of secondary trauma and job burnout, we develop several statistical models based on Figley's (1995) description of CF and on the stress process (Thoits, 1995) and assess these models using a random sample of social workers from New York City (NYC). Finally, we estimate models examining the relationship between secondary trauma and job burnout with a general measure of psychological distress. The two research questions—factors related to secondary trauma and job burnout and the predictive power of secondary trauma and burnout for psychological difficulties—address validity and reliability issues for our CF scale.

CF

CF, consistent with most common usage, is defined as the formal caregiver's reduced capacity or interest in being empathic or "bearing the suffering of clients" and is "the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced or suffered by a person" (Figley, 1995, p. 7; also see Figley, 2002a, 2002b). Within this context, CF is a hazard associated primarily with the clinical setting or among first responders to traumatic events and is composed of at least two components—secondary trauma and job burnout.

With the inclusion of PTSD in the third edition of the *Diagnostic and Statistical Manual of Mental Disorders*, stress response symptoms related to severe psychological trauma were defined as a psychiatric disorder (American Psychiatric Association, 1980). Figley (1995) developed the concept of CF when he began to focus on the unique work environment of trauma workers and mental health professionals and how they appeared to experience the effects of trauma vicariously. More specifically, CF appeared to be the consequence of working with traumatized individuals, if the professional was exposed to significant numbers of traumatized persons and had an empathic orientation (Figley, 1995). Empathic engagement with traumatized clients often requires the professional to discuss details of the traumatic experience, including role play and dramatic reenactment of the events, which are thought vital to the therapeutic process, but can have an adverse emotional impact on the caregiver (Figley, 2002a, 2002b). Thus, when therapists, doctors, nurses, or child protection workers report symptoms related to re-experiencing the client's traumatic event, wishing to avoid both the client and reminders of the client's trauma, and persistent arousal because of intimate knowledge about the client's traumatic experiences, they are likely suffering from secondary trauma (Figley, 1995, 2002b; Jenkins & Baird, 2002; Schauben & Frazier, 1995). The psychological mechanisms for this kind of patient-to-therapist transmission is fairly well known and likely involves the same cognitive learning processes related to fear conditioning and the acquisition of PTSD in humans (Boscarino, 1997, 2004).

More recently, Figley (1995, 2002a, 2002b) and others (e.g., Gentry et al., 2002; Jenkins & Baird, 2002; Nelson-Gardell & Harris, 2003; Salston & Figley, 2003; Stamm, 2002) observed that secondary trauma and what has been called job burnout overlap, in that both are characterized by the emotionally exhausting nature of working with survivors of trauma. Figley (2002b) has suggested, however, that secondary trauma is not the same as job burnout and that each has a unique effect on a professional's well-being (Jenkins & Baird, 2002; Sabin-Farrell & Turpin, 2003; Salston & Figley, 2003). Job burnout is often defined as a response to prolonged exposure to demanding interpersonal situations and is characterized by "emotional exhaustion, depersonalization, and reduced personal accomplishment" (Maslach, Schaufeli, & Leiter, 2002). High emotional involvement without adequate social support or feelings of personal work accomplishments (i.e., job satisfaction) may leave the caring professional vulnerable to burnout. Thus, we suggest that both secondary trauma and job burnout are likely central and critical clinical features of CF.

In this study we assess the extent to which secondary trauma and job burnout are related to and independent of one another.

CF Within a Stress Process Model

In their review of the literature on CF, Sabin-Farrell and Turpin (2003) suggest several possible psychological or psychoanalytic mechanisms (e.g., countertransference, emotional contagion) by which working with clients may result in CF (also see Salston & Figley, 2003). In this study, we conceptualize CF within a stress process framework (Pearlin, 1989; Pearlin et al., 1981; Thoits, 1995). This framework contends that challenging environments (stressors) typically require individuals to respond both physiologically through alterations in the neuroendocrine and hormonal systems (Boscarino, 1997, 2004) and psychologically, usually through alterations in cognitive functioning (Boscarino et al., 2006; Francis, 1997; Thoits, 1995).

Similar to the stress process (Thoits, 1995), CF researchers (Figley, 1995, 2002b; Kassam-Adams, 1999) contend that other aspects of the formal caregiver's environment can influence the likelihood of developing CF, which means that social workers exposed to similar amounts of stress are not equally vulnerable to this work hazard and its negative consequences. Although by no means consistent, most stress research indicates that individuals from lower status or disadvantaged groups are more vulnerable or emotionally reactive to stress exposures compared to more advantaged groups. Thus, women, the elderly, the unmarried, and ethnic or racial minority groups respond more strongly to stress and have greater physical and psychological problems following these events, compared to men, younger adults, married individuals, and whites (Pearlin, 1989; Thoits, 1995). A personal history of trauma is also thought to increase the likelihood of developing CF (Figley, 1995; Nelson-Gardell & Harris, 2003). Finally, coping and social support can reduce or moderate the influence of stressful events on a person's well-being (Pearlin, 1989; Thoits, 1995). Coping resources are psychological characteristics that people can use when dealing with stressful situations. Psychological qualities like self-esteem or a sense of mastery can reduce the impact of stressors on well-being (Anderson, 2000; Pearlin, 1989; Pearlin et al., 1981). Social support is usually provided by significant others in the form of emotional, informational, or instrumental support. Individuals who have few social support or coping resources are more vulnerable to stressors and suffer greater physical and psychological problems, than those who have more of these resources. In the case of social workers, social support can come from either friends, family members, or significant others outside the work environment or from coworkers and supervisors within the work environment. Although some studies have shown that support from supervisors reduces stress among social workers, most research indicates that coworker support is the most important to professional caregivers (Thoits, 1995).

Previous research tends to support the hypothesized relationships among some of these risk factors, CF, and psychological distress (Figley, 1995, 2002a; Nelson-Gardell & Harris, 2003; Sabin-Farrell & Turpin, 2003; Salston & Figley, 2003; Schauben & Frazier, 1995). Schauben and Frazier (1995), for example, find that female psychologists and violence counselors with a higher percentage of sexual violence victims as clients reported more vicarious trauma and that this was related to greater psychological problems. A history of personal trauma is also related to poor psychological health among child welfare workers (Nelson-Gardell & Harris, 2003) and psychotherapists (Kassam-Adams, 1999). Kadambi and Truscott (2004), on the other hand, examined vicarious trauma among mental health professionals working with victims of sexual violence, individuals diagnosed with cancer, and individuals suffering from other mental health issues and found little evidence supporting the connection between working with traumatized clients and CF.

Last, as Pearlin (1989) notes, stressful situations occur within a social context and that these contexts form the arrangements within which people experience such events and their response to them. The work environment of social workers influences their associations with coworkers and supervisors, their status within the organization, and the mix of their clients. That is, stressful events, coping strategies, and social support are not random occurrences, but are dependent on the social environment (Pearlin, 1989).

To address gaps in previous research on CF, we focused on social workers in clinical practice in a region recently affected by a major traumatic event—the September 11 terrorist attacks in NYC. We measure CF in this group for several reasons. First, the delivery of health care services, especially for mental health problems, is increasingly being performed by social workers. With managed care's focus on controlling costs, social workers are now providing a significant portion of psychotherapy in hospitals, private practice, and in community disasters (Mechanic, 1999). More importantly, the work environment of social workers—high case loads, direct contact with clients, poor social support, and inadequate resources—offers little protection from burnout, secondary trauma, and CF (Kadushin & Kulys, 1995). Establishing a valid, reliable, and practical measure of CF would be a first step in the development of strategies for coping with the consequence of working with traumatized clients and the resulting high levels of psychological problems, work dissatisfaction, and job turnover.

Research Questions

In this study, we address two research questions. First, we examine factors that increase or decrease the level of secondary trauma and job burnout, paying particular attention to how working with traumatized clients relates to these two outcomes. We include independent variables deemed important in the stress process literature and those found in Figley's (1995) discussion of CF. Second, we examine the predictive power of secondary trauma and burnout for psychological health. Is one aspect of CF more strongly related to psychological distress compared to the other? In order to answer these two questions, therefore, secondary trauma and job burnout are treated as dependent variables in the first set of analyses and as independent variables in the second set.

METHOD

Participants

The data for this study are from a survey of social workers living in NYC. The sampling frame was all social workers with a master's in social work or higher who were current members of the National Association of Social Workers (NASW). The NASW is the main national social work organization with approximately 50% of all practicing social workers as members. The sampling frame for the study was developed using memberships lists supplied from INFOCUS, one of the largest marketing companies providing mailing lists for national professional associations. From the membership list, INFOCUS randomly selected 600 individuals with NYC addresses and we sent a mailed questionnaire between May 12 and May 15, 2003, to all of them. A second questionnaire was mailed 2 weeks later and a follow-up letter 2 weeks after the second mailing, reminding the person to return the survey. We accepted returned surveys until August 31, 2003. Because we were mainly concerned with social workers that potentially suffered from CF, we asked those respondents who were not engaged in direct practice to return the survey indicating that they were not in clinical practice. These surveys were eliminated from our study. Overall, 236 social workers returned completed surveys and 38 returned surveys indicating that they were not providing clinical services. All of the addresses appeared to be correct, as none of the questionnaires or letters from the three mailings were returned by the Post Office. Thus, the overall survey

completion rate (returned surveys [274] and all surveys sent [600]) was 46% and the effective response rate was 39% (236 of 600). The Institutional Review Board for the New York Academy of Medicine reviewed and approved the study's protocols.

Measures

Dependent variables—This study focused on two conceptual domains: CF and psychological distress. Based in earlier work (Adams et al., 2006; Boscarino, Figley, et al., 2004), investigators separated CF into two component concepts—secondary trauma and burnout—and measured each separately based on items from the 30-item CF Scale–Revised (Gentry et al., 2002). The original scale was developed by Figley (1995) and based on clinical experience. Subsequently, versions of this scale have been used in several studies (e.g., Jenkins & Baird, 2002; Stamm, 2002). The original CF scale was designed to assess both secondary (or vicarious) trauma and job burnout. The survey asked respondents to consider each scale item and indicate how closely it currently reflects their experience, using a 10-point, visual, analog-type Likert-type scale (1 = *never or rarely*, 10 = *very often*). Previous analyses showed, however, that this scale could be reduced to 13 items, 5 for secondary trauma and 8 related to job burnout (See the appendix for the exacting wording of the items in each sub-scale). We calculated the mean score for secondary trauma and job burnout (Cronbach's α = . 80 and .90, respectively). Because of the skewed distribution of these two scales, that violated the normality assumption of linear models, we took the natural log of the scale's score and used these transformed variables in all of our analyses (*M* = 0.70, *SD* = 0.52; *M* = 0.55, *SD* = 0.48; secondary trauma and job burnout, respectively).

General psychological distress was assessed using the 12-item version of the General Health Questionnaire (GHQ-12; Goldberg & Huxley, 1992; McDowell & Newell, 1996). This scale, based on a 4-point Likert-type scale, was designed to be a general screening instrument for psychological problems in a general population and has excellent validity and reliability (McDowell & Newell, 1996). In our study, the GHQ-12 scale (Cronbach's α = . 80) was the mean score on the items, with higher scores reflecting poorer psychological status (*M* = 2.02, *SD* = 0.30, range = 1.25 to 3.17).

Independent variables—Based on Figley's (2002a, 2002b) conceptualization of CF and our review of psychosocial stress theory (Pearlin, 1989; Thoits, 1995), we included demographic, stressor exposures, and psychological resources as independent variables in our models for secondary trauma, job burnout, and psychological distress. The five *demographic variables* were gender, race or ethnicity, age, marital status, and years working in professional counseling. Age and years in professional counseling were coded to the nearest year (*M* = 55.90, *SD* = 7.98; *M* = 23.39, *SD* = 7.86; respectively). Gender, marital status, and race or ethnicity were coded as binary variables, with female, married (including living together as if married), and white coded 1 and male, not married or not living together, and person of color coded as 0.

We included five variables measuring *exposure to stressful events.* First, the survey inquired about eight negative life events (e.g., getting divorced, having problems at work, etc.) that could have occurred to the respondent in the past 24 months (Freedy, Kilpatrick, & Resnick, 1993). These events were summed to produce a negative life events scale (*M* = 1.12, *SD* = 1.22). Second, we asked about eight lifetime traumatic events (e.g., attacked with a gun, a situation where being killed was possible, etc.) that could have happened during the respondent's lifetime (Freedy et al., 1993). As with negative life events, these events were summed to produce a lifetime traumatic events scale (*M* = 1.99, *SD* = 1.49). Third, there were seven questions about whether or not the respondent counseled people exposed to the

September 11 World Trade Center Disaster (WTCD), such as counseling those who directly witnessed the events, lost a spouse, etc. We summed these yes–no questions into a 9/11 counseling scale ($M = 3.18$, $SD = 1.59$). The survey also asked about 12 ways in which the respondent could have helped individuals affected by the WTCD (e.g., participate in rescue or recovery efforts, donated money, donated blood, attended memorial services, provided mental health counseling services). We summed these yes–no items to create a 9/11 involvement scale ($M = 2.13$, $SD = 1.62$). Finally, as a measure of exposure to other traumatized clients, we asked participants what percentage of their clients were survivors of physical or sexual violence. Responses were coded into a binary variable, indicating "low" exposure if fewer than 20% of clients were survivors of violence and "high" exposure if 20% or greater were survivors. The negative life events, traumatic events, and the counseling individuals exposed to the WTCD measures discussed were used and validated in other WTCD studies in NYC (Boscarino, Adams, & Figley, 2004; Boscarino et al., 2006; Boscarino, Galea, Ahern, Resnick, & Vlahov, 2002; Boscarino, Galea, et al., 2004; Galea et al., 2003).

Finally, we assess two measures of *psychological resources* and three *work environment* factors. The social support scale (Sherbourne & Stewart, 1989) consisted of 4 items (e.g., someone was available to confide in), summed and divided by the number of items answered so that higher mean scores reflected higher social support (Cronbach's $\alpha = .89$), based on a 4-point Likert-type scale from *none of the time* to *all of the time* ($M = 3.30$, $SD = 0.74$). Sense of mastery (Cronbach's $\alpha = .76$) was measured using 6 items from Pearlin's mastery scale (Pearlin et al., 1981). The response categories were based on a 5-point Likert-type scale (*strongly disagree* to *strongly agree*, coded 1 to 5). These items were summed and divided by the number of items answered, with higher scores on this scale indicating a greater sense of mastery ($M = 3.91$, $SD = 0.63$). Both the social support and mastery scale were validated in many studies and showed good reliability (Boscarino, Adams, et al., 2004; Boscarino et al., 2002; Boscarino et al., 2006; Boscarino, Galea, et al., 2004; Pearlin et al., 1981).

We calculated three *work environment* measures to assess the social context of social work on the secondary trauma, job burnout, and psychological distress. First, the work information scale was the mean of two items about having the necessary information to enhance the delivery of services and having adequate information about how to control emotional fatigue ($M = 4.17$, $SD = 0.61$). The second work environment measure asked respondents three questions about social support from coworkers and supervisors. To minimize missing cases, for those social workers in private practice (i.e., did not have coworkers or supervisors), we coded their missing responses to 1, reflecting no coworker or supervisor support. We created a work social support measure by taking the average of these three items ($M = 3.00$, $SD = 1.34$). Finally, the survey had two items about missing lunch and not having enough time for recreation or exercise because of work obligations. We calculated the average of these two items to create a measure of poor health habits because of work involvement ($M = 2.28$, $SD = 1.00$). The response options for these work environment questions were based on 5-point Likert-type scales, ranging from *strongly disagree* (1) to *strongly agree* (5), so that higher scores on the scales indicated greater agreement that information to be an effective social worker was available, that coworkers and supervisor were supportive, and that the respondent had poor health habits because of work demands, respectively. Based on the CF literature, we hypothesized that these three measures of the organizational environment within which social workers practice were associated with all three of our dependent variables (Figley, 1995, 2002b).

Statistical Analysis

Because we already established that the secondary trauma and job burnout scales measured only one factor and had acceptable internal reliability in our previous work (Adams et al., 2006; Boscarino, Figley, et al., 2004), we proceeded to assess the association among the two CF measures, the GHQ scale, and the independent variables discussed above. First, we divided the independent and dependent variables into binary variables and assessed their bivariate associations using cross-tabulations and χ^2 tests. Second, we constructed a series of ordinary least squares regressions to test the predictive utility of the independent variables for the two CF scales. More specifically we regressed the two CF measures, separately, on the demographic, stressor exposure, psychological resource, and work environment measures. Next, we used these same independent variables for regressions with the GHQ scale as the dependent variable. For these analyses, we first regressed the GHQ on the demographic, stress, resource, and environment variables. Then we included secondary trauma and job burnout, separately. Finally, we estimated a model that had all of the independent variables, including secondary trauma and job burnout. These regressions allowed us to evaluate the independent association between the GHQ and the two CF components (secondary trauma and job burnout), controlling for demographic, stress, psychological resources, and work environment factors. We assess the goodness of fit for all of our regression models using the R^2 and provide the standardized beta coefficients for each variable in the final model. The R^2 is the percentage of variance in the dependent variable that the independent variables explain. The higher the R^2, the better the model does at explaining variation in the dependent variable. The beta coefficient is a standardized measure of the association between the independent and dependent variables. Thus, the beta coefficient permits comparison of the strength of the association between two different independent variables and the dependent variable. For example, if the WTC involvement has a beta coefficient of .34 in a model with the GHQ as the dependent variable and negative life events has a beta of .45, then negative life events has a stronger association with our measure of psychological health than WTC involvement. These statistics allow us to estimate the relative strength of the association between the independent and dependent variables. SPSS version 14.0 was used for all data analysis and all p values shown were based two-tailed tests.

RESULTS

The demographic profile of our sample is presented in Table 1 (column 2). As shown, our respondents were predominately female (80%), White (89%), married (58%), and were older, with more than 80% of the respondents 50 or older. The majority of the respondents also did not have children younger than 18 living at home and had more than 20 years experience in professional counseling. In terms of the stressor measures, 31% had at least two negative life events in the past 2 years, 34% had at least three traumatic events in their lifetimes, 19% reported that 20% of their clients were survivors of violence, and about 18% were heavily involved in providing WTCD counseling services or with WTCD recovery efforts. For our psychological resource variables, more than half of respondents scored high on the social support and mastery scales (54% and 58%, respectively). Finally, the work environment factors revealed that almost 38% perceived that they had enough information to perform their social work roles well, 36% reported that they had good social support from their coworkers and/or supervisors, and only one third reported that they had poor health habits because of work obligations (Adams et al., 2006;Boscarino, Figley, et al., 2004).

Because one focus of our study was to assess factors related to CF, we examined the association between secondary trauma and job burnout and the demographic, stressor, psychological resource, and work environment variables in detail (Table 1, columns 3 and 4). Beginning with secondary trauma, interestingly, none of the demographic variables were

related to this outcome. Of the stress variables, respondents who reported more negative life events and greater involvement in the WTCD recovery efforts were more likely to score high on the secondary trauma scale, compared to those who had fewer negative life events or less involvement. Lifetime trauma, having a high percentage of clients who were victims of violence, and WTCD counseling involvement were not statistically associated with secondary trauma, although they trended in the predicted direction. Sense of mastery was associated with lower secondary trauma, whereas social support and all of the work environment variables were not statistically associated with this outcome. As expected, secondary trauma was strongly associated with both job burnout and higher scores on the GHQ, however. More specifically, respondents who scored high on secondary trauma also scored high on job burnout and had poorer psychological well-being.

Job burnout (Table 1, column 4) was associated with not being married, having more negative life events in the past year, and having more traumatic events in the past year. This outcome was not statistically related to the other demographic, stressor, or work environment variables. Unsurprisingly, individuals with high sense of mastery also scored lower on our job burnout measure. Finally, job burnout was strongly related to psychological health, as measured by the GHQ, with those in the high job burnout category more likely to exhibit poorer psychological well-being.

Table 2 presents the regression models for secondary trauma and job burnout. Because of our sample size, we limited the independent variables to those that were statistically significant in the bivariate results or were important for the stress model. As can be seen for secondary trauma (column 2), WTC involvement was significantly related to this outcome, as was having information to work effectively. More specifically, as involvement in WTC recovery efforts increased, respondents also scored higher on the secondary trauma scale ($B = .08$, $p < .001$), whereas those who reported having enough information to perform their work effectively had lower secondary trauma ($B = -.19$, $p < .01$). Overall, the independent variables in the model explain about 15% of the variation in secondary trauma. In the job burnout model, negative life events and a sense of mastery were significantly associated with this outcome. In addition, having information to work effectively was marginally significant, counter to our expectations. In particular, the more negative life events participants reported, the higher their job burnout scores ($B = .09$, $p < .01$). In contrast, the higher respondents scored on the mastery measure, the lower their job burnout scores ($B = -.21$, $p < .001$). For the work information variable, having such information tended to lower job burnout ($B = -.10$, $p < .10$). In these analyses, WTC involvement had the strongest association with secondary trauma, based on examination of the beta coefficients ($\beta = .26$), whereas mastery had the strongest relationship with job burnout ($\beta = -.26$).

Overall, our multivariate regressions for the GHQ scale (Table 3) explained between 29% and 42% of the variance, depending on which set of independent variables were in the model. Model 1 contains all of the demographic, stress, resource, and work environment variables only and indicated that negative life events, WTC recovery involvement, social support, mastery, and having information to work effectively were related to psychological health. These relationships are not greatly altered by including secondary trauma or job burnout in Models 2 through 4. Model 2 showed that including secondary trauma in the model increased the explained variance of 9%, from 29% to 38%. Model 3 revealed that including job burnout increased the explained variance from 29% to 40%. Model 4 included both secondary trauma and job burnout as predictors and explained 42% of the variance in the GHQ. Noteworthy in these analyses is that the associations between the GHQ and secondary trauma and job burnout remained statistically significant, even after taking into account demographic, stressor, resource, and work environment factors. The regression models also support the finding that job burnout and secondary trauma were separate

contributors to psychological distress. As shown in Model 4, both secondary trauma ($B = .12$, $p < .01$) and burnout ($B = .15$, $p < .001$) were statistically significant, controlling for other variables in the model. Last, examining the beta coefficients suggested that secondary trauma and job burnout were about equal in the strength of their association with psychological health ($\beta = .22$ and $.23$, respectively).

The regressions also supported several other expected associations. Model 4 indicated that respondents reporting more negative life events also had higher levels of psychological distress ($B = .04$, $p < .01$), whereas those with higher social support and a higher sense of mastery were less distressed ($B = -.05$, $p < .01$; $B = -.11$, $p < .001$; respectively). Interestingly, there was a trend for having adequate information to work effectively with clients to lower psychological distress. Surprisingly, there was trend for women to have lower psychological distress, whereas married respondents reported greater psychological distress. These last findings were surprising, given that most research on general populations suggests that women have higher distress and married couples have lower distress (Pearlin, 1981; Thoits, 1995). Further research is needed to confirm these results.

DISCUSSION AND APPLICATIONS TO PRACTICE

Using a random sample of social work practitioners in NYC, we assessed factors that may increase secondary trauma and job burnout and examined the association between these variables and psychological distress. Recently, investigators were successful in developing two reliable and parsimonious scales (Adams et al., 2006; Boscarino, Figley, et al., 2004), from an earlier CF scale (Gentry et al., 2002). With these separate scales, we could test the claim that secondary trauma is different from burnout, which was supported by our analyses. We contended that these two scales measure different aspects of the more general phenomena of CF as developed by Figley and others (Figley, 1995; Sabin-Farrell & Turpin, 2003; Stamm, 2002). Our current analyses, and the previous work noted, was one of the few based on a random sample of social workers involved in direct practice. It also incorporated many of the concepts CF writers have noted to be risk factors for CF within a more general stress process model (Pearlin, 1989; Pearlin et al., 1981; Thoits, 1995).

Our results suggested that exposure to clients traumatized by the WTCD increased secondary trauma, but not job burnout. In turn, both secondary trauma and job burnout were related to psychological problems. These associations held even after we took into account demographic and other factors (e.g., personal history of trauma) that could place the therapist at greater risk for CF. The measures have good reliability and the results of our analyses support our contention that these are valid measures. The burnout and secondary trauma scales, therefore, seemed to be appropriate assessment tools for identifying caregiving professionals at risk for CF and psychological difficulties. In other words, working with traumatized clients is related to secondary trauma, but not burnout, and both secondary trauma and job burnout (CF) are associated with psychological problems in our sample of social workers. All of these outcomes result in problems with service delivery and job turnover, serious issues for continuity of care (Bride, 2007; Siebert, 2004).

There were findings related to our study, reported elsewhere, that need to be address in discussions of CF. First, we selected a scale that purported to measure CF (Gentry et al., 2002). We found that this 30-item scale assessed seven underlying factors, not one or two (Adams et al., 2006). By eliminating items unrelated to secondary trauma and job burnout, our analyses helped to clarify our conceptualization (Adams et al., 2006). Thus, additional research is necessary to validate and expand on our original findings. In addition, there are a number of different conceptualizations of CF. In this study, we use the term as conceptualized by Figley (1995) and incorporate it into a stress-process model. Thus, our CF

conceptualization has a strong link to the PTSD literature. Other investigators take a psychoanalytic perspective and conceptualize secondary trauma as part of a "countertransference" process (Pearlman & Mac Ian, 1995).

A second issue related to our results was the relative nonsignificance of demographic factors, personal history of trauma, and work environment factors, such as coworker or supervisor support. Some investigators have argued that personal features of the therapist's environment could place him or her at risk for vicarious trauma (Anderson, 2000; Figley, 2002b). Figley, (2002a, 2002b) argues that therapists who do not have time to debrief after a traumatic session are more likely to suffer from CF compared to those who are allowed such time. Jenkins (1996) found that emergency medical workers reported better psychological health after attending a stress debriefing session compared to reports prior to the session. More empirical work is necessary, however, to better specify how risk and protective factors relate to CF and its psychological consequences.

Application to Practice

In his original conceptualization of CF, Figley (1995, 2002a, 2002b) contends that there are several strategies by which social workers can reduce their chances of suffering from this consequence of caregiving: increasing resiliency skills, self-care strategies, social support from others, development of caregiving skills, and conflict resolution (Gentry et al., 2002). From a stress-process perspective, resiliency skills and self-care strategies are essentially coping skills. The main theme of these strategies includes both the social and organizational aspects of reducing CF. Although the current study does not delve into improving coping skills, social support, and organizational change necessary to reduce CF, we explored the extent to which social workers perceived social support from coworkers or supervisor, had poor health habits because of work, and had work-related information to be effective at their job, that included self-care strategies. Except for work-related information to do an effective job, none of these work environment factors appeared statistically related to CF or psychological well-being. Future research should inquire about organizational factors in more detail to fully establish whether, and how, they contribute to CF and psychological well-being. The role of empathy also needs to be incorporated into future studies, given its prominence in CF causal models (Figley, 1995).

Dane (2000) has noted, among the most pressing need for professional caregivers is receiving curricula that meet the current challenges of direct clinical practice, being aware of the impact of secondary trauma. This includes anticipating the practitioner's vulnerabilities to working with traumatized clients. Ting et al. (2006) suggest that researchers need to understand the relationship between exposure to multiple traumatic experiences and CF, to understand necessary coping strategies, and to discover factors that increase resilience. In addition, Baum (2004) suggests that it is critical that social work field training supervisors convey two key messages: that balancing personal and professional life is important for all professionals and that concerns among students should be communicated to supervisors responsible for their success. If this is not achieved, social workers may perceive that they have failed or are inferior practitioners.

Limitations and Conclusion

As with any research project, there are limitations to our study. First, as suggested, the sample was smaller than desired for multivariate regression analyses and our final analytical sample size ($N = 219$) may have limited our ability to discern modest effects. Nevertheless, the secondary trauma and burnout scales match the clinically based concepts as developed by Figley (1995, 2002b). Second, we cannot fully disentangle the casual ordering of psychological distress and CF, because of the cross-sectional nature of our data.

Theoretically, Figley (1995) and others (Jenkins & Baird, 2002; Schauben & Frazier, 1995) have assumed a casual direction from CF to psychological problems. It is possible, however, that psychologically distressed individuals may interpret their interactions with clients such that they increase their vulnerability to CF. Only longitudinal data and further theoretical work can adequately address these issues.

A third limitation reflects the evolving conceptualization of CF, as noted earlier. In her history of the concept, Stamm (2002) argues that the scale should have both positive and negative items to measure both CF and compassion satisfaction. In addition, some CF researchers contend that empathy plays a prominent role in developing CF (Figley, 1995; Kadambi & Truscott, 2004). The CF scale used in the present study did not contain CF satisfaction items nor did it include items on empathy. These omissions may be part of the reason that exposure to survivors of violence was not significantly related to CF. The ongoing discussion of how to measure the concept makes for analytic difficulties and obviously necessitates further research on both the concept and its measurement.

Other limitations include that only certain types of social workers might be members of NASW, the professional database from which we drew our sample. Thus, our sampling frame may have been biased in some way. Furthermore, our response rate was somewhat below 50%. Although this is not significantly lower than other mail surveys in urban areas (Kessler, Little, & Groves, 1995), it may have introduced selection bias. Finally, it may not be possible to generalize our results beyond social workers practicing in NYC. Although social workers around the country face similar work environment problems, there may be other aspects of work unique to less urban settings or to postWTCD NYC. In addition, psychiatrists, psychologists, and trauma workers may have different responses to working with survivors of traumatic experiences as a consequence of working in different occupational settings.

These limitations should not overshadow the strengths of this study. It is one of the few to closely examine the psychometric properties of a CF scale and use it to predict psychological distress. The secondary trauma and job burnout scales employed in the present study were reported to have good reliability, good concurrent and predictive validity, and include only 13 items (Adams et al., 2006; Boscarino, Adams, et al., 2004). Even after accounting for other key risk factors, both scales are clearly related to psychological distress. In addition, the other scales used in the study are all well established and had good reliability and validity.

An additional strength of this study was our attempt to clarify the conceptual differences between secondary trauma, burnout, and CF, which has been lacking for CF (Jenkins & Baird, 2002). Thus, our data suggest that therapists could suffer from CF, which contains two components, secondary trauma and job burnout. Developing a valid and reliable instrument to detect CF is also a prelude to devising intervention strategies to mitigate its negative effects on practitioners. Clearly, CF resonates with clinicians and therapists who work with trauma survivors. As Figley (2002a) has noted, "It is, therefore, up to all of us to elevate these issues to a greater level of awareness in the helping professions. Otherwise, we will lose clients and compassionate psychotherapists" (p. 1440). As we and others have suggested, social workers, drawn to the field most characteristic of human service above one's own needs, are vulnerable to CF. It is our responsibility to ensure that these adverse outcomes are minimized among those who have chosen such a career.

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References

Adams RE, Boscarino JA, Figley CR. Compassion fatigue and psychological distress among social workers: A validation study. American Journal of Orthopsychiatry 2006;76:103–108. [PubMed: 16569133]

American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 3. Washington, DC: Author; 1980.

Anderson DG. Coping strategies and burnout among veteran child protection workers. Child Abuse and Neglect 2000;24:839–848. [PubMed: 10888022]

Aneshensel CS, Pearlin LI, Schuler RH. Stress, role captivity, and the cessation of caregiving. Journal of Health and Social Behavior 1993;34:54–70. [PubMed: 8463635]

Baum N. Social work students' treatment termination. Clinical Supervisory 2004;23(1):165–178.

Boscarino JA. Diseases among men 20 years after exposure to severe stress: Implications for clinical research and medical care. Psychosomatic Medicine 1997;59:605–614. [PubMed: 9407579]

Boscarino JA. Association between posttraumatic stress disorder and physical illness: Results and implications from clinical and epidemiologic studies. Annals of the New York Academy of Sciences 2004;1032:141–153. [PubMed: 15677401]

Boscarino JA, Adams RE, Figley CR. Mental health service use 1-year after the World Trade Center disaster: Implications for medical care. General Hospital Psychiatry 2004;26:346–358. [PubMed: 15474634]

Boscarino JA, Adams RE, Galea S. Alcohol use in NY after the terrorist attacks: A study of the effects of psychological trauma on drinking behavior. Addictive Behaviors 2006;31:606–621. [PubMed: 15982827]

Boscarino JA, Figley CR, Adams RE. Compassion fatigue following the September 11 terrorist attacks: A study of secondary trauma among New York City social workers. International Journal of Emergency Mental Health 2004;6:57–66. [PubMed: 15298076]

Boscarino JA, Galea S, Adams RE, Ahern J, Resnick H, Vlahov D. Mental health services and psychiatric medication use following the terrorist attacks in New York City. Psychiatric Services 2004;55:274–283. [PubMed: 15001728]

Boscarino JA, Galea S, Ahern J, Resnick H, Vlahov D. Utilization of mental health services following the September 11th terrorists attacks in Manhattan New York City. International Journal of Emergency Mental Health 2002;4:143–155. [PubMed: 12387188]

Bride BE. The impact of providing psychosocial services to traumatized populations. Stress, Trauma, and Crisis 2004;7:29–46.

Bride BE. Prevalence of secondary traumatic stress among social workers. Social Work 2007;52:63–70. [PubMed: 17388084]

Bride BE, Jones JL, MacMaster S. Correlates of secondary traumatic stress in child welfare workers. Journal of Evidence-Based Social Work. in press.

Bride BE, Jones J, MacMaster SA, Shatila S. The Tennessee Child Protective Services Supervisors Development Project: Evaluating process, outcome, and the role of secondary traumatic stress and burnout. Professional development. International Journal of Continuing Social Work Education 2003;6:79–84.

Bride BE, Robinson MM, Yegidis B, Figley CR. Development and validation of the Secondary Traumatic Stress Scale. Research on Social Work Practice 2004;14:27–35.

Conrad D, Kellar-Guenther Y. Compassion fatigue, burnout, and compassion satisfaction among Colorado child protection workers. Child Abuse and Neglect 2006;30:1071–1080. [PubMed: 17014908]

Daley MR. Burnout: A smoldering problem in protective services. Social Work 1979;24:375–379.

Dane B. Child welfare workers: An innovative approach for interacting with secondary trauma. Journal of Social Work Education 2000;36:27–38.

Deighton RM, Gurris N, Taue H. Factors affecting burnout and compassion fatigue in psychotherapists treating torture survivors: Is the therapist's attitude to working through trauma relevant? Journal of Traumatic Stress 2007;20:63–75. [PubMed: 17345651]

Figley, CR. Compassion fatigue as secondary traumatic stress disorder: An overview. In: Figley, CR., editor. Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized. New York: Brunner-Routledge; 1995. p. 1-20.

Figley CR. Compassion fatigue: Psychotherapists' chronic lack of self care. Journal of Clinical Psychology 2002a;58:1433–1441. [PubMed: 12412153]

Figley, CR. Treating compassion fatigue. New York: Brunner-Routledge; 2002b.

Francis LE. Ideology and interpersonal emotion management: Redefining identity in two support groups. Social Psychology Quarterly 1997;60:153–171.

Freedy JR, Kilpatrick DG, Resnick HS. Natural disasters and mental health: Theory, assessment, and intervention. Journal of Social Behavior and Personality 1993;8:49–103.

Galea S, Vlahov D, Resnick H, Ahern J, Susser E, Gold J, et al. Trends of probable post-traumatic stress disorder in New York City after the September 11 terrorist attacks. American Journal of Epidemiology 2003;158:514–524. [PubMed: 12965877]

Gentry, JE.; Baranowsky, AB.; Dunning, K. ARP: The accelerated recovery program (ARP) for compassion fatigue. In: Figley, CR., editor. Treating compassion fatigue. New York: Brunner-Routledge; 2002. p. 123-137.

Goldberg, D.; Huxley, P. Common mental disorders: A bio-social model. New York: Routledge; 1992.

Jayaratne S, Chess WA, Kunkel DA. Burnout: Its impact on child welfare workers and their spouses. Social Work 1986;31:53–59.

Jenkins SR. Social support and debriefing efficacy among emergency medical workers after a mass shooting incident. Journal of Social Behavior and Personality 1996;11:477–492.

Jenkins SR, Baird S. Secondary traumatic stress and vicarious trauma: A validation study. Journal of Traumatic Stress 2002;15:423–432. [PubMed: 12392231]

Kadambi MA, Truscott D. Vicarious trauma among therapists working with sexual violence, cancer, and general practice. Canadian Journal of Counseling 2004;38:260–276.

Kadushin G, Kulys R. Job satisfaction among social work discharge planners. Health and Social Work 1995;20:174–186. [PubMed: 7557721]

Kassam-Adams, N. The risks of treating sexual trauma: Stress and secondary trauma in psychotherapists. In: Stamm, BH., editor. Secondary traumatic stress: Self-care issues for clinicians, researchers, and educators. Towson, MD: Sidran Institute; 1999. p. 37-48.

Kessler RC, Little RJA, Groves RM. Advances in strategies for minimizing and adjusting for survey nonresponse. Epidemiologic Reviews 1995;17:192–204. [PubMed: 8521937]

Leon AM, Altholz JAS, Dziegielewski SF. Compassion fatigue: Considerations for working with the elderly. Journal of Gerontological Social Work 1999;32:43–62.

Maloney LJ. Post traumatic stresses on women partners of Vietnam veterans. Smith College Studies in Social Work 1988;58:122–143.

Maslach C, Schaufeli WB, Leiter MP. Job burnout. Annual Review of Psychology 2002;52:379–422.

McDowell, I.; Newell, C. Measuring health: A guide to rating scales and questionnaires. New York: Oxford University Press; 1996.

Mechanic, D. Mental health and social policy: The emergence of manage care. 4. Needham Heights, MA: Allyn & Bacon; 1999.

Nelson-Gardell D, Harris D. Childhood abuse history, secondary traumatic stress, and child welfare workers. Child Welfare 2003;82:5–26. [PubMed: 12641376]

Ohaeri JU. The burden of caregiving in families with a mental illness: A review of 2002. Current Opinion in Psychiatry 2003;16:457–465.

Pearlin LI. The sociological study of stress. Journal of Health and Social Behavior 1989;30:241–256. [PubMed: 2674272]

Pearlin LI, Lieberman MA, Menaghan EG, Mllan JT. The stress process. Journal of Health and Social Behavior 1981;22:337–356. [PubMed: 7320473]

Pearlman LA, Mac Ian PS. Vicarious traumatization: An empirical study of the effects of trauma on trauma therapists. Professional Psychology: Research and Practice 1995;26:558–565.

Rycraft J. The party isn't over: The agency role in the retention of public child welfare caseworkers. Social Work 1994;39:75–80. [PubMed: 8310324]

Sabin-Farrell R, Turpin G. Vicarious traumatization: Implication for the mental health of health workers. Clinical Psychology Review 2003;23:449–480. [PubMed: 12729680]

Salston M, Figley CR. Secondary traumatic stress effects of working with survivors of criminal victimization. Journal of Traumatic Stress 2003;16:167–174. [PubMed: 12699204]

Schauben LJ, Frazier PA. Vicarious trauma: The effects on female counselors of working with sexual violence survivors. Psychology of Women Quarterly 1995;19:49–64.

Schulz R, Newsom J, Mittelmark M, Burton L, Hirsch C, Jackson S. Health effects of caregiving: The caregiver health effects study: An ancillary study of the cardiovascular health study. Annals of Behavioral Medicine 1997;19:110–116. [PubMed: 9603685]

Sherbourne CD, Stewart AL. The MOS social support survey. Social Science in Medicine 1989;32:705–714.

Siebert DC. Depression in North Carolina social workers: Implications for practice and research. Social Work Research 2004;28:30–40.

Simon CE, Pryce JG, Roff LL, Klemmack D. Secondary traumatic stress and oncology social work: Protecting from fatigue and compromising the worker's worldview. Journal of Psychosocial Oncology 2006;23:1–14. [PubMed: 16618685]

Somer E, Buchbinder E, Peled-Avram M, Ben-Yizhack Y. The stress and coping of Israeli emergency room social workers following terrorist attacks. Qualitative Health Research 2004;14:1077–1093. [PubMed: 15359044]

Stamm, BH. Measuring compassion satisfaction as well as fatigue: Developmental history of the compassion satisfaction and fatigue test. In: Figley, CR., editor. Treating compassion fatigue. New York: Brunner-Routledge; 2002. p. 107-119.

Thoits PA. Stress, coping, and social support processes: Where are we? What next? Journal of Health and Social Behavior 1995;35:53–79. [PubMed: 7560850]

Thoits PA. Social support as coping assistance. Journal of Consulting and Clinical Psychology 1986;54:416–423. [PubMed: 3745593]

Ting L, Sanders S, Jacobson JM, Power JR. Dealing with the aftermath: A qualitative analysis of mental health social workers' reactions after a client suicide. Social Work 2006;51:329–341. [PubMed: 17152631]

Wade K, Beckerman N, Stein EJ. Risk of posttraumatic stress disorder among AIDS social workers: Implications for organizational response. Clinical Supervisor 1996;14:85–97.

Wee D, Myers D. Compassion satisfaction, compassion fatigue, and critical incident stress management. International Journal of Emergency Mental Health 2003;5:33–37. [PubMed: 12722488]

APPENDIX. COMPASSION FATIGUE SCALE

Consider the following items about your work/life situation. Write the number that best reflects your experiences using the following rating scale, 1 through 10:

Never/Rarely									Very Often
1	2	3	4	5	6	7	8	9	10

___a. I have felt trapped by my work.

___b. I have thoughts that I am not succeeding in achieving my life goals.

___c. I have had flashbacks connected to my clients.

___d. I feel that I am a "failure" in my work.

___e. I experience troubling dreams similar to those of a client of mine.

___f. I have felt a sense of hopelessness associated with working with clients/patients.

___g. I have frequently felt weak, tired or rundown as a result of my work as a caregiver.

___h. I have experienced intrusive thoughts after working with especially difficult client/patients.

___i. I have felt depressed as a result of my work.

___j. I have suddenly and involuntarily recalled a frightening experience while working with a client/patient.

___k. I feel I am unsuccessful at separating work from my personal life.

___l. I am losing sleep over a client's traumatic experiences.

___m. I have a sense of worthlessness, disillusionment, or resentment associated with my work.

SOURCE: Items are from the Compassion Fatigue Scale-Revised (Gentry, Baranowsky, & Dunning, 2002).

NOTE: Secondary Trauma items are c, e, h, j, and l; Job Burnout items are a, b, d, f, g, i, k, and m.

TABLE 1

Profile of New York City Social Workers Following the September 11 Terrorist Attacks

Sample Characteristics	Sample		Secondary Trauma				Burnout			
			Low		High		Low		High	
	%	n	%	n	%	n	%	n	%	n
Gender										
Male	20.5	47	21.5	42	14.7	5	21.0	41	17.6	6
Female	79.5	182	78.5	153	85.3	29	79.0	154	82.4	28
Race										
Non-White	11.5	27	11.7	23	10.8	4	11.6	23	11.4	4
White	88.5	207	88.3	174	89.2	33	88.4	176	88.6	31
Age										
49 or younger	17.2	39	18.1	35	11.8	4	16.9	33	18.8	6
50 to 59	49.8	113	48.2	93	58.8	20	48.7	95	56.3	18
60 or older	33.0	75	33.7	65	29.4	10	34.4	67	25.0	8
Marital status										
Not married	42.3	99	40.6	80	51.4	19[*]	39.2	78	60.0	21[*]
Married	57.7	135	59.4	117	48.6	18	60.8	121	40.0	14
Children younger than 18 in home										
No	75.2	176	73.1	144	86.5	32	74.4	148	80.0	28
Yes	24.8	58	26.9	53	13.5	5	25.6	51	20.0	7
Years counseling experience										
10 years or less	5.6	13	6.6	13	0.0	0	6.6	13	0.0	0
11 to 20 years	32.6	76	31.0	61	41.7	15	31.8	63	37.1	13
21 to 30 years	47.2	110	47.7	94	44.4	16	46.5	92	51.4	18
30 or more years	14.6	34	14.7	29	13.9	5	15.2	30	11.4	4
Negative life events past year										
Low (0 or 1 event)	69.1	163	72.5	144	51.4	19[*]	72.6	146	48.6	17[**]
High (2 or more events)	30.9	73	27.6	55	48.6	18	27.4	55	51.4	18
Lifetime traumatic events										
Low (0 to 2 events)	65.7	155	66.8	133	59.5	22	68.7	138	48.6	17[*]

Sample Characteristics	Sample		Secondary Trauma				Burnout			
			Low		High		Low		High	
	%	n	%	n	%	n	%	n	%	n
High (3 or more events)	34.3	81	33.2	66	40.5	15	31.3	63	51.4	18
Clients who are victims of violence										
Less than 20%	80.9	191	81.4	162	78.4	29	79.6	160	88.6	31
20% or more	19.1	45	18.6	37	21.6	8	20.4	41	11.4	4
World Trade Center counseling involvement										
Low (less than 4 types)	81.8	193	82.9	165	75.7	28	81.6	164	82.9	29
High (4 or more types)	18.2	43	17.1	34	24.3	9	18.4	37	17.1	6
World Trade Center recovery involvement										
Low (less than 4 activities)	80.9	191	84.9	169	59.5	22***	81.1	163	80.0	28
High (4 or more activities)	19.1	45	15.1	30	40.5	15	18.9	38	20.0	7
General social support										
Low	45.9	105	44.0	85	55.6	20	45.2	89	50.0	16
High	54.1	124	56.0	108	44.4	16	54.8	108	50.0	16
Sense of mastery										
Low	42.1	98	38.4	76	62.9	22**	35.2	70	82.4	28***
High	57.9	135	61.6	122	37.1	13	64.8	129	17.6	6
Have enough info to work effectively										
No	62.1	144	59.7	117	75.0	27	59.8	119	75.8	25
Yes	37.9	88	40.3	79	25.0	9	40.2	80	24.2	8
Support from coworker or supervisor										
Low	64.0	151	64.3	128	62.2	23	63.2	127	68.6	24
High	36.0	85	35.7	71	37.8	14	36.8	74	31.4	11
Poor health habits due to work										
No	67.5	154	67.7	130	66.7	24	69.9	137	53.1	17
Yes	32.5	74	32.3	62	33.3	12	30.1	59	46.9	15
General Health Questionnaire score										
Low (less than 4)	80.1	189	84.9	169	54.1	20***	85.1	171	51.4	18***
High (4 or more)	19.9	47	15.1	30	45.9	17	14.9	30	48.6	17
Secondary trauma score										

Sample Characteristics	Sample		Secondary Trauma				Burnout			
			Low		High		Low		High	
	%	n	%	n	%	n	%	n	%	n
Low	84.3	199	—	—	—	—	90.5	182	48.6	17***
High	15.7	37	—	—	—	—	9.5	19	51.4	18
Job burnout score										
Low	85.2	301	91.5	182	51.4	19***	—	—	—	—
High	14.8	35	8.5	17	48.6	18	—	—	—	—

NOTE: $N = 236$.

*
$p < .05$.

**
$p < .01$.

***
$p < .001$. χ^2 test.

TABLE 2

Linear Regressions Predicting Secondary Trauma and Job Burnout Among New York City Social Workers Following September 11 Attacks

Independent Variables[a]	Secondary Trauma (log)			Job Burnout (log)		
	B	*SE*	*β*	*B*	*SE*	*β*
Gender (female)	.03	.08	.03	-.02	.08	-.02
Race (White)	.16	.10	.11	.15	.11	.09
Marital status (married)	-.05	.07	-.05	-.10	.07	-.09
Years prof. counselor	-.00	.00	-.04	-.01	.00	-.10
Negative life events	.04	.03	.10	.09	.03	.20**
General social support	-.03	.05	-.04	-.01	.05	-.01
Sense of mastery	-.06	.05	-.08	-.21	.05	-.26***
World Trade Center recovery involve	.08	.02	.26***	.01	.02	.04
World Trade Center counseling involve	.01	.02	.02	-.00	.02	-.00
Info to work effectively	-.14	.05	-.19**	-.10	.06	-.12†
Constant	1.13			1.91		
R^2	.15			.20		

NOTE: $N = 219$.

[a] Gender, race, and marital status are used as binary variables in regression analyses. All other variables are used as continuous variables.

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

TABLE 3

Linear Regressions for Secondary Trauma and Work Burnout Predicting Scores on the General Health Questionnaire

Independent Variables[a]	Model 1: Demo, Stressor, Resource and Environmental Variables Only			Model 2: Secondary Trauma Added			Model 3: Burnout Out Added			Model 4: Burnout and Secondary Trauma Added		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β
Gender (female)	−.07	.04	−.11†	−.08	.04	−.11*	−.07	.04	−.10†	−.08	.04	−.11†
Race/ethnicity (White)	.05	.06	.05	.02	.04	.02	.02	.05	.02	.01	.05	.01
Marital status (married)	.06	.04	.11†	.07	.04	.12*	.08	.04	.14*	.08	.04	.14*
Years professional counselor	−.00	.00	−.03	−.00	.00	−.02	.00	.00	.00	−.00	.00	−.00
Negative life events	.06	.02	.25***	.05	.01	.22***	.04	.01	.18***	.04	.01	.18**
General social support	−.06	.03	−.14*	−.05	.03	−.13*	−.06	.03	−.13*	−.05	.02	−.13*
Sense of mastery	−.15	.03	−.31***	−.13	.03	−.29***	−.10	.03	−.22***	−.11	.03	−.23***
9/11 counseling involvement	−.01	.01	−.08	−.02	.01	−.08	−.01	.01	−.08	−.02	.01	−.08
9/11 site involvement	.03	.01	.14*	.01	.01	.06	.02	.01	.13*	.02	.01	.08
Have info to work effectively	−.09	.03	−.18**	−.06	.03	−.12†	−.06	.03	−.13*	−.05	.03	−.11†
Secondary Trauma Scale (log)	—	—	—	.20	.04	.32***	—	—	—	0.12	.04	.22**
Work Burnout Scale (log)	—	—	—	—	—	—	.21	.04	.36***	.15	.04	.23***
Constant	3.05			2.82			2.66			2.64		
R²	.29			.38			.40			.42		

NOTE: $N = 219$.

[a] Gender, race, and marital status are used as binary variables in regression analyses. All other variables are used as continuous variables.

† $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.