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Factors Affecting Mental Health of Local Staff Working in the Vanni Region, Sri Lanka

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Abstract

In the aftermath of the civil war that extended from 1983–2009, humanitarian organizations provided aid to the conflict-affected population of the Vanni region in northern Sri Lanka. In August, 2010, a needs assessment was conducted to determine the mental-health status of Sri Lankan national humanitarian aid staff working in conditions of stress and hardship, and consider contextual and organizational characteristics influencing such status. A total of 398 staff members from nine organizations working in the Vanni area participated in the survey, which assessed stress, work characteristics, social support, coping styles, and symptoms of psychological distress. Exposure to traumatic, chronic, and secondary stressors was common. Nineteen percent of the

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population met criteria for posttraumatic stress disorder (PTSD), 53% of participants reported elevated anxiety symptoms, and 58% reported elevated depression symptoms. Those reporting high levels of support from their organizations were less likely to suffer depression and PTSD symptoms than those reporting lower levels of staff support (*OR* =.23, $p < .001$) and (*OR* =.26, $p < .001$), respectively. Participants who were age 55 or older were significantly less likely to suffer anxiety symptoms than those who were between 15 and 34 years of age (*OR* =.13, $p = .011$). Having experienced travel difficulties was significantly associated with more anxiety symptoms (*OR* = 3.35, $p < .001$). It was recommended that organizations provide stress-management training and increase support to their staff.

Keywords

national staff; humanitarian aid workers; depression; PTSD; Sri Lanka

To date, little research has been done to explore the consequences of stress on humanitarian aid workers in complex humanitarian emergencies (CHEs), and what organizations can do to appropriately manage and support staff while providing aid in postconflict settings (Eriksson, Lopes Cardozo, Foy, et al., 2012; Eriksson, Bjorck, & Abernethy, 2003; Eriksson, Van de Kemp, Gorsuch, Hoke, & Foy, 2001;Holtz, Salama, Lopes Cardozo, & Gotway, 2002; Lopes Cardozo et al., 2012; McCall & Salama, 1999;Shah, Garland, & Katz, 2007). Even less is known about the consequences of the stress of humanitarian aid work on national staff, employees who are drawn from the local population. Even though national staff far outnumber expatriates and make up the majority of the workforce in many humanitarian organizations, entitlements to services—including basic health care, psychological support, medical evaluation, salaries and other benefits, organizational support structures, and security policies—for national staff are generally less comprehensive than for expatriate staff (McCall & Salama, 1999). In addition, national staff have often suffered traumatic experiences and extreme stress related to the CHE in their countries (Lopes Cardozo et al., 2005; Lopes Cardozo & Salama, 2001).

Tensions between the Sinhalese majority and Tamil separatists in Sri Lanka erupted into war in 1983. After two decades of fighting, the government and the Liberation Tigers of Tamil Eelam (LTTE) formalized a cease-fire in February, 2002. Violence between the LTTE and government forces again intensified in 2006, until the government regained control of the Eastern Province in 2007. In May, 2009, the government announced that its military had finally defeated the remnants of the LTTE and killed its leader.

The conflict in Sri Lanka, which lasted more than 25 years, devastated the northern and eastern regions of the country and claimed the lives of more than 80,000 people, causing significant hardships for the population and an erosion of the economy. During the two years prior to the end of active conflict, the Vanni area in the Northern Province was particularly affected by the violence. The war displaced hundreds of thousands of people, many of whom were sheltered in temporary camps and centers. Approximately 14 months after the end of the conflict, the majority of the internally displaced people (IDPs) had been released from closed camps in the Vanni area. However, as of February, 2010, around 105,000 IDPs

remained in 15 sites in the Vavuniya and Mannar districts and the Jaffna Peninsula. Of these, almost 100,000 were still in the Menik Farm site located in the far southwest of Vavuniya District (UNHCR, 2010). Many of the conflict-affected regions were also heavily impacted by the devastating tsunami in December, 2006, which killed more than 30,000 people in Sri Lanka (UNHCR, 2010).

The extensive personal and collective trauma exposure related to both the civil conflict and the tsunami has been identified in Sri Lankan refugee and community populations in Sri Lanka in the past decade (De Jong, et al., 2002; Somasundaram, 2010; Steel, Silove, Bird, McGorry, & Mohan, 1999). Researchers have identified emotional distress consistent with the constructs of posttraumatic stress disorder, anxiety, and depression (Husain et al., 2011; Somasundaram, 2004), and they have clarified the unique psychosocial effects of war and natural disaster on the population of Sri Lanka (Fernando, 2008; Jayawickreme, Jayawickreme, Atanasov, Goonasekera, & Foa, 2012; Zoysa, 2001). The current study represents the results of a needs assessment among national staff of humanitarian organizations working in the Vanni region in Sri Lanka, conducted from August 3 through 31, 2010. The goals of the study were to measure the prevalence of stress-related and trauma-related psychological problems among national staff working in conditions of stress and hardship with the war-affected population in the Vanni District, Sri Lanka. In addition, possible risk and mitigating factors influencing mental health among national staff in that area were assessed. Working together with the Antares Foundation (an organization that provides management and staff support and care in humanitarian organizations), this needs assessment was part of a series of studies that we conducted among national staff working in countries affected by war and conflict in other parts of the world, such as Jordan, Uganda, and Kosovo (Ager et al., in press; Eriksson, Lopes Cardozo, Foy et al., 2012; Eriksson, Lopes Cardozo, Ghitis et al., 2012; Lopes Cardozo et al., 2005; Lopes Cardozo et al., 2012). The aim of these studies was to provide recommendations to humanitarian organizations that they can use to develop and implement evidence-based measures to support their staff.

Method

In collaboration with the Consortium of Humanitarian Agencies (CHA), a local nongovernmental organization (NGO), the assessment team obtained a list of NGOs and other humanitarian organizations working in the Vanni region. The majority of these organizations were local Sri Lankan NGOs. The assessment team visited the headquarters of each of the organizations (located in Colombo or Vavuniya) that employed local staff in the Vanni region, and met with representatives to explain the project and to invite their participation. Nine out of 12 organizations agreed to participate. A training day was organized to brief both the organizations' representatives and the assessment facilitators on the assessment procedures, and to provide training on research ethics. Subsequently, eligible staff members from each organization were invited to participate in the survey on one of five data-collection days. The protocol for this assessment was determined to be nonresearch by the United States Department of Health and Human Services Centers for Disease Control and Prevention (CDC) senior scientific staff who reviewed the proposal according to standard procedures. Therefore, the protocol did not need further approval from the

institutional review board (IRB) at the CDC. We obtained written informed consent from each participant.

Data Collection and Sample

The total number of national staff meeting inclusion criteria at the nine participating organizations was 517 individuals. Because of the relatively low number of staff it seemed reasonable to conduct a census rather than obtaining a sample.

Following discussions with key cultural informants, it was determined that administration of the survey instrument indoors in a group setting would be culturally acceptable. No names were recorded on the questionnaires. Potential participants were invited to a venue in the city of Vavuniya. Male and female facilitators who were fluent in English and either Tamil or Sinhalese were hired to assist with survey administration.

Analyses

Data analyses were performed using SPSS Version 17.0 and SAS Version 9.2. Chi-square tests were used to assess categorical variables and Student's *t* tests to assess continuous variables. Values of $p < .05$ were considered statistically significant. Data were analyzed and displayed only in aggregate form and were not identifiable to any specific individual.

Logistic Regression Modeling

We performed bivariate analyses of all variables to determine those most highly associated with each outcome. The variables selected for the final logistic regression models were based on the statistical significance in the bivariate analyses and scientific understanding of psychosocial stressors and mental health. We used a forward, stepwise variable selection in each model. For each variable, an *F* statistic was calculated that reflects the variable's contribution to the model. Variables were entered into the model if the significance of the *F* test was 0.15 or less.

Measures

The survey questionnaire included sections on demographics, organizational support and work experience, work support measures for local staff and management (climate within the organization), general health and self-reported current or past history of psychological problems, chronic stressors, trauma experiences, possible secondary trauma transmission, social support, coping strategies, and availability of psychological support services. Mental health outcomes included symptoms of posttraumatic stress disorder (PTSD), anxiety, and depression. An initial rapid qualitative assessment was completed with three key cultural informants in order to ensure that the instrument included variables necessary to capture the experiences specific to the conflict in Sri Lanka, and that the survey instrument was culturally appropriate. A detailed review of the draft questionnaire was then conducted with key informants, who were either mental-health professionals from Vavuniya, or knew the local context well and were familiar with psychosocial instruments. The final questionnaire was translated into Tamil and Sinhalese and back-translated by different translators into English to ensure the accuracy of the translation.

Demographics and work experience—Participants were asked for basic personal background information (age, gender, marital status, education, etc.) and for information regarding their type of work or volunteer responsibilities within their organizations, including the beneficiary population with whom they work, the type of organization (e.g., international NGO, national NGO, Red Cross/Red Crescent, UN agency, or governmental), and the length of time they had worked with their current agency.

Participants were also asked a series of questions regarding the organizational support and policies in place within their agency, based on the Antares Foundation's *Managing Stress in Humanitarian Workers: Guidelines for Good Practice* (3rd ed., 2012). These questions covered access to specific areas of training or briefing (e.g., security, organizational values and mission, codes of conduct, information specific to the service location, etc.), as well as access to specific types of employment benefits (e.g., medical insurance, disability insurance, vacation and sick leave, psychological counseling or postcrisis care, and end of employment care).

Organizational support was measured through seven items determining the existence of staff support measures, such as provision of medical insurance or psychological support systems. Individual support items were included as possible predictors in the logistic regression.

Perceptions of organization work experience were assessed by six items, addressing such issues as encouragement to take sick leave and vacation, and effective management of team conflict. Agreement with statements was measured on a 6-point Likert-type scale. These individual work-experience items were included as possible predictors in the logistic regression.

Exposure to stressors and traumatic events—The survey included three measures to assess variables hypothesized as salient stressors in humanitarian work: Exposure to traumatic events during the past 20 years, chronic stressors, and secondary traumatic stress. These stressors were hypothesized to be predictors of distress or adjustment in this survey.

A measure was developed for this specific setting to assess the various types of traumatic experiences associated with the violent conflict in Sri Lanka. The measure was adapted from several other trauma-exposure measures used to assess trauma exposure in international aid workers (Lopes Cardozo et al., 2005). The number of events that each participant reported experiencing was summed to create a total personal-exposure-to-trauma scale score, and for the logistic regression analyses, the personal exposure to trauma was categorized into three groups (no exposure, exposure to 1 to 4 events, and exposure to 5 or more events). These variables were considered in a forward selection regression model for PTSD, but were not found to be significant ($p = .15$) and therefore were not entered in the final regression model. In addition, key trauma-exposure items were included in logistic regression analyses to test for unique risk.

Exposure to secondary traumatic stress—Secondary traumatization or vicarious traumatization is a term that refers to the exposure to trauma due to the close association with a traumatized individual (Adams, Figley, & Boscarino, 2008; Gentry, Baranowsky, &

Dunning, 2002). Participants were asked to indicate the extent to which they hear and listen to trauma stories in their current employment using a Likert-type scale ranging from 1 (*never*) to 4 (*very often*). The responses were organized into two categories: *never or rarely*, and *sometimes or very often*. In addition to exposure to secondary trauma, participants responded to items describing possible trauma symptoms associated with client stories. All seven individual secondary traumatic stress items were entered for selection into the logistic regression models.

Exposure to chronic stressors—Much of the challenge of humanitarian work lies in the day-to-day stressors or daily hassles of the work and context. A measure of exposure to chronic stressors and related distress in international aid workers (Eriksson, Bjorck, & Abernethy, 2003) was adapted for use in this survey. Participants were asked to indicate how much stress they currently felt in relation to the named stressor using a Likert-type scale of 2 (*none*), 3 (*little*), 4 (*moderate*), 5 (*substantial*) or 6 (*extreme*), or to mark 1 (*N/A*) if they were not currently experiencing that situation or stressor. For the logistic regression-analyses models, the response for each item was dichotomized to two categories of *none or little or moderate*, and *substantial or extreme*. All 12 individual chronic stressor items were entered for selection into the logistic regression models.

Perceived social support—Participants were asked to report their perception of being supported by others and providing support to others using 12 items of the Social Provisions Scale (Cutrona, 1989). Research conducted previously has supported the reliability and validity of the Social Provisions Scale, as well as the factor structure of the measure (Cutrona & Russell, 1987). Scores on the measure have been shown to predict adaptation to stress among a wide variety of populations, including postpartum women, spouses of cancer patients, the elderly, and individuals working in stressful job situations. Participants rated their level of agreement from 1 (*strongly disagree*) to 4 (*strongly agree*) with statements regarding respect from others, offering support to others, common interests, feeling supported by others, and feeling close to others. Ratings on the 12 items were summed to create a total average score, and low (0–4), medium (5–8), and high (9–12) categories of perceived social support were identified for logistic regression analyses. The negatively phrased items were reverse scored, and a personal mean score of all answered items was used for inferential analyses.

Coping—Coping was assessed using items from the Coping Strategies Indicator (CSI; Amirkhan, 1994) comprising three items from each of the three original subscales: problem-solving coping, seeking-support coping, and avoidant coping. In addition, 10 items were created specific to the coping strategies utilized by those living in the Sri Lanka context. Each item was scored using a Likert-type scale of 1 (*a lot*), 2 (*a little*), and 3 (*not at all*).

Religious practice was added as an additional question on coping (Pargament, Magyar-Russell, & Murray-Swank, 2005). We entered all 19 individual coping items for consideration in the forward selection regression models for anxiety, depression, and PTSD (Table S1). We did this because we wanted to include the original items of the CSI as well as the items specific for the context and culture in Sri Lanka.

Mental Health Measures

Posttraumatic stress disorder—The Harvard Trauma Questionnaire (Mollica, Wyshak, de Marneffe, Khuon, & Lavelle, 1987) captures symptoms from the *Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM–IV–TR;* American Psychiatric Association, 2000) criteria for PTSD. The items are grouped to reflect recurring symptoms, arousal, and avoidance. We defined cases meeting PTSD symptom criteria according to a scoring algorithm proposed by the Harvard Refugee Trauma Group, on the basis of *DSM–IV-TR* diagnostic criteria. This definition of probable PTSD requires a score of 3 or 4 on at least 1 of 4 reexperiencing symptoms, at least 3 of 7 avoidance and numbing symptoms, and at least 2 of 5 arousal symptoms (Mollica et al., 1993). Internal consistency of the PTSD scale was good, with a Cronbach's alpha of 0.88.

Depression and anxiety—Depression and anxiety symptoms were measured with the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974; Mollica et al., 1987). The measure includes 10 items assessing the severity of anxiety symptoms and 15 items assessing the severity of depression symptoms. Participants rated their experience of the symptoms in the last month using the Likert scale of 1 (*not at all*), 2 (*a little*), 3 (*quite a bit*), and 4 (*extremely*). Clinically significant symptom levels for both anxiety and depression were determined by using the normed and validated cutoff score of 1.75 for both subscales. Cronbach's alpha for internal consistency was 0.87 for the anxiety subscale and 0.87 for the depression subscale.

Stepwise logistic regression models were developed to assess factors potentially associated with the mental health outcomes (depression, anxiety, and probable PTSD). Variables considered for inclusion in the logistic models were age, sex, religion, length of time of current employment (categorized as one year or less, or one or more years), education level (university vs. high school/vocational), managerial responsibility (manager/director vs. others), number of personal trauma events (categorized into 0 events, 1–4 events, and 5 or more events) as well as 20 individual trauma events, organizational staff support services (categorized into low/medium, vs. high), exposure to chronic stressors (12 individual chronic stressors), perceived social support (low, medium, high categories), work experience with the organization (6 individual items), and coping styles (19 individual coping items). The final regression models included all variables that were significant at $p = .15$. In addition, based on theory, we explored a separate logistic regression model with probable PTSD as outcome, including the following variables: age, sex, trauma events, coping items, and having received, or currently receiving medication or counseling for a psychological problem.

Qualitative Data

The survey instrument included two open-ended questions allowing participants to provide confidential feedback to their organizations. (See supplemental online content).

Results

Descriptive Analyses

A total of 398 staff from nine humanitarian organizations working in the Vanni area consented to participate in the assessment. Seven of these organizations were local NGOs, one was an international NGO, and one was a United Nations organization. The overall response rate was 77%. Of the respondents, 44.3% were male and 55.7% were female. Median age was 29 years. Most of the participants were Tamil (86.5%). Slightly less than half (45.2%) were single and slightly more than half (52.0%) were married or in a committed relationship. The majority of respondents were Hindu (66.3%); 20.1% were Christian, 7.8% were Buddhist, and 5.3% Muslim. The majority (78.6%) of the participants were employed by a national NGO (see Table 1).

Organizational support and training—The majority of the respondents reported that their organizations provided them with annual leave (83.5%) and sick leave (94.7%). Fewer (40.2%) had medical insurance, and less than a quarter (23.4%) reported having disability insurance. More than half had access to psychological support systems (63.7%) and emotional support systems (56.2%), but fewer respondents reported that their institutions had written stress-management policies (27.6%). The majority of the respondents reported that their organizations provided them with information on codes of conduct (75.0%), the organizations' values and mission statements (82.9%), and security risks (76.8%), but fewer (40.7%) reported receiving stress-management training. The majority of participants were satisfied with staff support services (79.4%) provided by their organizations; however, the majority (83.2%) of respondents also thought that their organizations followed their policies too rigidly, and that their organizations valued the number of people served at the expense of service quality (85.4%).

Coping and social support—The most commonly used coping mechanisms for stress were "trying to solve the problem" (75.3%) and "thinking about what needed to be done to straighten things out" (67.0%), followed by "forming a plan of action in mind" (52.7%) and "confiding fears and worries to a friend" (48.9%; see Table S1 [link on first page]). Religion was important for coping for slightly more than half (54.5%) of the participants. Respondents reported strong social support: 82.9% reported that there was a trustworthy person could turn to for advice, 83.9% stated that they had close relationships that provided them with emotional security and well-being, and 88.4% reported that there were people they could depend on for help (see Table S2 [link on first page]).

Chronic and traumatic stress exposure—The most common chronic stressors were personal economic and financial problems (63.8%), followed by travel difficulties and restrictions on movement (60.1%). Workload was reported as a stressor by slightly more than half (52.3%) of the respondents. Tensions arising from unequal treatment of expatriate and national staff was reported as a stressor by just under half (47.9%) of the respondents. Table 2 presents the frequency of all chronic stressors.

The majority of the respondents reported having to flee suddenly (56.7%) or having lost property or belongings (63.7%). More than a third experienced lack of food or water

(44.2%), lack of shelter (33.2%), the murder of a family member or a friend (36.7%), living in an internally displaced persons (IDP) camp (41.7%), living in bunkers (39.1%), or having experienced other traumatic events in which they were frightened or felt their life was in danger (41.0%). See Table 3 for frequency of direct exposure to trauma events during the past 20 years.

Analysis of the secondary traumatization section of the questionnaire revealed that 79.6% of the respondents listened to trauma stories from their beneficiary population, 52.0% had experienced flashbacks of the people's experiences they helped, 50.0% reported losing sleep over a client's traumatic experiences, and 45.5% experienced intrusive thoughts related to especially difficult cases. Thirty percent of the participants reported that they avoided working with certain "difficult" clients.

Health and occupational outcomes—Only slightly more than a third (34.7%) of the responding staff reported excellent or very good health, and 30.4% reported a current medical or health problem. Twenty-four percent of the participants reported having ever received counseling or medication for a psychological problem, and 11.3% said they are currently receiving medication or counseling for such a problem.

The majority of participants appeared to indicate satisfaction with their jobs, 83.2% agreed or strongly agreed that they "felt well-satisfied with [my] job," 75.8% agreed or strongly agreed that they "found real enjoyment in [my] work," 27.2% of participants agreed or strongly agreed with the statement, "I considered my job rather unpleasant," and only 12.4% indicated they agreed or strongly agreed with the statement "I am disappointed that I ever took this job."

Mental health outcomes—When we computed the prevalence of probable PTSD cases using the scoring algorithm described in the methods section above, 18.8% of the population met the criteria for a probable PTSD case in this population.

Using a 1.75 normed and validated cutoff score to determine a case of elevated anxiety or depression, 52.8% of participants met the case definition for anxiety symptoms and 58.2% met the case definition for depression symptoms.

Inferential Analyses

Depression—Staff who held a university degree were significantly more likely to suffer depression symptoms than those with lower levels of education ($OR = 4.14$, $p = .032$). Individuals endorsing high levels of support from their organizations were less likely to suffer depression symptoms than those receiving medium or low levels of support ($OR = .23$, $p < .001$). Staff of national NGOs, the Red Cross/Red Crescent, or a United Nations organization were less likely to suffer depression symptoms than those working for an international NGO ($OR = .12$; $OR = .61$; OR 0.01, $p < .001$). Employees trained in human-resource policies were less likely to suffer depression symptoms than those not trained. ($OR = .25$, $p = .004$; see Table 4)

Anxiety—Participants who were age 55 or older at the time of the survey were significantly less likely to suffer anxiety symptoms than those who were between 15 and 34 years of age (*OR* = .13, *p* = .011). Having experienced travel difficulties was significantly associated with more anxiety symptoms (*OR* = .35, *p* < .001). Respondents reporting satisfaction with staff support were significantly more likely to suffer anxiety symptoms (*OR* = 2.59, *p* = .009). Using an avoidant coping style was significantly associated with having more anxiety symptoms (*OR* = 1.12, *p* = .016), and using chanting or mantras as a way of coping was also significantly associated with higher anxiety levels (*OR* = 1.92, *p* = .034). (see Table 4)

PTSD—Social support was protective against probable PTSD (*OR* = 0.26, *p* < .001), whereas conflicts or misunderstandings with coworkers were positively associated with probable PTSD (*OR* = 2.74, *p* = .005). Those who took sick leave were significantly more likely to suffer probable PTSD (*OR* = 1.78, *p* = .0010; see Table 4). None of the other coping items were significantly associated with probable PTSD, including having an avoidant coping style. Currently receiving medication or counseling for psychological problems was significantly associated with probable PTSD (*OR* = 5.05, *p* = .005).

(See online supplement for results of the qualitative analyses).

Discussion

The prevalences of anxiety (53%), depression (58%), and probable PTSD (19%) among the local staff working in the Vanni region were higher than among residents of Jaffna District in Sri Lanka in 2009 (anxiety = 32%, depression = 22%, and PTSD = 7% respectively; Husain et al., 2011). One explanation could be that local staff working in the Vanni region were exposed to violent conflict more recently than the general population of Jaffna, where the situation had been somewhat more stable over the past couple of years. However, those residents in Jaffna living in IDP camps had prevalences of anxiety (49%), depression (42%), and PTSD (11%) more similar to the local staff in the Vanni region (Husain et al., 2011). Nevertheless, despite these elevated levels of mental ill health, local staff working in the Vanni region were able to work for humanitarian organizations, and expressed satisfaction with their jobs, showing resiliency. There was a range of background variables that demonstrated significant predictive relationships on the mental-health outcomes. Those staff members reporting higher levels of education were significantly more likely to suffer depression symptoms than those with lower levels of education. Sri Lankan national staff receiving high levels of support from their organizations were less likely to suffer depression symptoms than those receiving medium or low levels of staff support. Employees trained in human-resource policies were less likely to suffer depression symptoms than those who had not had such training. Any kind of training received from the organization may be comparable to receiving other forms of organizational support. In a similar finding among expatriate aid workers, we found that higher levels of perceived social support were associated significantly with lower levels of depression (Lopes Cardozo et al., 2012). Sri Lankan national staff working in national NGOs, the Red Cross or a United Nations organization were less likely to suffer depression symptoms than those working for an international NGO. Although we do not know the specific working conditions of staff

employed by each of these organizations, and it is not possible to draw any conclusions from this result, this finding deserves further attention.

Those staff members who were 55 years of age or older had fewer anxiety symptoms than the younger staff. In a mental-health survey conducted among residents in Jaffna, Sri Lanka in 2009, we found in contrast, that older age was associated with higher levels of anxiety symptoms (Husain et al., 2011). However, unlike the sample in Jaffna, the respondents to the survey in Sri Lanka were aid workers assisting the affected population. It is possible that older people had more work and life experience, and were better mentally equipped to deal with this stressful work. Lack of recognition for the work performed was associated with higher levels of anxiety symptoms for Sri Lankan national staff. Another chronic stressor associated with more anxiety symptoms was having experienced travel difficulties. A surprising finding was that staff who were satisfied with staff support provided by their organization reported more anxiety symptoms. This finding seems somewhat counterintuitive; however, we found a similar association in a longitudinal study among expatriate aid workers (Lopes Cardozo et al., 2012). It was proposed that the perception of sufficient staff support from the organization might put the responsibility more on the worker if tasks do not go as well as planned. Using an avoidant coping style was associated with having more anxiety symptoms, and using chanting or mantras as a way of coping was also associated with higher anxiety levels. Because we cannot determine cause and effect in this cross-sectional survey, it is possible that individuals experiencing high levels of anxiety are more likely to employ chanting and mantras in an attempt to alleviate their symptoms.

Although the levels of reported depression and anxiety symptoms were high, the vast majority of the respondents reported that they found satisfaction and enjoyment in their work. Having a job and being able to work was important to local staff, as a way to provide an income and help rebuild their community after years of violent conflict. These positive factors may have helped reduce any job-related burnout. This suggests that the experiences of depression and anxiety symptoms were not primarily work-related. In addition, respondents reported perceived strong social support, little loneliness or isolation, and proactive coping strategies. In our assessment, we measured the perception of social support, rather than actual received assistance. In addition, religion appeared to play a significant role in Sri Lankan society; only 0.5% of respondents did not report a religious affiliation. More than half of the staff reported that their religion helps them to cope better with stress. However, these positive factors did not demonstrate a statistically significant resilience effect on the likelihood of clinical levels of anxiety or depression symptoms.

Large numbers of respondents reported moderate to serious problems with PTSD symptoms, such as arousal (e.g., irritability, difficulty concentrating, excessive jumpiness), avoidance, and reexperiencing symptoms. The prevalence of probable PTSD cases was also high, at almost 19%. This finding was echoed in the high levels of symptoms of depression and anxiety found in this survey. Many of the staff members are living with high levels of physical arousal and agitation from their war experiences. This could potentially impact their own work effectiveness (due to difficulties with concentration, decision making, and problems with interpersonal relationships because of irritability) and on their own physical health (because of long-term physical consequences of stress). Respondents who reported

having more social support were also significantly less likely to suffer probable PTSD than those who reported less social support; thus, perceived social support appears to be protective against probable PTSD, an association that has been well-documented in the literature (King et al., 1998). Those who reported more conflicts or misunderstandings with coworkers were significantly more likely to suffer probable PTSD. Again, we cannot be certain if the conflicts with coworkers came first or, if persons who suffer from probable PTSD are more likely to have conflicts with coworkers. The finding that those who took sick leave because of stress on the job were significantly more likely to suffer probable PTSD could also not be temporally determined. We did not find a statistically significant association with avoidant coping styles and probable PTSD, thus not adding support to the theory that avoidant ways of coping would be a contributing risk factor for PTSD (Pineles et al., 2011), at least not among the respondents of our assessment in Sri Lanka.

Unlike in other studies (Husain et al., 2011; Lopes Cardozo et al., 2005; Lopes Cardozo et al., 2004), in our assessment we did not find any statistically significant gender differences for the mental-health outcomes among staff for depression, anxiety, and probable PTSD. One explanation might be that women in Sri Lanka who choose to work for humanitarian organizations were not less resilient than men, and may have been a preselected, more resilient group compared with, for example, women in the sample of the mental-health survey conducted by Husain et al. in Jaffna district, Sri Lanka. (Husain et al., 2011).

Secondary traumatic stress may occur as a result of indirect exposure to trauma through a first-hand account of a traumatic event (Shah et al., 2007). In our assessment, the majority of the respondents listened to trauma stories of their clients, and half experienced loss of sleep or intrusive thoughts related to this work. However, we did not find any statistically significant associations with mental-health outcomes. Because national staff are drawn from the same population being served by their employers, they have suffered the same traumatic events as their clients and thus are likely to identify with client populations. It is known that such identification may lead more easily to vicarious traumatization and burnout (Shah et al., 2007; Smith, Agger, Danieli, & Weisaeth, 1996).

Financial pressures were a significant stressor for this population. This was the highest chronic stressor, and was mentioned frequently in the responses to the open-ended questions (see supplementary materials). Low salaries spawn a number of consequences, including subsistence problems, family stress, and the need to have a second job, which cuts down on the time available to spend with family and friends, or to relax. In addition, a substantial number of respondents reported being affected by chronic stressors related to the work environment and workplace. Frequently cited chronic stressors included first, travel difficulties, including restrictions on movements, threatening checkpoints, and rough roads, and second, a high workload. These traveling stressors were affecting staff on a daily basis, impossible to get away from, and may have been aggravated by previous experiences during the months of active fighting in the area. Issues concerning staff relationships with management and staff interpersonal relationships figured prominently both as chronic stressors and as comments in the open-ended questions. NGO staff members were looking for guidance, advice, and leadership from their organizational leaders. They wanted to be commended when they did well and not criticized too harshly when mistakes were made,

and they wished to be treated with respect and courtesy, without discrimination. It should be noted that many of the managers also have been affected by the stress of a quarter century of war, and were likely to be displaying the effects of the conflict.

Limitations and Recommendations

Using a cross-sectional survey method created notable limitations because we cannot assert any causal relationships between variables and outcomes. Because no structured clinical interviews were performed, it is unclear to what extent self-reported symptoms of depression, anxiety, and PTSD, would match clinical diagnosis. It is possible that cultural differences could have influenced the results of this assessment. Even though the screening instruments to detect anxiety, depression, and PTSD were previously used in Sri Lanka (Husain, 2011), they were not specifically validated for the context in the Vanni region. The findings of this assessment are limited to the specific population of national staff working for humanitarian organizations in the Vanni region in Sri Lanka. Although there may be certain similarities with national staff working in other countries affected by war and conflict, the results of this assessment were not intended to be generalizable.

Based on the assessment findings, the following recommendations were made to participating organizations in the Vanni region in Sri Lanka: (1) Make the teaching of stress-management techniques a regular part of staff training, and focus this training on methods to help reduce physical agitation and arousal; 2) provide more continuing education on mental-health issues, while raising awareness that the issues can apply to everyone, including staff; 3) explore whether the depression and anxiety inventory is identifying unresolved grief, other issues and feelings related to a quarter-century of violent conflict, or relate to the present social situation and future perspective, specifically for Tamils in Sri Lanka; (4) offer specialized training to managers to increase the skills necessary for their work, including project planning, time management, motivating staff, and assessing and providing corrective feedback on performance; and (5) provide psychosocial skills training and a sustainable support system to aid the staff in their work with beneficiary populations and to address the high levels of depression and anxiety symptoms in these workers.

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Table 1

Demographic Characteristics of Local Staff Working in the Vanni Region, Sri Lanka, August, 2011

Variables	*n*/*N* (%)
Sex	
Female	175/395 (44.3%)
Male	220/395 (55.7%)
Age Group	
15–34	302/398 (75.9%)
35–54	85/398 (21.4%)
55+	11/398 (2.8%)
Marital Status	
Married (or in committed relationship)	207/398 (52.0%)
Not married	191/398 (48.0%)
Education Level	
Ordinary levels	57/398 (14.3)
Secondary school	119/398 (29.9%)
High school	144/398 (36.2%)
Higher vocational	37/398 (9.3%)
University and postgraduate	41/398 (10.3%)
Ethnicity	
Sinhalese	32/392 (8.2%)
Tamil	339/392 (86.5%)
Muslim	20/392 (5.1%)
Other	1/392 (0.2%)
Time of current employment	
<1 year	293/398 (73.6%)
>1 year	105/398 (26.4%)
Type of organization	
UN	36/398 (9.1%)
Red Cross/Red Crescent	25/398 (6.3%)
International nongovernmental organization (INGO)	24/398 (6.0%)
National NGO	313/398 (78.6%)
Job Function	
Manager/Director	55/398 (14.1%)
Technical/Administrative/Other	334/398 (85.9%)
Religion	
Buddhist	31/398 (7.8%)
Hindu	264/398 (66.3%)
Islam	21/398 (5.3%)
Christian	80/398 (20.1%)
None	2/398 (0.5%)

Note. Missing responses were eliminated.

Table 2

Chronic Stressors Among Local Staff Respondents Working in the Vanni Region, Sri Lanka, August, 2011

Stressors	***n*/*N* (%)**
Personal economic/financial problems	254/398 (63.8)
Workload too high	204/398 (52.3)
Being asked to perform duties outside of professional training	135/396 (34.1)
Lack of direction from organization management	155/397 (39.0)
Lack of recognition from organization management for work accomplished	160/398 (40.2)
Conflicts or misunderstandings between coworkers	149/397 (37.5)
Travel difficulties, restrictions on movement, threatening checkpoints, rough roads	238/396 (60.1)
Tension due to expatriate and national staff not treated equally by organization management	190/397 (47.9)
Feeling hostility from the environment due to one's religious affiliation	92/395 (23.3)
Feeling hostility from the environment for other reasons	114/396 (28.8)
Feeling powerless to change the situation of the beneficiary community	141/398 (35.4)
Separation from close relatives due to work responsibilities	169/398 (42.5)

Table 3

Trauma Events Experienced During the Past 20 Years by Local Staff Respondents Working in the Vanni Region, Sri Lanka in August, 2011

Traumatic event	***n*/*N* (%)**
Lack of food or water	176/398 (44.2)
Ill health without access to health care	86/394 (21.8)
Lack of shelter	131/394 (33.2)
Forced separation from family members	45/396 (11.4)
Rape	5/392 (1.3)
Family or friend was killed/murdered	146/398 (36.7)
Murder of other people (neighbor, someone from village)	118/396 (29.8)
Death of family or friend due to disease, lack of food	53/397 (13.4)
Missing or lost family member(s)	71/394 (18.0)
Shelling/bombings	130/398 (32.7)
Having to flee suddenly/displacement	225/397 (56.7)
Lost property or belongings	253/397 (63.7)
Living in internally displaced persons camps	166/398 (41.7)
Living in bunkers	154/394 (39.1)
Serious trauma event due to the tsunami	53/395 (13.4)
Other life-threatening or frightening event	163/398 (41.0)

Table 4

Variables Affecting Mental Health Outcomes of Local Staff Respondents Working in the Vanni Region, Sri Lanka, August, 2011

	Depression AOR (95% CI)	Anxiety AOR (95% CI)	Probable PTSD AOR (95% CI)
Sex			
Female	0.66 (0.30–1.44)	1.66 (0.92–2.99)	1.093 (0.55–2.19)
Male (reference)	1	1	1
Marital Status			
Not married	0.94 (0.44–1.99)	0.70 (0.40–1.23)	0.89 (0.46–1.70)
Married	1	1	1
Age Group			
35–54 vs. 15–34	0.92 (0.38–2.19)	0.39 (0.19–0.81)	0.77 (0.34–1.75)
55+ vs. 15–34	0.05 (0.00–0.66)	0.13 (0.02–1.09) *	—
15–34	1	1	1
Education			
University/postgrad	4.14 (1.13–15.18) *	1.26 (0.45–3.54)	0.83 (0.28–2.44)
High school/vocational	1	1	1
Employment duration			
<1 year	1.09 (0.49–2.42)	1.48 (0.80–2.74)	1.45 (0.73–2.89)
>1 year	1	1	1
Organization type			
NNGO vs. INGO	0.12 (0.02–0.87) ***	1.53 (0.52–4.51)	0.73 (0.29–2.49)
RC vs. INGO	0.61 (0.06–5.78) ***	1.25 (0.29–5.34)	0.55 (0.09–3.44)
UN vs. INGO	0.01 (<0.001–0.09) ***	0.74 (0.17–3.12)	0.36 (0.07–1.93)
INGO	1	1	1
Manager	0.35 (0.12–1.00) *	1.82 (0.78–4.25)	0.82 (0.35–1.95)
Nonmanager	1	1	1
Religion			
Buddhist	0.35 (0.01–1.24)	0.67 (0.22–2.00)	0.44 (0.10–1.91)
Other	1	1	1
Support level			
High	0.23 (0.10–0.53) **	0.61 (0.33–1.12)	0.26 (0.14–0.47) ***
Low/medium	1	1	1
Organizational support			
Vacation/sick leave	2.36 (0.64–8.87)	2.25 (0.73–6.96)	0.52 (0.25–1.09)
No or don’t know	1	1	1
Training:			
Human resource policies (yes)	0.29 (0.10–0.63) **	—	—
Codes of conduct (yes)	1.85 (0.82–4.17)	—	—
No or don’t know	1		

	Depression AOR (95% CI)	Anxiety AOR (95% CI)	Probable PTSD AOR (95% CI)
Chronic stress exposure			
Substantial or extreme vs. none to moderate (ref)			
Financial problems	1.50 (0.73–3.09)	—	—
Workload too high	1.54 (0.66–3.60)	—	—
Lack of recognition	3.67 (1.42–9.50) **	3.35 (1.65–6.79) **	0.56 (0.25–1.24)
Coworker conflict/misunderstanding	—	—	2.74 (1.35–5.56) **
Travel difficulties	3.60 (1.70–7.59) **	2.15 (1.09–4.26) *	—
Hostility due to religion	—	—	1.84 (0.92–3.71)
Separation from family	—	1.64 (0.89–3.04)	—
None to moderate	1	1	1
Work experience (agrees vs. disagrees; ref)			
Encourages collaboration	0.56 (0.23–1.40)	—	—
Organization follows policies too rigidly	—	0.45 (0.20–1.02)	—
Satisfied with staff services	5.20 (1.91–14.17) **	2.59 (1.27–5.29) **	—
Coping: 3 = a lot vs. 2 = a little vs 1 = not at all (=ref) Formed plan of action?			
A little vs. not at all	0.09 (0.02–0.39) *	—	—
A lot vs. not at all Exercised more?	0.15 (0.04–0.61) *	—	—
A little vs. not at all	2.16 (1.01–4.62)	1.61 (0.91–2.85)	—
A Lot vs. not at all Avoided people?	3.15 (0.92–10.82)	2.31 (0.95–5.60)	—
A little vs. not at all	2.17 (1.02–4.60)	2.29 (1.26–4.17)	—
A Lot vs. not at all Overworked?	2.07 (0.70–6.09)	1.12 (0.51–2.47) *	—
A little vs. not at all	3.05 (1.11–8.37)	—	—
A Lot vs. not at all Have gone on vacation?	3.40 (1.16–9.82)	—	—
A little vs. not at all	0.71 (0.32–1.57)	—	—
A Lot vs. not at all Taken sick leave because of stress on job?	0.15 (0.05–0.53) *	—	—
A little vs. not at all	2.16 (1.06–4.40)		0.31 (0.16–0.62)
A lot vs. not at all	8.36 (0.74–95.10) *	—	1.78 (0.54–5.84) **
Used chanting/mantras?		—	
A little vs. not at all	2.03 (0.87–4.78)	2.41 (1.24–4.67)	—
A lot vs. not at all Traumatic exposure: experienced vs. not (ref)	2.08 (0.71–6.05)	1.92 (0.86–4.31) *	—
Injury due to landmine	—	1.46 (0.26–8.27)	—
Lack of food or water	1.77 (0.84–3.70)	—	—
Ill health without medical care	2.75 (0.97–7.76)	—	1.69 (0.82–3.47)
Imprisonment	—	—	2.41 (0.86–6.78)
Forced separation family	5.13 (1.10–23.97) *	1.78 (0.68–4.64)	—
Knowing someone killed/murdered	—	—	1.86 (0.97–3.54)

	Depression AOR (95% CI)	Anxiety AOR (95% CI)	Probable PTSD AOR (95% CI)
Death of family/friend	2.30 (0.78–6.72)	2.19 (0.90–5.32)	—
Torture	0.16 (0.04–0.76) *	—	—
Lost property/belongings	—	—	1.56 (0.75–3.25)
Other terrifying situation	2.52 (1.20–5.33) *	1.64 (0.93–2.89)	—
Not experienced	1	1	1

Note. AOR adjusted odds ratio; CI confidence interval. — denotes this variable did not meet the requirements to be included in the regression.

*$p < .05$.

**$p < .01$.

***$p < .001$.