

Traumatic Experiences and Psychological Distress in an Urban Refugee Population Seeking Treatment Services

Allen Keller, MD,*† Dechen Lhewa, BA,‡ Barry Rosenfeld, PhD,†§ Emily Sachs, BA,*
Asher Aladjem, MD,* Ilene Cohen, PhD,* Hawthorne Smith, PhD,* and Katherine Porterfield, PhD*

Abstract: While a growing literature has addressed the psychological consequences of torture and refugee trauma, most studies have focused on homogeneous samples drawn from a single region. Thus, relatively little research has attempted to identify demographic or experiential factors that might help explain different levels of distress in these individuals. We measured depression, anxiety, and posttraumatic stress disorder (PTSD) symptoms in a convenience sample of refugees and survivors of torture seeking treatment in a torture treatment program ($N = 325$). We found 81.1% of patients had clinically significant anxiety, 84.5% had clinically significant depressive symptoms, and 45.7% had significant PTSD symptoms. Regression analyses revealed that anxiety and depressive symptom were significant higher among women ($\beta = .08, p = 0.02$ and $\beta = .22, p = 0.0001$ for anxiety and depression respectively) and those who reported death threats as part of their traumatic experiences ($\beta = .10, p = 0.033$ and $\beta = .12, p = 0.036$ respectively). Symptoms of PTSD were also predicted by death threats ($\beta = .22, p = 0.03$), but were also influenced by the experience of rape ($\beta = .33, p < 0.001$), family torture experiences ($\beta = .23, p = 0.022$), religion ($\beta = .21, p = 0.03$), and age ($\beta = -.18, p = 0.004$). The clinical implications of these results are discussed.

Key Words: Refugee trauma, torture, PTSD, psychological distress.

(*J Nerv Ment Dis* 2006;194: 188–194)

A growing literature has documented the severe psychological repercussions of torture, political violence, and war-related trauma. This is a significant concern given that among refugee populations, it is estimated that between 5% and 35% have experienced torture and other human rights

abuses (Baker, 1992). More than 400,000 torture victims are believed to reside in the United States alone (Piwowarczyk et al., 2000). Despite a general acknowledgment of the detrimental effects of torture and trauma on mental health, relatively little research has attempted to identify factors that may influence the psychological effects of these abuses. Instead, most studies have simply compared individuals who were tortured or abused to a comparable group who have not been so traumatized. Relatively few studies, on the other hand, have focused solely on patients who have experienced different types of traumatic events in hopes of differentiating which factors correspond to higher or lower levels of psychological distress.

Estimates of posttraumatic stress disorder (PTSD), depression, and other psychiatric disorders have varied widely in studies of torture or trauma victims, largely in response to methodological variation. For example, a recent review of the literature on refugee mental health noted that rates of PTSD have ranged from 4% to 86% across different studies (Hollifield et al., 2002). However, many writers have concluded that the rate and severity of psychological disturbance increase commensurate with the severity of the traumatic experience, a phenomenon often referred to as the “dose-response” theory of trauma (McNally, 2003).

Few traumatic experiences are as devastating as torture, regardless of whether the nature of the torture is largely physical (e.g., physical assault and bodily injury) or psychological (e.g., sensory deprivation, threats to family members). For example, Gorst-Unsworth and Goldenberg (1988) interviewed 84 Iraqi refugees, all of whom reported having been tortured prior to fleeing their native country.¹ They found high rates of PTSD (50%) and depression (35%), as well as psychosis and other forms of psychiatric disorder. More recently, Van Ommeren et al. (2001) studied roughly 800 Bhutanese refugees, half of whom were survivors of torture.² The authors observed significantly higher rates of PTSD among torture survivors compared with refugees who had not been tortured (43% vs. 4%), as well as higher rates of dissociative disorders (18% vs. 3%) and somatoform pain disorders (51% vs. 28%). Unfortunately, studies of refugees and torture survivors have often been limited by nonrepresentative samples and unvalidated assessment techniques to measure psychological symptoms and disorders (Hollifield et al., 2002).

One of the few studies to analyze differences in the torture experience and reactions across a diverse sample of

*Program for Survivors of Torture, Bellevue Hospital Center, New York, New York; †School of Medicine, New York University, New York, New York; ‡Department of Psychology, Boston University, Boston, Massachusetts; and §Department of Psychology, Fordham University, Bronx, New York.

Supported in part by funding from the Van Ameringen Foundation, the United States Office of Refugee Resettlement, and the New York University School of Medicine Master Scholar’s Program (A. Keller, PI).

Send reprint requests to Barry Rosenfeld, PhD, Department of Psychology, Fordham University, Bronx, NY 10458.

Copyright © 2006 by Lippincott Williams & Wilkins

ISSN: 0022-3018/06/19403-0188

DOI: 10.1097/01.nmd.0000202494.75723.83

torture survivors found substantial cross-cultural differences (Moisander and Edston, 2003). In their study of individuals living in Sweden, these authors found a number of significant differences in the types of torture used against individuals from Bangladesh, Iran, Peru, Syria, Turkey, and Uganda. Prevalence rates of PTSD ranged from 69% to 92%, although this diagnosis was not based on a systematic clinical interview or validated measure. However, this study offered little insight into the factors (i.e., traumatic experiences) that were more or less likely to generate psychological distress or psychiatric diagnoses.

The present study sought to fill this void by examining the rate and nature of psychological distress (depression, anxiety, PTSD symptoms) among a diverse consecutive sample of torture survivors seeking services in an urban torture treatment center. Psychological distress was assessed through the use of widely accepted and well-validated psychological tests. In addition, by analyzing a diverse sample of torture survivors, we sought to identify variables that correspond to higher or lower levels of psychological distress such as the type of trauma experienced and sociocultural variables (e.g., age, gender, religion).

METHODS

Participants

Data were collected from a convenience sample of patients seeking services through the Bellevue Hospital/New York University Program for Survivors of Torture. The Program for Survivors of Torture (SOT) has been providing multidisciplinary services to survivors of torture and refugee trauma since 1995. The SOT program provides medical, mental health, social, and legal services to individuals from over 60 countries. Patients are referred to the program from a wide variety of sources ranging from legal agencies and community organizations to current and former patients. All patients reported having experienced traumatic events consistent with the United Nation's definition of torture or were survivors of genocide, war trauma, or political violence (UN Convention Against Torture, 1984/1987). All participants who entered the SOT Program between May 2000 and December 2002 were included in these analyses. Although the SOT program cares for children as well as adults, only those patients over 18 years of age were included in these analyses because most of the rating scales used have been developed and validated on adult samples.

Procedures

Data were collected during an initial intake session, typically lasting 1 to 2 hours. All intake interviews are conducted by psychologists, psychiatrists, or supervised psychology trainees (e.g., predoctoral psychology interns). When necessary, interviews were conducted with the assistance of a trained interpreter. Demographic, torture/trauma experiences, and medical data were extracted from intake summaries and clinic notes, including a structured intake questionnaire that elicits specific information regarding the nature of persecution, medical and mental health symptoms, and an unstructured narrative (e.g., asking the reasons why he or she was

persecuted). Intake evaluators coded up to five traumatic events that the patient reported having experienced prior to migration. These five (or fewer) events, although not an exhaustive list of all traumas experienced, presumably represent the most significant and damaging events the individual experienced. In addition, all subjects completed two self-report questionnaires measuring psychological symptoms, the Hopkins Symptom Checklist (Derogatis et al., 1974) and the Harvard Trauma Questionnaire (Mollica et al., 1992), both of which are described below. Translated versions of the questionnaires were used when available.¹ Because data collection forms were completed by the clinician conducting the intake evaluation, interrater reliability for the data coded on these intake questionnaires was not available.

The Hopkins Symptom Checklist (HSCL-25) is a 25-item self-report inventory consisting of two subscales measuring anxiety (10 items) and depression (15 items) that has been widely used in research with refugees and torture survivors. The HSCL-25 has been repeatedly found to have high reliability and concurrent validity, both for raw scores and for classifications based upon a cutoff score of 1.75 (Winokur et al., 1984). The HSCL-25 has also been translated into a number of different languages specifically for use with refugee populations (Kleijn et al., 2001; Mollica et al., 1987). The Harvard Trauma Questionnaire (HTQ), a measure of trauma experience and response, includes a 16-item scale designed to measure severity of PTSD symptoms that was developed specifically for use in refugee populations (Mollica et al., 1992). The HTQ has been used in a number of studies of refugees and asylum seekers, several of which have also supported the validity of PTSD classifications based on a cutoff score of 2.5 (Hollifield et al., 2002), although other studies have suggested that lower scores may have greater sensitivity in identifying individuals who meet DSM-IV criteria for PTSD (Smith Fawzi et al., 1997).

Demographic and torture-related data were coded according to the Huridocs codebook (Dueck and Aída, 1993), a classification system developed by the Human Rights Documentation Systems International. Huridocs codes, which are quite detailed, were subsequently collapsed into broader categories of torture experience (using the categories provided by the classification system) for ease of reporting and analysis (since analyzing the two or three individuals who reported a very specific torture experience was not feasible). Because intake procedures evolved during the 2-year study period, some data were not available for all subjects (e.g., the Harvard Trauma Questionnaire was added to the intake process in June 2001) and the volume of missing data precluded the use of imputation procedures. This study was approved by the Institutional Review Board of New York University School of Medicine, although the retrospective nature of data analysis precluded obtaining informed consent.

Statistical Analyses

Demographic and clinical data were first analyzed using descriptive statistics to summarize the characteristics of the sample. In addition, because relatively few data regarding the reliability and validity of the HSC and HTQ have been described in previous analyses (Hollifield et al., 2002), we

also analyzed scale properties for the entire sample as well as for several translated versions of the scales for which sufficient sample sizes were available (i.e., French and Tibetan). Correlation coefficients were used to analyze whether demographic or experiential variables were significantly associated with level of psychological distress in this sample. Significant predictors identified in univariate analyses were subsequently included in a series of stepwise multiple regression analyses to identify the most parsimonious, nonoverlapping predictors of anxiety, depression, and PTSD. Data were analyzed using the SPSS statistical software.

RESULTS

Sample Characteristics

The sample included 199 male and 126 female participants ranging in age (at the time of intake) from 18 to 72 years ($M = 33.74$ years, $SD = 9.7$). The majority of participants were married ($N = 177$, 54.5%), and 43.7% ($N = 142$) described themselves as Muslim, 22.8% ($N = 74$) as Buddhist, and 27.9% ($N = 9$) as Christian. Among the 54 countries represented in this sample, the countries most heavily represented were Tibet with 72 subjects (22.2%), Sierra Leone with 53 (16.3%), and Guinea with 24 (7.4%). The age at which participants immigrated to the United States ranged from 8 years to 72 years, with an average of 27.6 years ($SD = 8.9$). Most subjects had an asylum application pending ($N = 160$, 49.2%), but 116 participants had not applied for asylum (35.7%), and 31 had already been granted asylum at the time of intake (9.5%). Additional demographic data are presented in Table 1.

The most common reason cited by participants as the basis for the persecution and torture they suffered was political activities (e.g., membership or leadership in a forbidden political party, $N = 210$, 65.8%). Religious affiliation was cited as the reason for persecution by 35 individuals (11.0%), while ethnicity or cultural background was noted by 28 individuals (8.8%). Other reasons for persecution were having a family relationship to an individual who was also the target of persecution ($N = 24$, 7.5%) and gender or sexual orientation ($N = 22$, 6.9%); these data were missing for six individuals. Most of participants reported having been physically assaulted ("beaten") as a form of torture (Table 2), although rape and other forms of sexual assault were also common (reported by 18% and 11% of the sample, respectively). Forms of psychological torture frequently reported include harassment directed at either the participant or family members (reported by 90% and 85% of participants respectively), witnessing violence or torture against others (79%), and torture of family members (68%).

Mental Health Functioning

Prior to analyzing the level of psychological distress in our sample, we assessed the reliability of the self-report scales for both the full sample and for each of the three languages that were most commonly used (English, French, and Tibetan). Reliability, based on coefficient α and item-total correlations, was uniformly high for each scale in each of these languages. For example, coefficient α for the HSCL-25

TABLE 1. Sample Characteristics

Variable	N	%
Gender		
Male	199	61.2%
Female	126	38.8%
Age at intake		
18–19	8	2.5%
20–29	121	37.2%
30–39	121	37.2%
40–49	51	15.7%
50 and over	24	7.4%
Region of origin		
Africa, central	45	13.8%
Africa, west	136	41.8%
Africa, other	12	3.7%
Americas	16	4.9%
Asia, east	73	22.5%
Asia, other	24	7.4%
Eastern Europe	19	5.8%
Marital status		
Never married	121	37.2%
Married/common law	177	54.5%
Separated/divorced/widowed	27	8.3%
Religion		
Buddhist	74	22.8%
Christian	90	27.75%
Muslim	142	43.7%
Other/none	12	3.7%
Missing	7	2.2%
Education		
None	39	12.0%
Less than high school	67	20.6%
High school/GED	56	17.2%
Some college	52	16.0%
College/professional degree	72	22.2%
Religious school/other	30	9.2%
Missing	9	2.8%
Immigration status		
Not applied for asylum	116	35.7%
Asylum pending	160	49.2%
Asylum granted	31	9.5%
Other/legally in United States	12	3.7%
Missing	6	1.85%
Reasons for persecution		
Political activities	210	65.8%
Religion	35	11.0%
Ethnicity/cultural background	28	8.8%
Family relationship to other victims	24	7.5%
Gender/sexual identity	22	6.9%

Anxiety subscale was .84 for the entire sample and ranged from .82 to .87 for the three translated versions (Table 3). Likewise, coefficient α was greater than .80 for all three scales (the HSCL-25 Anxiety scale, Depression scale, and HTQ) for the full sample, and fell below this threshold only for the Tibetan translation of the HTQ, for which the sample size was quite low.

TABLE 2. Types of Torture and Traumatic Experiences

Variable	N	%
Type of torture—physical		
Other/unspecified beating	145	44.6%
Beating with object	112	34.5%
Rape	59	18.2%
Other physical assault	51	15.7%
Beating with hand	43	13.2%
Other sexual assault	35	10.8%
Burns	30	9.2%
Type of torture—psychological		
Harassment	291	89.5%
Family harassed	276	84.9%
Witness violence to others	255	78.5%
Family tortured	221	68.0%
Lived in hiding	216	66.5%
Saw dead bodies	172	52.9%
Witnessed violence/torture of family	171	52.6%
Beating with object	112	62.5%
Forced to work	110	33.8%
Rape	59	18.2%
Food/water deprivation	59	18.2%
Death threats	53	16.3%
Threats	48	14.8%
Sexual assault (other than rape)	35	10.8%
Burns	30	9.2%
Other deprivation	29	8.9%
Stress to senses	29	8.9%

An analysis of responses to the HSCL-25 and HTQ revealed an extremely high level of psychological distress across the sample. For example, the average score on the HSCL-25 Anxiety subscale was 2.36 (*SD* = .66, range: 1–4), with 81.1% (*N* = 262 of 323, data were missing for two subjects) obtaining scores above the cutoff score of 1.75 that identifies individuals

TABLE 3. Scale Reliability by Language

	Total	English	French	Tibetan
Hopkins Symptom Checklist—Anxiety Subscale				
<i>N</i>	296	109	68	44
Coefficient α	.84	.82	.84	.87
Median item-total <i>r</i>	.55	.55	.55	.63
Hopkins Symptom Checklist—Depression Subscale				
<i>N</i>	279	108	62	35
Coefficient α	.87	.88	.88	.85
Median item-total <i>r</i>	.54	.52	.53	.56
Harvard Trauma Questionnaire				
<i>N</i>	208	68	55	31
Coefficient α	.87	.87	.86	.76
Median item-total <i>r</i>	.53	.55	.48	.57

with clinically significant anxiety symptoms. Likewise, the average score on the HSCL-25 Depression subscale was 2.44 (*SD* = .65, range: 1–3.87), with 84.5% of subjects (*N* = 50 of 323) falling above the 1.75 cutoff. Scores on the HTQ PTSD scale were somewhat lower, with a mean of 2.42 (*SD* = .59, range: 1–4) and 45.7% (*N* = 127 of 234) falling above the recommended cutoff score of 2.5.

The most commonly endorsed symptoms on these self-report scales were “recurrent thoughts or memories of the most hurtful or terrifying event,” endorsed by 79.3% of the sample (*N* = 184 of 232) as occurring “quite a lot” or “extremely” often during the preceding week. “Feeling lonely” was endorsed by 70.9% of respondents (*N* = 227 of 320) as “quite a lot” or “extremely,” and “worrying too much about things” was endorsed by 70.6% (*N* = 226 of 320). Other commonly endorsed (“quite a lot” or “extremely” often) symptoms were “feeling sad” (68.4%, *N* = 229 of 320), “avoiding thoughts or feelings associated with the traumatic or hurtful event” (67.3%, *N* = 152 of 226), and “difficulty falling [or] staying asleep” (66.4%, *N* = 223 of 321). Infrequently endorsed symptoms included “thoughts of ending your life,” endorsed by 14.7% of respondents (*N* = 47 of 320) as occurring “quite a bit” or “extremely” often in the preceding week. “Unable to feel emotions” was endorsed by 21.8% of subjects (*N* = 50 of 229), “inability to remember parts of the most traumatic or hurtful events” was endorsed by 23.7% (*N* = 54 of 228), and “trembling” was endorsed by 24.1% (*N* = 76 of 316).

Correlates of Psychological Distress

An examination of demographic and experiential correlates of psychological distress revealed a number of significant associations (Table 4). Women reported significantly higher levels of psychological anxiety (2.52 vs. 2.27), depression (2.60 vs. 2.33), and PTSD symptoms (2.59 vs. 2.31),

TABLE 4. Correlates of Psychological Distress

	Anxiety		Depression		PTSD	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
Sociodemographic variables						
Gender	.19	0.0007	.20	0.0003	.23	0.0004
Age	-.10	0.062	-.10	0.068	-.15	0.022
Religion ^a	.00	0.97	.01	0.25	.03	0.045
Region of origin ^a	.01	0.92	.03	0.197	.06	0.04
Education	.05	0.38	.00	0.98	.03	0.62
INS status ^a	.02	0.056	.02	0.097	.04	0.014
Experiential variables ^b						
Age of 1st torture	.10	0.07	.11	0.07	.11	0.09
Rape	.17	0.003	.20	0.0003	.28	0.0001
Death threat	.13	0.02	.12	0.038	.16	0.014
Witness family trauma ^c	.06	0.26	.07	0.25	.15	0.024

^aCoefficient reflects η^2 for polychotomous^A variables; other coefficients refer to either point-biserial or Pearson product-moment correlation coefficients.

^bAll of the torture types noted in Table 2 were analyzed; however, only variables that had a significant association with one of the three psychological distress variables were reported in the text or this table.

^cWitnessed violence or torture of family members.

compared with men ($p < 0.0001$ for each analysis). Age, on the other hand, was only significantly correlated (negatively) with severity of PTSD symptoms, $r = -.15$, $p = 0.022$. No such associations were observed for either anxiety or depression. Likewise, region of origin was also significantly associated with severity of PTSD symptoms, $F(4,229) = 3.21$, $p = 0.014$, but not anxiety, $F(4,318) = 0.49$, $p = 0.74$, or depression, $F(4,318) = 2.14$, $p = 0.076$. Post hoc comparisons revealed that the Asian immigrants endorsed the lowest level of PTSD symptoms, whereas South American individuals endorsed significantly more PTSD symptoms; African and European refugees fell between these two extremes. PTSD symptom severity was also significantly associated with religion, $F(2,218) = 4.15$, $p = 0.017$, $F(2,218) = 3.14$, $p = 0.045$, but there were no significant differences in anxiety or depression scores based on religious affiliation, $F(2,302) = 0.04$, $p = 0.97$ (for HSCL-25 Anxiety scores) and $F(2,302) = 1.39$, $p = 0.20$ (for HSCL-25 Depression scores). Post hoc comparisons revealed that Buddhists endorsed significantly fewer PTSD symptoms than Christians ($p < 0.05$) and Muslims ($p < 0.10$). Years of education completed was not correlated with any of the three psychological distress variables. However, there was a significant association between immigration status and level of psychological distress, as patients who had already been granted asylum endorsed significantly fewer PTSD symptoms compared with patients with pending asylum applications and those who had not yet filed an asylum application (2.15 vs. 2.51 and 2.38 respectively), $F(2,220) = 4.38$, $p = 0.014$. Although a similar pattern emerged for anxiety and depressive symptoms, these differences did not reach statistical significance; $F(2,302) = 2.91$, $p = 0.056$ and $F(2,302) = 2.35$, $p = 0.097$ respectively.

Levels of anxiety, depression, and PTSD symptoms were significantly related to several of the traumatic experiences studied. For example, patients who reported having been raped endorsed significantly more symptoms on each of the scales studied; anxiety (2.60 vs. 2.32, $p = 0.003$), depression (2.71 vs. 2.39, $p < 0.001$), and PTSD (2.75 vs. 2.34, $p < 0.0001$). A similar pattern emerged for patients who reported having received death threats, although the group differences were less dramatic. Nonetheless, patients who reported death threats endorsed significantly greater levels of anxiety (2.57 vs. 2.33, $p = 0.02$), depression (2.62 vs. 2.41, $p = 0.038$), and PTSD (2.63 vs. 2.38, $p = 0.014$) compared with individuals who did not experience death threats. The only other significant association observed in this sample was the presence of significantly greater numbers of PTSD symptoms reported by patients who witnessed violence or torture of family members (2.50 vs. 2.32, $p = 0.024$), although no such differences were observed for anxiety or depressive symptoms. No other differences in symptom severity were observed for the other traumatic experiences analyzed.

Surprisingly, there was no association between the age at which torture occurred and level of psychological distress, although these associations approached significance. There was also no significant association between the length of time since arrival in the United States, although patients who had been granted some form of permanent legal status in the

United States (e.g., granted asylum or citizenship, or had a work or student visa) had lower levels of PTSD than did patients who had not yet applied for asylum or had their asylum case pending (2.21 vs. 2.46, $t = 2.12$, $p = 0.03$). Legal status was not significantly associated with level of depression or anxiety. There was also no significant association between reasons for persecution and severity of psychological distress.

Stepwise multiple regression models predicting PTSD, Depression, and Anxiety scores based on the correlates identified in univariate analyses (gender, age, religion, region of birth, rape, death threats, witnessing torture to family members) generated similar models for depression and anxiety, both of which contained only two predictors, gender (female) and death threats, and accounted for relatively little variance in psychological distress. The model predicting HSCL-25 Depression scores accounted for only 6% of the variance, $F(2,278) = 10.91$, $p < 0.0001$ (death threats: $\beta = .12$, $p = 0.036$; and female gender: $\beta = .22$, $p = 0.0001$). The model predicting HSCL-25 Anxiety scores accounted for only 5% of the variance, $F(2,278) = 7.93$, $p = 0.0004$ (death threats: $\beta = .10$, $p = 0.033$; and female gender: $\beta = .08$, $p = 0.002$). Symptoms of PTSD, on the other hand, were best predicted by five variables: rape ($\beta = .33$, $p < 0.001$), death threats ($\beta = .22$, $p = 0.03$), family torture experiences ($\beta = .23$, $p = 0.022$), religion (Buddhist versus others; $\beta = .21$, $p = 0.03$), and age ($\beta = -.18$, $p = 0.004$). These five variables accounted for 19% of the variance in PTSD scores, $F(5,185) = 8.40$, $p < 0.0001$.

DISCUSSION

This study, which represents one of the largest systematic analyses of an ethnically diverse sample of torture survivors, found high levels of psychological distress as measured by standardized symptom rating scales. Roughly half of all patients (46%) fell above the cutoff for identifying clinically significant PTSD, while more than 80% fell above this threshold on measures of depression and anxiety. These levels of distress are particularly striking given that most participants had emigrated to the United States months or even years earlier, suggesting that the traumatic experiences described by our sample had lasting and profound effects on psychological well-being.

A number of interesting correlates of psychological distress also emerged in this study, including both demographic characteristics and traumatic experiences. Some of these results are not surprising, such as the finding that women reported higher levels of depression and anxiety than men, since such findings typically emerge in most epidemiological studies (Turner and Hersen, 1993). Other findings, however, were unexpected, such as the observation that death threats appear particularly stressful. Not only was this variable associated with depression, anxiety, and PTSD symptoms in the univariate correlations, but also it remained statistically significant in each of the three stepwise regression models, suggesting that the detrimental impact of death threats on psychological well-being is relatively robust. Another interesting finding was the significantly lower rate of PTSD symptoms among Buddhist refugees (virtually all of

whom were Tibetan). This finding is consistent with the observation of other researchers that Tibetan Buddhists appear less prone to PTSD symptoms than other survivors of torture, despite experiencing comparable traumatic experiences (Crescenzi et al., 2002; Holtz, 1998; Terheggen et al., 2001). Despite this lower level of PTSD symptoms, the high level of internal consistency found for the Tibetan translation of the Harvard Trauma Questionnaire suggests that the phenomenon of PTSD may be equally valid in Tibetan Buddhist survivors of torture, even if considerably less common.

In fact, these data provide considerable support for the reliability of the psychological distress instruments used in this study: the Harvard Trauma Questionnaire and Hopkins Symptom Checklist. Both of these measures have been widely used in the refugee mental health literature, including a recent study of asylum seekers detained by the US Immigration and Customs Enforcement Service conducted by our research group (Keller et al., 2003), but empirical data regarding the adequacy of these scales in many of the refugee populations in which they have been used have often been lacking (Hollifield et al., 2002). Our data indicate comparable and high levels of reliability regardless of the language in which the scale was administered, suggesting that the constructs in question (anxiety, depression, and PTSD) may not be as vulnerable to language and cultural differences as some have suggested (Holtz, 1998). Although these data do not offer conclusive evidence of validity per se (because of the lack of an objective gold standard of depression, anxiety, or PTSD), they nevertheless offer some support for the utility of these measures in future refugee research.

Despite the compelling findings reported here, a number of methodological limitations temper the conclusiveness and generalizability of our results. First, the possibility of selection bias cannot be eliminated. Although the Bellevue/NYU SOT is not specifically a mental health program, since the program provides a wide range of medical and social services in addition to mental health treatment, it is certainly likely that a convenience sample of individuals seeking treatment through this program are more distressed and symptomatic than torture survivors in the community who have not sought treatment. Thus, some degree of overestimation is likely in terms of the severity of psychological symptoms observed in our study.

Another notable limitation pertains to the available pool of predictor variables. Understanding the factors that lead to better or worse psychological adjustment is clearly an important undertaking, and our study represents one of the first attempts to do so, highlighting a number of risk factors. However, countless other variables might have a far more profound impact on psychological adjustment (e.g., coping strategies, personality characteristics, greater detail regarding the specific nature and timing of the traumatic events reported). Unfortunately, our analysis was limited to the data available through our standardized intake procedure, and a number of potentially important variables were simply not available for study. Moreover, our modest sample size, while substantially larger than in most studies of torture survivors, precluded more sophisticated data analytic methods that

might have revealed additional predictors or interaction effects. Future research using a prospective and/or longitudinal design may help illuminate the factors that influence development of (or resilience to) psychological distress.

Despite these limitations, this study highlights the importance of identifying torture and trauma victims and the long-term and dramatic psychological consequences of these experiences. There is a need for greater clarity regarding the best (and worst) methods for coping with traumatic events. Such data can have a dramatic impact on the emotional well-being of this vulnerable population, both by minimizing the impact of traumatic experiences and by informing interventions once psychological symptoms have emerged. For example, understanding the types of experiences that are most likely to generate lasting psychological distress can help inform prevention efforts aimed at minimizing these long-term effects of trauma. By identifying high-risk subgroups within the broader population of torture survivors, targeted interventions may be more likely to succeed. Clearly, further research is needed to address the nature of the relationship between trauma and psychological well-being.

ACKNOWLEDGMENTS

The authors express their gratitude to the many staff and patients of the SOT, with special thanks to John Wilkinson, MSW, Lillian Perdomo, BA, Yinka Akinsulure Smith, PhD, Lucia Keller, PhD, Leanh Nguyen, PhD, Patricia Blau, MSW, and George Lui, MD.

REFERENCES

- Baker R (1992) Psychosocial consequences for tortured refugees seeking asylum and refugee status in Europe. In M Basoglu (Ed), *Torture and Its Consequences: Current Treatment Approaches* (pp 83–106). Cambridge: Cambridge University Press.
- Crescenzi A, Ketzner E, Van Ommeren M, Phuntsok K, Komprou I, de Jong JT (2002) Effect of political imprisonment and trauma history on recent Tibetan refugees in India. *J Trauma Stress*. 15:369–375.
- Derogatis LR, Lipman RS, Rickels K, Uhlenhuth EH, Covi L (1974). The Hopkins Symptom Checklist (HSCL): A measure of primary symptom dimensions. In P Basel (Ed), *Modern Problems in Pharmacopsychiatry*. Basel, Switzerland: Karger.
- Dueck J, Aida MN (1993) *HURIDOCS Standard Formats: Supporting Documents*. Oslo: HURIDOCS.
- Gorst-Unsworth C, Goldenberg E (1988) Psychological sequelae of torture and organized violence suffered by refugees from Iraq: Trauma-related factors compared with social factors in exile. *Br J Psychiatry*. 172:90–94.
- Hollifield M, Warner TD, Lian N, Krakow B, Jenkins JH, Kesler J, Stevenson J, Westermeyer J (2002) Measuring trauma and health status in refugees: A critical review. *JAMA*. 288:611–621.
- Holtz TH (1998) Refugee trauma versus torture trauma: A retrospective controlled cohort study of Tibetan refugees. *J Nerv Ment Dis*. 186:24–34.
- Keller AS, Ford D, Trinh-Shevrin C, Meserve C, Sachs E, Leviss JA, Singer E, Smith H, Wilkinson J, Kim G, Alden K, Rosenfeld B (2003) Mental health of detained asylum seekers. *Lancet*. 362:1271–1273.
- Kleijn WC, Hovens JE, Rodenburg JJ (2001) Posttraumatic stress symptoms in refugees: Assessments with the Harvard Trauma Questionnaire and the Hopkins Symptom Checklist-25 in different languages. *Psychol Rep*. 88:527–532.
- McNally RJ (2003) Progress and controversy in the study of posttraumatic stress disorder. *Ann Rev Psychology*. 54:229–252.
- Mollica RF, Caspi-Yavin Y, Bollini P, Truong T, Tor S, Lavelle J (1992) The Harvard Trauma Questionnaire: Validating a cross-cultural instrument for measuring torture, trauma and post traumatic stress disorder in refugees. *J Nerv Ment Dis*. 180:111–116.
- Mollica RF, Wyshak G, de Marneffe D, Khoun F, Lavelle J (1987) Indochi-

- nese versions of the Hopkins Symptom Checklist-25: A screening instrument for the psychiatric care of refugees. *Am J Psychiatry*. 144:497–500.
- Moisander PA, Edston E (2003) Torture and its sequel: A comparison between victims from six countries. *Forensic Sci Int*. 137:133–140.
- Piowarczyk L, Moreno A, Grodin M (2000) Health care of torture survivors. *JAMA*. 284:539–541.
- Smith Fawzi MC, Murphy E, Pham T, Lin L, Poole C, Mollica RF (1997) The validity of screening for post-traumatic stress disorder and major depression among Vietnamese former political prisoners. *Acta Psychiatr Scand*. 95:87–93.
- Turner SM, Hersen, M (1993) *Adult Psychopathology and Diagnosis* (4th ed). New York: Wiley.
- UN Convention Against Torture (1984/1987) *The Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment*. Article 14(1).
- Van Ommeren M, de Jong JTVM, Sharma B, Komproe I, Thapa SB, Cardena E (2001) Psychiatric disorders among Bhutanese refugees in Nepal. *Arch Gen Psychiatry*. 58:475–482.
- Winokur A, Winokur DF, Rickels K, Cox D (1984) Symptoms of emotional distress in a family planning service: stability over a four-week period. *Br J Psychiatry*. 144:395–399.
- Terheggen MA, Stroebe MS, Kleber RJ (2001) Western conceptualizations and Eastern experience: a cross-cultural study of traumatic stress reactions among Tibetan refugees in India. *J Trauma Stress*. 14:391–403.

END NOTE

¹Validated translations of HSC and HTQ were available in Arabic, Farsi, Serbo-Croatian, Russian, Cambodian, Vietnamese, and Laotian. However, despite the availability of these translated questionnaires, a subset of participants who entered the program in 2000 and 2001 were administered the questionnaires orally with the assistance of a trained translator. Unfortunately, it was not possible to identify which of the 2000 and 2001 cases had previously translated versions of the questionnaires as opposed to having a translator administer the questionnaire orally.