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Anger, PTSD, and the Nuclear Family: A Study of Cambodian Refugees

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Abstract

This study profiles the family-directed anger of traumatized Cambodian refugees, all survivors of the Pol Pot genocide (1975-1979), who were patients at a psychiatric clinic in Lowell, MA, USA. We focus on the nuclear family (NF) unit, the NF unit defined as the patient's "significant other" (i.e. spouse or boyfriend/girlfriend) and children. Survey data were collected from a convenience sample of 143 Cambodian refugee patients from October 2006 to August 2007. The study revealed that 48% (68/143) of the patients had anger directed toward a NF member in the last month, with anger directed toward children being particularly common (64 of the 143 patients, or 49% [64/131] of the patients with children). NF-type anger was severe, for example, almost always resulting in somatic arousal (e.g., causing palpitations in 91% [62/68] of the anger episodes) and often in trauma recall and fears of bodily dysfunction. Responses to open-ended questions revealed the causes of anger toward a significant other and children, the content of anger-associated trauma recall, and what patients did to gain relief from anger. A type of cultural gap, namely, a *linguistic gap* (i.e., the parent's lack of English language skills and the child's lack of Khmer language skills) seemingly played a role in generating conflict and anger. NF-type anger was associated with PTSD presence. The effect of anger on PTSD severity resulted in part from anger-associated trauma recall and fears of bodily dysfunction, with 54% of the variance in PTSD severity explained by that regression model. The study: 1) suggests that among traumatized refugees, family-related anger is a major clinical concern; 2) illustrates how family-related anger may be profiled and investigated in trauma-exposed populations; and 3) gives insights into how family-related anger is generated in such populations.

Keywords

Anger; PTSD; family; catastrophic cognitions; Cambodian refugees; acculturation; USA

Introduction

The current study investigates anger, specifically the anger of traumatized Cambodian refugees directed toward family members. All patients attended a psychiatric clinic in Lowell, MA, USA, and all were survivors of the Pol Pot period. The Pol Pot genocide occurred from 1975 to 1979, during which about 1.7 million of Cambodia's 7.9 million people died, a quarter of the population; death resulted from execution, starvation, overwork, and illness. Owing to having survived these and other traumas (e.g., living in dangerous refugee camps), Cambodian refugees have high rates of psychiatric disorders. In one study, 56% of the Cambodian refugees attending an outpatient psychiatric clinic had PTSD, and the PTSD scores were quite high (on

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the Clinician-Administered PTSD Scale; Hinton et al., 2006); in another study, 60% had panic disorder (Hinton et al., 2000).

Anger appears to play an important role in the psychopathology of traumatized Southeast Asian refugees. In one study, Southeast Asian refugees with PTSD had significantly higher scores on the Anger Reaction Index, including higher levels of both expressed and experienced anger (Abe, Zane, & Chun, 1994). In a study of Vietnamese refugees using the Symptom Checklist (SCL), of the 9 items that were able to differentiate between patients with and without PTSD, 3 were anger items (Hauff & Vaglum, 1994). In a study of Cambodian refugees attending a psychiatric clinic, the patients had elevated rates of anger and much anger-associated autonomic arousal, with 58% of the patients with PTSD having anger episodes causing enough somatic arousal symptoms (e.g., palpitations) to meet panic attack criteria; and they had many catastrophic cognitions about the somatic symptoms induced by anger, including culturally specific concerns, such as that the neck vessels might rupture (Hinton, Hsia, Um, & Otto, 2003).

In the study of anger among Cambodian refugees discussed above (Hinton et al., 2003), the authors did not investigate the cause of anger episodes, or whether anger triggered recall of trauma events. Our clinical experience with Cambodian refugees would suggest that anger is often directed toward spouse and children, that the anger is severe (e.g., associated with extreme somatic arousal: palpitations), and that the anger often triggers trauma recall. Anger is a one of the 14 *DSM-IV* diagnostic criteria for PTSD (First, Spitzer, & Gibbon, 1995), and trauma's main impact on local social worlds may be through anger. The few studies that have examined the effect of anger among trauma victims at the level of the family have only investigated anger directed toward a spouse (see, e.g., Taft et al., 2007); none have examined anger directed toward children. The lack of studies of anger's effect on the family unit of traumatized populations represents a major gap in the literature.

To address this gap in the literature, the current study examines the anger of Cambodian patients directed toward family members, specifically nuclear family (NF) members, here defined as the “significant other” (i.e., spouse or boyfriend/girlfriend) and children. To investigate family-directed anger, we developed an approach informed by the psychological literature on anger (Berkowitz, 1999; DiGiuseppe & Tafrate, 2007; Novaco & Chemtob, 2002) and anthropological theories of emotion (Shweder, 2004). In addition, the approach was influenced by the literature demonstrating that “generational dissonance” (Smith-Hefner, 1999), a difference in acculturation between the first and second generation, may be a key issue in Cambodian diaspora communities, and by our clinical experience showing a linguistic gap to be a key problem in conflict resolution.

Based on this literature review and our clinical experience, we undertook a multidimensional, psycho-sociocultural examination of NF-type anger of Cambodian refugees attending a psychiatric clinic. We determined the number of patients having experienced anger toward NF members in the previous month, whether the source of anger was a significant other or a child, asked the reasons for becoming angry at a NF member, and assessed anger along several dimensions (viz., intensity, frequency, somatic arousal, and acting-out behaviors). To further profile anger episodes, we also investigated whether anger resulted in trauma recall, the content of that trauma recall, and whether anger caused concerns about bodily dysfunction. If the conflict involved a child, we examined whether the child's lack of proficiency in the Cambodian language, conjoined with the parent's lack of English ability, impeded conflict resolution. And we asked patients what they did to gain relief from the anger episode. We also determined the rate of PTSD, its association with NF-directed anger, and whether the effect of anger on PTSD severity resulted in part from anger-associated trauma associations and catastrophic cognitions. (We performed these regression analyses, for one, because previous studies of Cambodian

refugees indicate that the effect of panic attacks on PTSD severity results in large part from trauma recall triggered by those panic attacks [Hinton, Chhean, Pich, Um, et al., 2006], and anger episodes, which often trigger strong arousal, would be expected to demonstrate a similar pattern; and second, because catastrophic cognitions about the somatic symptoms in anger episodes would be expected to result in panic-disorder-like panic attacks and a sense of vulnerability, both of which have been shown to worsen PTSD [Clark, 1999; Hinton et al., 2006; Hinton & Good, 2009].)

Methods

Participants

All patients received treatment at a psychiatric clinic in Lowell, MA, home to approximately 30,000 Cambodians, the second largest Cambodian population in the United States. Upon first presenting to the clinic, all patients have PTSD, with comorbid anxiety and depression; very few have bipolar or schizophrenia disorder (< 5%). The vast majority (over 90%) are unemployed, many receiving disability benefits. For the current study, we aimed to obtain a sample of at least 60 patients with NF-type anger, and estimated (based on preliminary screenings of rates) that a final sample size of over 140 patients would be needed. Inclusion criteria were having passed through the Pol Pot period and being at least 6 years old at its beginning (in 1975), being clinically stable and not pregnant, and not having a bipolar or psychotic disorder. Eight patients were not eligible for participation; 10 eligible patients declined to be surveyed because of time concerns. The study was approved by the clinic's institutional review board, and all patients gave informed consent.

Procedures

During their clinic visit to receive medications at the clinic, consecutive patients were asked whether they wished to participate in the survey. Data collection with 143 Cambodian refugee patients was undertaken from October 2006 to August 2007. All queries were made by the first author, except those regarding the PTSD checklist, which was administered by the research assistant. The first author is fluent in both spoken and written Khmer. The research assistant was a physician in Cambodia, and has many years of mental health experience working as a bicultural worker.

We asked whether the patient had become angry at a NF member in the last month, and then asked what the NF member had done to cause anger. If the cause of anger was a child, we asked the child's age. To profile anger episodes, we used 8 scales (see the Measures section). If the conflict involved a child, we used three scales to assess the role of a linguistic gap in generating conflict. We asked patients what they did to feel better in the last month after becoming angry at a NF member. Blind to the patient's response to the anger queries, the research assistant administered the PTSD Checklist.

Measures

In total, there were 12 instruments. Eight instruments profiled the anger episodes; 3 assessed the role of a linguistic gap in generating conflict; and 1 assessed PTSD severity. Several of the scales used to assess anger severity were one-item Likert-type scales. Studies indicate that one-item Likert-type scales have good validity and reliability when the items have clear face validity (Davey, Barratt, Butow, & Deeks, 2007), as is the case here.

Anger Intensity Scale—The intensity of the anger caused by NF members in the last 4 weeks was assessed by asking how angry the patient had become, rating the response on a 0–4 Likert-type scale: 0 (*not at all*), 1 (*a little angry*), 2 (*fairly angry*), 3 (*very angry*), and 4 (*extremely angry*).

Anger Episode Frequency—The frequency of the anger episodes toward NF members in the last 4 weeks was assessed on a 0–4 Likert-type scale: 0 (*never*), 1 (*1 time*), 2 (*2–3 times*), 3 (*1–2 times/week*), and 4 (*almost every day*).

Panic-Attack Somatic-Symptom Scale—Ten of the 13 *DSM-IV* criteria are somatic symptoms: (1) palpitations, (2) sweating, (3) trembling, (4) shortness of breath, (5) feeling of choking, (6) chest pain or discomfort, (7) nausea or abdominal distress, (8) dizziness or lightheadedness, (9) numbness or tingling sensations, and (10) chills and hot flashes. The patient was asked whether any of those symptoms had suddenly started upon becoming angry at a NF member in the last 4 weeks, and the response was rated on a 0–4 Likert-type scale: 0 (*no symptoms*), 1 (*1 symptom*), 2 (*2–3 symptoms*), 3 (*4–5 symptoms*), and 4 (*> 5 symptoms*).

Length-of-Palpitations Scale—Palpitations are a key aspect of anger-type arousal, so we specifically asked patients how long they lasted during the NF-anger episodes, and rated the response on the following scale: 0 (*0 minutes*), 1 (*< 1 minute*), 2 (*1–14 minutes*), 3 (*15–29 minutes*), and 4 (*> 29 minutes*).

Anger Somatic-Symptoms Addendum—We also asked patients whether anger caused any of 5 other somatic symptoms that a previous study (Hinton et al., 2003) had found to be commonly caused by anger among Cambodian refugees (for a discussion of the Khmer understanding of the meaning of these symptoms, see the *Anger Catastrophic-Cognitions Scale* section below): (1) headache, (2) tinnitus, (3) neck soreness, (4) blurry vision, and (5) facial hotness. The patient was asked whether any of those symptoms had suddenly started upon becoming angry at a NF member in the last 4 weeks, and the response was rated on a 0–4 Likert-type scale: 0 (*no symptoms*), 1 (*1 symptom*), 2 (*2 symptoms*), 3 (*3 symptoms*), and 4 (*4 to 5 symptoms*).

Anger Acting-Out Scale—Acting-out behaviors during NF anger episodes were assessed on a 0–4 Likert-type scale: 0 (*not angry*), 1 (*angry, but kept inside*), 2 (*spoke loudly*), 3 (*yelled*), and 4 (*throw things or hit someone*).

Anger Trauma-Recall Severity Scale (ATRSS)—We determined whether the patient had trauma recall triggered by anger episodes, excluding those cases in which trauma recall triggered the anger. We assessed the severity of anger-triggered trauma recall on three dimensions: degree of reliving, length, and frequency. The degree of living was assessed on the CAPS Flashback Intensity Scale (Weathers, Keane, & Davidson, 2001), which is a 0–4 Likert-type scale: 0 (*no reliving*); 1 (*mild, somewhat more realistic than just thinking about the event*); 2 (*moderate, definite but transient dissociative quality, still very aware of surroundings, daydreaming quality*); 3 (*severe, strongly dissociative [reports images, sounds, or smells] but retained some awareness of surroundings*); and 4 (*extreme, complete dissociation [flashback], no awareness of surroundings, may be unresponsive, possible amnesia for the episode [blackout]*). The length of trauma recall was rated on a 0–4 Likert-type scale: 0 (*no anger*), 1 (*< 1 minute*), 2 (*< 5 minutes*), 3 (*< 10 minutes*), and 4 (*≥ 10 minutes*). The trauma recall's frequency in the last month was rated on the following 0–4 Likert-type scale: 0 (*never*), 1 (*once*), 2 (*twice*), 3 (*three times*), and 4 (*> three times*). With 20 patients, we determined the ATRSS's test–retest (at 1 week) and inter-rater reliability ($r = .85$ and $.92$, respectively).

Anger Catastrophic-Cognitions Scale (ACCS)—According to the Khmer understanding of bodily physiology, that is, their ethnophysiology, anger brings about an inner boiling (called “inner hotness,” or *kdaw khnong*) that sends blood, steam, and *khyâl* (a wind-like substance) upward in the body. As they rise, the blood, steam, and *khyâl* may hit the lungs,

causing shortness of breath, possibly asphyxia; may strike the heart, causing palpitations, possibly heart arrest; may distend the neck vessels, causing neck soreness, possibly neck-vessel rupture; and may rush into the cranium, causing tinnitus (referred to as “*khyâl* exits the ears,” or *khyâl ceuny taam treujieu*), dizziness, and blurry vision, possibly syncope, deafness, and blindness. This upward rising of blood, steam, and *khyâl* is often called a “*khyâl* attack.” Also, anger is thought to cause blood from all over the body to rush into the chest, an explanation for the chest tightness and palpitations experienced during anger states, and it is thought that this blood may coagulate and cause death. Yet still, the very fact of being easily angered is thought to indicate a dangerous mental and physical weakness.

To determine the severity of catastrophic cognitions about bodily dysfunction upon becoming angry at a NF member in the last 4 weeks, we asked about six catastrophic cognitions related to the Khmer ethnophysiology of anger (see too, Hinton et al., 2003), each assessed on a 0–4 Likert-type scale: 0 (*not at all*), 1 (*a little*), 2 (*some*), 3 (*a lot*), and 4 (*extremely*). We asked, “In the last 4 weeks, when you got angry, did you think, I may have... X,” where “X” was any of the following catastrophic outcomes: (1) “inner hotness” (*kdaw khnong*), (2) a “*khyâl* attack” (*kaeot khyâl*), (3) “cardiac arrest” (*geung beh doung*), (4) “bursting of the neck vessels” (*dac sosai go*), (5) “coagulated blood” (*go chieum*), and (6) “weakness” (*khsaoy*). With 20 patients, we determined the scale’s test–retest (at 1 week) and inter-rater reliability ($r = .81$ and $.88$, respectively).

English Language Ability Scale—Each patient’s English proficiency was assessed on a 0–4 Likert-type scale: 0 (*no understanding*), 1 (*understands some words, but minimal understanding*), 2 (*able to speak full sentences, to communicate to some degree*), 3 (*fairly good ability to speak and understand*), and 4 (*excellent ability to speak and understand*). As assessed by 20 patients, test–retest (at 1 week) and inter-rater reliability were excellent ($r = .84$ and $.89$, respectively).

Khmer Language Ability Scale—The Khmer language ability of the child with whom there was a conflict was rated on a 0–4 Likert-type scale: 0 (*no understanding*), 1 (*understands some words, but minimal understanding*), 2 (*able to speak full sentences, to communicate to some degree*), 3 (*fairly good ability to speak and understand*), and 4 (*excellent ability to speak and understand*). As assessed by 20 patients, test–retest (at one month) and inter-rater reliability were excellent ($r = .86$ and $.92$, respectively).

Language-Barrier Scale—The patient’s perception of the extent to which the child’s lack of Khmer language skills made it difficult to communicate when a dispute arose was rated on a 0–4 Likert-type scale: 0 (*not at all*), 1 (*a little*), 2 (*some*), 3 (*quite a bit*), and 4 (*extremely*). As assessed by 20 patients, test–retest (at one month) and inter-rater reliability were excellent ($r = .83$ and $.86$, respectively).

PTSD Checklist (PCL)—The PCL assesses how much each of the 17 *DSM-IV* PTSD criteria has bothered the patient in the last month, each assessed on a 1–5 Likert-type scale: 1 (*not at all*), 2 (*a little bit*), 3 (*moderately*), 4 (*quite a bit*), and 5 (*extremely*). The PCL has shown excellent psychometric properties (Wittchen, Lachner, Wunderlich, & Pfister, 1998). The Cambodian version of the PCL has excellent test–retest (at one week) and inter-rater reliability ($r = .91$ and $.95$, respectively). A PCL score of 44 has been proposed to determine PTSD presence (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996). Among the Cambodian population, the “44” cut-off score to have excellent correspondence ($\kappa = .81$; 30 patients) to the diagnosis made by a rater using the SCID module for PTSD (First et al., 1995).

Analysis of Quantitative and Qualitative Data

Analysis of quantitative data was performed by SPSS version 14.0. To further investigate our causal model, we conducted a regression analysis to determine whether the anger-associated trauma recall and catastrophic cognitions would predict PTSD severity beyond our other measures of anger severity. This would suggest that anger-associated trauma recall and catastrophic cognitions not only are key dimensions of the phenomenology of anger in this group, but also play a central role in anger's worsening of PTSD severity.

As described above, the study included the following three open-ended queries: what the significant other or child had done to cause anger; what trauma events were recalled upon becoming angry; and what the patient did to feel better after becoming angry at a NF member. The responses to the open-ended questions were transcribed and translated. The first author analyzed the response into categories (Strauss & Corbin, 1998). Those categories were discussed in a team meeting with bicultural staff. Then both the first author and a bicultural research assistant with a doctorate degree coded the responses by those categories. Any discrepancies were discussed. Then the frequency of the categories was quantified.

Results

Demographic Information

Of the surveyed patients, most were women: 72.7% (104/143). The mean age of patients was 50.1 ($SD = 8.2$), range 39–75. Forty percent (57/143) of the patients had a significant other (SO). The rate of having a SO did not differ significantly by gender. Of the 57 patients with a SO, 68% (39/57) had been married according to the traditional Cambodian wedding ceremony but only 14% (8/57) were legally married, with all those legally married also having married according to the traditional ceremony. Among those without a SO, the most common reasons for not having a SO were being left by a SO (50%, 43/86) and having left a SO because of the SO's abuse or infidelity (24%, 21/86). In the entire sample, almost all patients had children (92%, 131/143). All those with a spouse had at least one child. The average number of children was 4.1 ($SD = 2.1$), and 61% of the children were 18 or younger. Eighty-five percent (121/143) of the patients lived with a child. All patients had a NF member, meaning either a SO or a child.

Characterizing Anger Episodes

In the total sample, almost half (48%, 68/143) reported becoming angry in the last month toward a NF member. In the total sample, 10 percent (14/143) reported becoming angry at a spouse, 45% (64/143) at a child. Among patients with a SO, 25% (14/57) reported experiencing anger toward his or her SO in the previous month. Among patients with children, 49% (64/131) reported experiencing anger toward a child in the previous month. Whether or not the person had a SO did not significantly affect the rate of anger.

Among those patients with anger toward a SO ($n = 14$), the main causes of anger were the SO's infidelity (29%, 4/14); the SO's acting disrespectfully, such as yelling or demanding that certain chores be done in a rude manner (22%, 3/14); and the SO's being overcritical about the patient's not having a paying job (22%, 3/14). Other reasons included being blamed by the SO for misbehaviors of children (e.g., children not going to school) (14%, 2/14) and being criticized for not doing requested actions quickly (e.g., buying items at the store) (14%, 2/14). (Some patient cited more than one reason for becoming angry, so the total percentages are greater than 100%.)

Among those patients who became angry at a child in the last month ($n = 64$), the causes of anger toward children are shown in Table 1. The two most common causes, each of which was reported by 30% (19/64) of the patients, were the child acting disrespectfully and the child

staying out at night beyond curfew. The age distribution of the children toward whom the patients became angry was as follows: 0–12, 11%; 12–18, 50%; 19–25, 25%; and 26 or older, 14%.

Among patients with NF-type anger in the last month ($n = 68$), the anger episodes were severe as assessed by intensity, frequency, somatic symptoms, acting-out behaviors, trauma associations, and catastrophic cognitions (Table 2). Most rated the anger episodes as intense, with 50% having become either very or extremely angry (i.e., a 3 or 4 on the 0–4 Likert-type scale). The anger episodes were frequent, with over half (52%, 35/68) of those with anger episodes in the last month having at least weekly anger episodes (i.e., a 3 or 4 on the 0–4 Likert-type scale). The anger episodes were marked by multiple somatic symptoms: almost three-quarters (71%, 48/68) of the patients had 4 or more *DSM-IV* panic-attack somatic symptoms during the episodes, that is, enough somatic symptoms to qualify as having a panic attack just on that basis, what might be called an “anger-type panic attack” (Cornelius, 1996); over three-quarters (77%, 52/68) had at least 3 of the 5 somatic symptoms listed in the addendum (i.e., a 3 or 4 on the 0–4 Likert-type scale); and 91% (62/68) had palpitations, with 50% (34/68) having palpitations that lasted 15 or more minutes (i.e., a 3 or 4 on the 0–4 Likert-type scale). The anger episodes were often marked by acting-out behaviors, with 44% yelling and 16% either throwing things or hitting others (i.e., a 3 or 4 on the 0–4 Likert-type scale).

Sixty-eight percent (46/68) of the patients had trauma recall during anger episodes (Table 2), and about half (52%, 35/68) had flashbacks, with 15% (10/68) having mild flashbacks (i.e., rated a 1 or 2 on the 0–4 Likert-type CAPS Flashback Intensity Scale) and 37% (25/68) having severe flashbacks (i.e., rated a 3 or 4). Sometimes patients had recall of several trauma events that occurred one after the other. The most common type of recalled trauma event was performing slave labor while starving during the Pol Pot period (Table 3). Catastrophic cognitions about the bodily consequences of anger-induced arousal were also common (see Table 2), with 84% (57/68) of the patients with anger episodes fearing at least a little (≥ 1 on the 0–4 Likert-type scale) that heart arrest might occur, and 81% (55/68) that neck-vessel rupture might occur.

Most patients with NF-type anger said that the child's lack of Cambodian language proficiency contributed greatly to conflict (on the 0–4 Likert-type scale, $M = 2.8$, $SD = 0.8$). Patients rated the Khmer language ability of the child with whom the conflict occurred as somewhat low ($M = 2.2$, $SD = 0.9$), and the patients also rated lowly their own ability to speak English ($M = 0.9$, $SD = 0.4$).

Patients used various methods to gain relief during the previous month's NF-type anger episodes (see Table 4), most commonly “coining” and other techniques that aimed to prevent blood, steam, and *khyâl* from rising upward into the chest, neck, and head. To “coin,” a finger tip is coated with “*khyâl* oil,” and then that finger tip is run for six to eight inches along the skin in a certain area—outward along the arms, from the spine outward, from the sternum outward, down the neck. Next a coin is grasped with the thumb and fingers and dragged downward along that coated area, creating a red streak. This coining process is repeated until there are red streaks all over the arms, back, chest, and neck. Coining is thought to dislodge blockages, return normal flow, and allow *khyâl* and steam to escape directly through the linear streaks. These treatments were sometimes performed by the patient, at other times by family members. Though not specifically assessed, several patients who had reduced or no anger in the last month mentioned using Buddhist techniques, such as meditating, practicing “equanimity,” that is, distancing from affect, and enacting the ideal of non-revenge; these techniques were learned by going to the temple or listening to local Buddhist programs on television.

The Relationship of Anger to PTSD Presence and Severity

In the entire surveyed sample, 49% (70/143) had PTSD. Among patients with anger directed toward a NF member in the last month, 66% (45/68) had PTSD, whereas among those without such anger, 33% (25/75) did, odds ratio 3.9, $\chi^2 = 15.3$, $p < .001$. (This means that 34% [23/68] of the patients who had anger in the last month did not have PTSD, and 36% [25/70] of the patients who had PTSD did not have anger in the last month.) Even after eliminating anger from the PTSD total, patients with anger toward a NF member in the last month had much higher levels of PTSD, with a per item average of 4.1 ($SD = 1.0$) versus 3.0 ($SD = 0.9$) on the 1–5 Likert-type scale, $t(141) = 15.3$, $p < .001$. The rate of having anger or PTSD did not differ by gender or by whether the person had a SO.

Among patients with NF-type anger in the last month, we hypothesized that the effect of anger on PTSD severity would in large part be due to trauma recall and catastrophic cognitions experienced during the anger episodes. To investigate this hypothesis, we created a measure of the NF-type anger by creating a composite of five scales (cf. Novaco & Chemtob, 2002): (1) intensity; (2) frequency of anger episodes; (3) a composite scale of somatic symptoms made by averaging two scales (the *DSM* somatic symptom scale and the somatic symptom addendum); (4) length of palpitations; and (5) degree of acting-out. We eliminated the anger item from the PTSD total because anger was one of the predictor variables. As seen in Table 5, the measure of anger severity predicted PTSD severity, accounting for 24% of the variance, but adding anger-caused trauma recall and catastrophic cognitions to the model resulted in the prediction of 54% of the variance in PTSD severity. All variables helped to predict PTSD severity, but the best predictor was anger-triggered trauma recall. (Because one of our predictor variables, namely, trauma recall caused by anger, is also potentially part of the dependent variable, we also did a regression after removing the trauma recall items from the PCL, specifically those assessing criteria B1 and B3. Doing so, the regression results were basically the same, with 51% of the variance still accounted for.)

Discussion

Among Cambodian patients attending a psychiatric clinic, the current study documented the frequency and clinical importance of anger directed toward NF members. We found that NF anger was frequent and often directed toward children, and that NF-type anger was severe, for example, 71% of the anger episodes met panic attack criteria on the basis of somatic arousal, and the anger episodes often resulted in trauma recall and catastrophic cognitions. We also discovered that language barriers between parents and children existed, and were perceived to hinder conflict resolution. Using qualitative methods, we found that there was a wide range of causes of anger toward NF members, that trauma recall was common (particularly of performing slave labor in the Pol Pot period), and that patients used many techniques to decrease anger and associated bodily symptoms: “coining,” yelling, distracting themselves, Buddhist methods. In a regression analysis, we demonstrated that the effect of anger on PTSD severity resulted to a considerable degree from anger-caused trauma recall and catastrophic cognitions. This would suggest that these two variables are not only key aspects of the phenomenology of anger in this group but also central cogs in anger's worsening PTSD.

An extensive literature documents that “anger attacks” are common among depressed patients (Fava & Rosenbaum, 1998). To meet “anger attack” criteria, the person must have experienced four or more of several symptoms (these include somatic and psychological symptoms and acting-out behaviors) upon becoming angry in the last month, and the person must be irritable and overreactive to minor annoyances. To profile anger, the current study separated out somatic arousal symptoms and acting-out behaviors into two scales and utilized several additional scales: scales to evaluate certain culturally important somatic symptoms, trauma recall, and

catastrophic cognitions. We believe the current study demonstrates a clinically more useful way to assess anger (including arousal) among traumatized populations.

Why did the patients have such prominent somatic symptoms, especially palpitations, during anger episodes? One reason may be trauma-caused physiological reactivity and decreased ability to regulate emotions (Brown, Harris, & Eales, 1993; Levitan, Rector, Sheldon, & Goering, 2003; Panksepp, 1998). PTSD patients have been shown to have an abnormally great heart rate increase upon getting angry (Beckham et al., 2002). In the current study, patients with NF-type anger had elevated PTSD scores, and many met PTSD criteria. Too, anger may trigger trauma memories—this commonly occurred in the current study—and that may cause palpitations and other arousal symptoms (Clark et al., 1999).

Why did anger so often result in trauma recall, and why was the main recalled trauma event the performing of slave labor while starving? Anger episodes may contain *retrieval cues*, that is, aspects of the anger episode may resemble a trauma event, and so recall it to mind (Litz & Keane, 1989; McNally, 2003). Let us examine how the retrieval cue hypothesis can be used to explain why anger so often caused patients to recall performing slave-like labor during the Pol Pot period.

The retrieval cues of slave labor that frequently occur in an anger episode are the following:

Somatic-type retrieval cues

Patients report that performing slave labor while starving during the Pol Pot period often induced palpitations, dizziness, and other symptoms, so when an anger episode induces these same somatic symptoms (which commonly occurs, as the current study demonstrated), these symptoms may act as retrieval cues, recalling this slave labor.

Emotion-type retrieval cues

Patients often report how angry they felt that they worked so hard and were given almost no food to eat during the Pol Pot period; here in the United States, upon experiencing anger, this emotion may serve as a retrieval cue of that event.

Cognitive-appraisal-type retrieval cues

The retrieval cue of the trauma event may be not just the emotion of anger, but more specifically, the very cognitive appraisal that gives rise to anger (Berkowitz, 1999; DiGiuseppe & Tafrate, 2007). When talking of children's misbehaviors, such as not going to school, or arriving late to school, parents often remark that they were given so little during the Khmer Rouge period and had to work so hard to survive, whereas their children are given so much, but do so little. That is, there is a sense of a "lack of reciprocity," of a broken contract, which may recall doing slave labor while being provided with almost no food—another case of a broken contract. Or if the child "causes discomfort" in any way—for example, by making noise when the patient is in a state of anxious hyperarousal—that may act as a retrieval cue of other times the patient was "caused discomfort," such as when the Khmer forced the performing of slave labor, that is, the child and Khmer rouge both come under the rubric of "discomfort-causing person." Moreover, if the child acts in a way perceived to be "disrespectful" (e.g., talking rudely), this may act as a retrieval cue of trauma events involving shame and degradation, such as slave labor in the Pol Pot period. That slave labor—done when sleep deprived and starving, often during exposure to the elements (e.g., in the rain or the midday sun), all the while being yelled at or hit for any perceived lack of effort—was profoundly degrading, a reduction to animal status (as patients frequently remark): being forced to pull plows, a task normally done by animals, and given only foods normally eaten by pigs, such as rice shavings and the roots of banana and papaya trees.

There are further cultural and sociological reasons for the frequency of parent–child conflict found in the current study, and its escalation to severe anger. As documented in the current study, many children speak Cambodian poorly, and most parents speak English poorly. And making difficult the parent's learning of English and the mainstream culture, most were poor farmers in Cambodia who received only a few years of formal education; during the Cambodian genocide, the educated were targeted for execution, so relatively few survived. A lack of shared language, values, and culture—that is, generational dissonance, a *cultural gap*—causes disputes to occur and to escalate, and it impairs dispute resolution. In the current study, we showed the importance of a *linguistic gap* in conflict escalation, creating *linguistic-gap-type generational dissonance*. (On the concept of *generational dissonance*, also called dissonant acculturation, that is, a lack of shared culture between parents and children, see Portes, Fernández-Kelly, & Haller, 2005; Portes & Rumbaut, 2006; Smith-Hefner, 1999.)

Another possible cause of frequent anger in this survey is the various types of stress experienced by Cambodian refugees (Chan, 2004; Miller et al., 2002; Ong, 2003; Smith-Hefner, 1999; Watters, 2001). These various types of stress almost certainly increase worry, anxiety, and irritability, and hence interpersonal conflict and anger episodes. Examples of stress experienced by Cambodian refugees include the following:

- *Acculturative stress*. As described above, adapting to the United States is made difficult owing to low levels of education and poor English ability.
- *Financial stress*. Poverty is a great stressor that often afflicts Cambodian refugees (Collins, 2008; Portes & Rumbaut, 2006)—for example, struggling to pay the rent or heating bills.
- *Safety-environmental stress*. The vast majority of Cambodians live in city neighborhoods where there is frequent violence, much gang activity, and high rates of school dropout (e.g., in Lowell, MA, and Long Beach, CA).

Other factors may also increase irritability and anger in the current sample. One common source of irritability and anger in refugee populations is a feeling of injustice, for example, about the lack of punishment of perpetrators (Basoglu et al., 2005; Summerfield, 2003). There have been no punishments of Pol Pot perpetrators, though recently a few high-level officials were put on trial.

Data from the current study suggest that the treatment of traumatized Cambodian refugees should include a multidimensional assessment of the anger caused by NF members, including a thorough investigation of the causes of the conflict. Trauma recall and catastrophic cognitions associated with anger episodes should be identified and specifically treated. The patient should be provided education about PTSD and taught parental and anger-management skills, including culturally consonant methods such as meditation and Buddhist affect-distancing techniques (DiGiuseppe & Tafrate, 2007). Treatment should attempt to bridge the cultural gap (to reduce generational dissonance) between parents and children. The patient's children should be educated about the Pol Pot period and the nature of PTSD. Techniques that increase self-esteem, and *cultural-esteem* (namely, pride in the Khmer culture and its traditions; this gives a sense of meaning and increases self-esteem), would be expected to decrease the predisposition to and triggering of anger (DiGiuseppe & Tafrate, 2007). The study also suggests the importance of community-wide education (e.g., through local Cambodian radio and television and through school programs), such as school programs designed specifically for younger Cambodians that educate about the Pol Pot period and the psychological effects of having passed through it (e.g., anger and PTSD symptoms).

The current study revealed certain central aspects of the *socio-cultural course of anger* in the Cambodian context, a key component of the socio-cultural course of trauma-related disorder

in this group (Kleinman et al., 1995; Ware & Kleinman, 1992). The particular causes of anger toward spouse and children, the degree of somatic arousal during episodes, the local understanding of the physiology of anger-caused arousal, recall of specific types of trauma events, the linguistic gap, the specific ways of treating anger, such as using Buddhist techniques and “coining” (often done by family members)—these all highlight the unique trajectory of anger within the Cambodian family and cultural context. To further research the socio-cultural course of anger, future studies should investigate the intergenerational effects of anger. Though much has been written on the intergenerational transmission of trauma and PTSD (Dekel & Goldblatt, 2008; Kellermann, 2001), there has been little examination of the role of parental anger as an important variable in this process, or of the intergenerational transmission of a tendency to anger as a legacy of trauma.

Though we performed an analysis to determine the extent to which anger predicted PTSD, it should be noted that anger may be more directly related to trauma than the category of PTSD. Just as previous studies suggest that various unique types of panic attacks—e.g., those focused on concerns about neck sensations or on somatic symptoms triggered by standing—may form a key part of trauma-related disorder in the Cambodian population (see, e.g., Hinton & Good, 2009), so too may anger-triggered panic attacks. These various types of panic attacks may be a more central part of the trauma ontology of Cambodian refugees than the PTSD construct, with ontology here meant in the sense of the psycho-sociocultural experiencing of a particular individual. Future studies should investigate these issues, for example, by using multiple variables, including current stressors, past trauma events, PTSD severity, and a sense of injustice, to predict anger severity.

A large percentage of those surveyed did not have a significant other (about 60%). In a community study that assessed Cambodians from 35 to 75 years of age, 33% were single (whether a person had a “significant other” was not assessed) (Marshall et al., 2005). Future studies should investigate the relationship status of Cambodian patient populations as compared to those in the general community, the reasons for the relationship status, and whether it is predictive of anger (and PTSD).

Certain limitations of the current study should be noted. This survey was conducted among a convenience sample of clinic patients, so it cannot be determined to what extent the study findings apply to Cambodians in the community who have PTSD who are not in treatment. Many of the measures were self-report measures: ideally we would have made a more objective assessment of the language skill of patients and children. Many of the scales have not been validated by previous studies. Some of the data in the current study were collected on the basis of open-ended queries; future studies should use questionnaire-type surveys to specifically ask about the presence of the themes identified by the open-ended questions (e.g., the particular reasons for anger identified by the study). As another limitation, we used cross-sectional data; future studies using a longitudinal design can better address key causal questions, such as whether NF-type anger precedes or follows the development of PTSD.

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Table 1
Percentage of Patients Citing Certain Causes of Anger Toward Children in the Last Month Among Patients Who Became Angry at Children in the Last Month (N = 64)

Reason for becoming angry at children	Frequency
1. Acting disrespectfully, such as yelling at the parent (e.g., upon being asked to do a chore)	30%
2. Staying out at night beyond curfew	30%
3. Making noise (e.g., by playing loudly, bringing over several friends, playing the television loudly)	25%
4. Not doing assigned chores (e.g., cleaning room, washing dishes, buying things at the store)	25%
5. Skipping school or going late to school	23%
6. Getting into trouble at school or with the law or authorities (e.g., becoming gang involved)	19%
7. Not " <i>deung kun</i> ," literally, "not remembering one's good deeds," meaning not recognizing one's sacrifices and suffering, especially those during the Pol Pot period and the escape journey to the United States without which the child would not have survived. This expression suggests that the child has not reciprocated one's efforts by such things as proper respect, working hard in school, helping with chores. This is also referred to as the child being "ungrateful" (<i>agantnyeu</i>).	19%
8. Not believing (or ignoring), even saying it is untrue, when one recounts experiencing trauma recall during the anger episode; refusing to believe that Pol Pot events occurred	16%
9. Not doing homework	16%
10. Fighting between children, or between a child and that child's SO	13%
11. Causing to worry (e.g., by staying out late) that then causes one to recall a trauma occurring during the Pol Pot period or some other time	8%
12. Leaving grandchildren in one's care for excessive periods of time upon going to work or going out with friends	8%
13. Being financially dependent though finished with high school (e.g., asking for money or living at home without helping financially)	8%
14. Spending money irresponsibly (e.g., on gambling, entertainment)	8%
15. Demanding money or things	8%
16. Causing property damage (e.g., of a computer or of a car)	8%
17. Daughter becoming pregnant or going to live with boyfriend before finishing high school	8%
18. Having a boyfriend or girlfriend before finishing with school (may be high school or college)	8%

Note. Many patients gave more than one reason for being angry, and this is why the total percentages are greater than 100%.

Table 2
Characteristics of Anger Episodes Among Patients with Anger Directed Toward a Nuclear-Family Member in the Last Month (N = 68)

Variable	Scale score or percentage
Anger Intensity Scale	2.4 (1.1)
% rating the experienced anger as very to extremely severe	50%
Frequency Scale	2.7 (1.0)
% having weekly episodes	52%
Panic Attack Somatic Symptoms Scale	2.9 (2.7)
% having 4 or more panic attack somatic symptoms	50%
% reporting palpitations as a symptom	91%
Length-of-Palpitations Scale	2.4 (1.0)
% reporting palpitations lasted \geq 15 minutes	50%
Somatic Symptoms Addendum Scale	3.1 (2.1)
Acting-Out Scale	2.6 (0.9)
% yelling	44%
% throwing things or hitting others	16%
Trauma Recall Scale	2.5 (1.3)
% having trauma recall	68%
% having mild flashbacks (rated a 1 or 2)	15%
% having severe flashbacks (rated a 3 or 4)	37%
Catastrophic Cognitions Scale	1.9 (1.4)
% thinking anger might cause "inner hotness"	69%
% thinking anger might cause a <i>khyâl</i> attack	70%
% thinking anger might cause cardiac arrest	81%
% thinking anger might causes neck-vessel rupture	84%
% thinking anger might cause coagulated blood	73%
% thinking anger might indicate "weakness"	52%

Note. Standard deviations for scales are in parentheses. Table 1 has $N = 64$ whereas Table 2 has $N = 68$ because only 4 patients who did not have anger directed toward a child had anger directed toward a significant other.

Table 3
The Type of Traumatic Event That Was Recalled Upon Becoming Angry Toward a Nuclear-Family Member in the Last Month Among Patients Who Had Trauma Recall When Angry in the Last Month (N = 46)

	Type of traumatic event recalled upon becoming angry	Frequency
1.	Performing slave labor while starving	34%
2.	Being tortured (e.g., being beaten in prison, being forced to stand while biting ants crawl over body)	11%
3.	Being the victim of intended execution (most commonly surviving being struck in the back of the head with a club)	9%
4.	Witnessing evisceration	9%
5.	Being exposed to bombing during the Vietnamese invasion in 1979	9%
6.	Seeing someone killed (in some cases a family member)	7%
7.	Memories of the escape journey from Cambodia to the Thai border camps	7%
8.	Being beaten up by a SO (in all cases the victim was a woman)	7%
9.	Being raped (in all three cases, the victim was a woman and the rape occurred during the Pol Pot period)	7%

Note. Though some patients had recall of multiple trauma events, we only analyzed the trauma event for each patient that was most vividly recalled, as rated by the CAPS Flashback Intensity Scale.

Table 4
What Patients Did to Feel Better Upon Getting Angry at NF Members in the Last Month (N = 68)

	What was done to feel better upon getting angry	Frequency
1.	Coining and other techniques to normalize the flow of blood and <i>khyâl</i>	37%
2.	Being alone	29%
3.	Going outside	27%
4.	Doing something to take the mind away from the cause of anger, such as watching television or exercising or chanting	25%
5.	Yelling	18%
6.	Buddhist techniques (thinking the word " <i>ubekhaa</i> " or " <i>khamdeu</i> " [equanimity], chanting, practicing mindfulness, thinking about the Buddhist concept of "non-revenge")	15%
7.	Cooling down by showering	5%

Note. Many patients described doing more than one thing to feel better upon becoming angry, and this is why the total percentages are greater than 100%.

Table 5
Hierarchical Regression Analysis Summary for Variables Predicting the Severity of PTSD (PTSD Checklist Scores) Among Patients Having Nuclear-Family-Type Anger in the Last Month (N = 68)

Variable	<i>B</i>	<i>SE B</i>	β
Step 1			
Anger severity	0.76	0.17	.49*
Step 2			
Anger severity	0.62	0.16	.40*
Catastrophic cognitions	0.26	0.07	.37*
Step 3			
Anger severity	0.47	0.14	.30*
Catastrophic cognitions	0.16	0.06	.22*
Trauma recall	0.29	0.06	.47*

Note. $R^2 = .24$ for Step 1; $\Delta R^2 = .13$ for Step 2; $\Delta R^2 = .18$ for Step 3 ($ps < .01$). Anger severity, catastrophic cognitions, and trauma recall were rated on 0–4 Likert-type scales; PTSD severity on a 1–5 Likert-type scale. PTSD was assessed by the PCL, minus the anger item. Anger severity was a composite of five scales (see *Results*). Catastrophic cognitions were assessed on the ACCS, trauma recall was assessed on the ATRSS.

* $p < .05$