

Factor Structure of PTSD Symptoms Among West and Central African Refugees

Andrew Rasmussen, Hawthorne Smith, and Allen S. Keller
Bellevue Hospital and New York University School of Medicine, New York, NY

Although trauma is widespread in Africa, Africans are unrepresented in the literature on posttraumatic stress disorder (PTSD). The authors used confirmatory factor analysis of responses to the Harvard Trauma Questionnaire to model PTSD symptom structure in a sample of African refugees presenting at a U.S. torture treatment clinic. They tested four models that are proposed in the literature and one based on their clinical experience in which some symptoms of hyperarousal were integrated into intrusion. Their findings support a preference for a 4-factor aroused intrusion model. Discussion focuses on interpretation of models, the role of numbing and avoidance, and the limitations of Euro American symptoms in non-Euro American populations.

Mass trauma and displacement are widespread in modern Africa. The United Nations High Commissioner for Refugees (UNHCR) reports that 6 of the 10 leading refugee-producing countries and nearly half of the world's displaced persons are in Africa. In 2001, in West Africa alone 850,000 individuals were living in refugee camps or seeking asylum (UNHCR, 2002). Some mental health practitioners working in Africa note that "psychological trauma... may be so common as to be considered 'normal'" (Njenga, 2002; p. 358). Yet there are few studies of posttraumatic stress among Africans. The studies that do exist chronicle high rates of chronic symptoms of posttraumatic stress disorder (PTSD) and depression expressed by the refugees in African refugee camps (Fox & Tang, 2000; Pham, Weinstein, & Longman, 2004; Tang & Fox, 2001), and among various African refugees and asylum seekers in host countries (Jaranson et al., 2004; Keller et al., 2006). Despite the obvious distress of traumatized African populations, there are substantial gaps in the mental health

literature on posttraumatic phenomenology among these groups (Fox, 2003; Peltzer, 1998; Smith, 2003).

Only two published studies attempt to describe posttraumatic idioms of distress among Africans. Using a grounded theory approach, Fox (2003) discussed case vignettes illustrating traumatic stress with traditional Mandinka practitioners. The traditional practitioners' descriptions delineated four nonpsychotic posttraumatic reactions to trauma in the Mandinka nosology (organized in order of severity): *masilango*, or *extreme fear*; *kidja faro*, or *heart shakes*; *mira kurango*, or *thinking sickness*; and *per-rio*, or *brain out of place*. These disorders represented a "family of trauma-related conditions" (p. 498) instead of a unitary construct. They were comprised of several symptoms Euro American practitioners would recognize as signs of PTSD, e.g., hypervigilance, flashbacks, nightmares, exaggerated startle response, concentration problems, and avoiding traumatic cues, as well as a few that are not included in the Euro American diagnosis, e.g., body heat,

Correspondence concerning this article should be addressed to: Andrew Rasmussen, Bellevue/NYU Program for Survivors of Torture, Bellevue Hospital Center, 462 First Ave., CD 733, New York, NY 10016. E-mail: rasmua01@med.nyu.edu.

sitting, and staring. Trauma exposure—including political violence—was central to the clinical picture for each of these disorders, and those who suffered were often described as having multiple social problems as well as the disorders themselves.

McCall and Resick (2003) took a very different approach, examining the diagnostic validity of PTSD *per se* among Africans. Intended, in part, to examine whether PTSD exists outside of modern industrial cultures, the authors interviewed 20 individuals from the Ju/'hoansi people (also known as !Kung San or "Bushmen"), traditionally a hunter-gatherer community living in the Kalahari Desert. All participants reported that they had been assaulted, and all endorsed several the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV*; American Psychiatric Association, 1994) PTSD symptoms. The authors found low rates of endorsement of Criterion C (avoidance/numbing), particularly low endorsement (5%) of C3, C4, and C6 (trouble remembering, less interest in daily activities, and feeling emotionally numb) and high rates (<65%) of B4 and B5 (emotional and physical arousal at reminders), C1 (purposeful avoidance), D2 and D4 (outbursts of anger and being too alert). The authors concluded that PTSD was an appropriate diagnosis for individuals in the sample. The applicability to other African groups is, however, not a foregone conclusion. The Ju/'hoansi and other San peoples are cultural minorities in Africa, and given that most refugees are from West and Central Africa and from Bantu, Nilotic, and Niger-Congo cultural groups, the applicability of this study to the majority of trauma cases in Africa may be limited.

Patel (1995) has provided an important review of African explanatory models for common mental illnesses in 11 sub-Saharan countries. Where there may be some cultures that lack psychological constructs altogether, most cultures in Africa distinguish between mind and body, and there are traditional practitioners in many cultural groups who specialize in mental illness. Mental illnesses are largely defined behaviorally rather than cognitively, and connections are often made between symptoms of the mind and symptoms of the heart. African explanatory models often include an etiological focus, with three

implications: the existence of an external cause, the intent behind the cause, and the possibility of understanding and alleviating suffering through various means. For instance, in his work among the Shona of Zimbabwe, Patel (1998) acknowledged that strain can result in mental duress and breakdown. Although an etiological focus is largely absent for most Euro American psychological disorders, PTSD relies on an external cause, making the existence of parallel phenomenology among Africans more likely. Patel (1995) also notes that explanatory models are changing. With globalization, and urbanization has come the influence of Euro American biomedical models. For instance, the importance of spiritual explanations for mental illness among urban residents has been diminishing over the past decades.

Modeling Posttraumatic Stress Symptom Structure in Non-Euro American Samples

Psychological responses to trauma are generally agreed to be comprised of both autonomic nervous system (ANS) reactions and behavioral sequelae. Across cultures, therefore, there is considerable room for variation concerning behaviorally circumscribed features, whereas those more closely associated with neurobiological responses may be more generalizable (Marsella, Friedman, & Spain, 1996). Modeling the symptom structure of PTSD across cultures should thus begin with identifying and making a distinction between those symptom factors directly associated with ANS functioning and those more likely to vary. The *DSM-IV* symptom model of PTSD is comprised of intrusion (or reexperiencing, Criterion B), avoidance/numbing (Criterion C), and hyperarousal (Criterion D). Cross-culturally, including avoidance and numbing symptoms on the same factor may be misleading, as avoidance is largely behavioral, involving purposive effort, whereas numbing is largely involuntary. Avoidant behavior might therefore be culturally mediated (e.g., dealing with suffering as working through one's karma in Buddhist cultures), where numbing might not. Alternatively, others have suggested that intrusive thoughts and

memories should be invariant across culture, and numbing, hyperarousal, as well as avoidance should be subject to cultural variation (Marsella, Friedman, & Spain, 1996).

Confirmatory factor analysis (CFA) allows investigators to model first-order factors defined by interrelationships between items and higher-order factors that unify the first-order factors. Models of PTSD with first-order factors present a picture of PTSD in which symptom clusters are independent phenomena (although they may be correlated with one another), and those with second-order factors imply that symptom clusters are distinct pieces of a larger PTSD construct. The *DSM-IV*'s implicit factor structure of PTSD is a higher-order 3-factor model: three first-order symptom factors and a second-order PTSD factor. Although there are a few studies using CFA that provide empirical support for the *DSM-IV* model (e.g., Cordova, Studts, Hann, Jacobsen, & Andrykowski, 2000; Giannopolou et al., 2006), most researchers using CFA find that PTSD data fit 4-factor models better (e.g., Asmundson et al., 2000; Asmundson, Wright, McCreary, & Pedlar, 2003; DuHamel et al., 2004; McWilliams, Cox, & Asmundson, 2005; Simms, Watson, & Doebbellling, 2002). Most support splitting the *DSM-IV*'s avoidance/numbing factor into separate avoidance and numbing dimensions. There is also evidence that higher order factors do not add to model fit (King, Leskin, King, & Weathers, 1998), and that two-factor solutions may have utility as well (Creamer, Bell, & Failla, 2003), and some studies confirm theorized causal connections between intrusion and avoidance and hyperarousal and numbing (Buckley, Blanchard, & Hickling, 1998). There do not seem to be differences in factor structure across types of traumatic events. Notably, no CFA study has modeled PTSD using African samples.

Intriguing findings by Simms and colleagues (2002) support separating symptoms of hypervigilance (D4) and exaggerated startle response (D5), which are "more prototypic manifestations of hyperarousal" (p. 638), and combining the remaining hyperarousal symptoms with symptoms of numbing into a general dysphoria dimension—essentially the negative affect that PTSD has in common with mood and anxiety disorders. Limiting hyperarousal

to D4 and D5 is also supported by several other studies (Buckley et al, 1998; Taylor, Kuch, Koch, Crockett, & Passey, 1998). Whether the other hyperarousal symptoms—insomnia (D1), irritability or outbursts of anger (D2), and difficulty concentrating (D3)—are part of general negative affect or more closely related to intrusive memories and nightmares has yet to be tested. In our clinical experience working with African patients, many have complained of sleep problems explicitly because of nightmares (i.e., as direct sequelae of B2) and difficulty concentrating because of intrusive memories of trauma (B1). These associations would suggest an interpretation of these symptoms that is somewhat different than is included in the *DSM-IV* or as part of general negative affect that is without explicit etiology.

In line with suggestions by leaders in the field of PTSD and culture (Marsella, Friedman, & Spain, 1996), our goal was to develop a factor analytic model for PTSD among African trauma survivors. The literature on African responses to trauma suggests that symptoms of intrusion and avoidance are clear components of African posttraumatic idioms of distress. Sleep disturbance and other somatic symptoms seem to be important as well, although whether these are related to hyperarousal, general dysphoria, or are symptoms of intrusion (e.g., nightmares) is unclear. Given Fox's (2003) description that Mandinka posttraumatic responses are a "family of related responses" rather than a unified construct, testing first-order, correlated factors models instead of higher-order models seemed appropriate.

We used a CFA of item responses by African patients on an established measure of PTSD collected in the initial stages of a course of treatment at a U.S. torture treatment clinic to examine model fit for five models of PTSD. Four were taken from the Euro American literature on PTSD, and we developed the fifth. At issue were the association of symptoms of African patients' posttraumatic stress (i.e., symptom structure).

Model 1: Model 1 consists of a single unifying latent variable for all PTSD symptoms.

Model 2: The *DSM-IV* model is simply a statistical rendering of the three symptom clusters defined for PTSD:

intrusion (or reexperiencing), avoidance/numbing, and hyperarousal. Model 2 assumes that the symptom clusters described by the *DSM-IV* are correlated factors only, not part of a larger latent construct.

Model 3: Model 3 splits the *DSM-IV*'s avoidance/numbing into two factors, avoidance and numbing. This 4-factor *DSM-IV* model builds upon theoretical work by Litz (1992) distinguishing avoidance and numbing phenomenologically, and later research using CFA, particularly by King and colleagues (1998). Given that it is comprised of the *DSM-IV* clusters, it is nested within the *DSM-IV* symptom structure.

Model 4: The dysphoria model (Simms et al., 2002), discussed above, separates insomnia (D1), irritability of outbursts of anger (D2), and difficulty concentrating (D3) from hypervigilance (D4) and exaggerated startle response (D5) from other hyperarousal symptoms and combines them with symptoms of numbing into a general dysphoria dimension. Hypervigilance (D4) and exaggerated startle response (D5) are then their own hyperarousal factor. Avoidance symptoms comprise their own factor, as do symptoms of intrusion.

Model 5: Model 5 is a 4-factor model based on the literature on posttraumatic stress among Africans and the authors' clinical observations working with African trauma patients. Avoidance and numbing are two separate factors. Hypervigilance (D4), exaggerated startle response (D5), and irritability or outbursts of anger (D2) are separated from other hyperarousal symptoms, and insomnia (D1) and difficulty concentrating (D3) are combined with intrusion symptoms.

METHOD

Participants

Although clinic data included individuals from many parts of the African continent, we chose to limit analyses to the two largest regional groups: West and Central Africans ($n = 295$ and $n = 105$, respectively). We also limited analyses to those who had complete data for our PTSD measure, the Harvard Trauma Questionnaire (HTQ; see below).

Participants were involved in the intake process of a New York City torture treatment clinic. This group consisted of 249 men (62.3%) and 150 women (37.5%; one person was missing gender information), and was an average age of 33.9 years ($SD = 9.8$). Mean time in the United States was 21.1 months ($SD = 24.6$), although this distribution was skewed towards zero and over two thirds ($n = 267$, 66.8%) had been in the United States less than one year. The sample represented 22 different countries. The largest number of patients came from Guinea ($n = 76$, 19.0%), followed by Sierra Leone ($n = 70$, 17.5%), Mauritania ($n = 43$, 10.8%), Cameroon ($n = 40$, 10.0%), Zaire/Democratic Republic of Congo ($n = 39$, 9.8%), Togo ($n = 35$, 8.8%), and Liberia ($n = 24$, 6.0%; no other nation comprised more than 5% of the sample). Ethnically the sample had no majority, with the largest groups being Fula ($n = 123$, 30.8%), Mandinka ($n = 70$, 17.5%), Bamileke ($n = 18$, 4.5%), and Ewe ($n = 13$, 3.3%). All other groups had less than 10 individuals, although ethnicity was missing for 102 (25.5%) of individuals. A majority were Muslim ($n = 238$; 59.5%), over a third Christian ($n = 150$; 37.5%), 11 (2.8%) belonged to other religions, and one was agnostic.

Measures

All participants completed the *DSM-IV* PTSD symptom portion of the HTQ, a 16-item scale measuring severity of PTSD symptoms described in the *DSM-IV* (Mollica et al., 1992). The HTQ is a posttraumatic stress screening measure that asks participants to rate how much particular symptoms have bothered them in the past week using a 4-point frequency scale, where 1 = *not at all* and 4 = *extremely*. Items on this portion of the HTQ correspond to the 17 symptoms of PTSD listed in the *DSM-IV*, with two symptoms, psychological and physiological reactivity given traumatic cues (B4 and B5, respectively), represented by a single item (HTQ 16, "Sudden emotional or physical reaction when reminded of the most hurtful or traumatic events."). Although several studies have utilized a cut-off score of 2.5 to identify clinically significant

PTSD (Mollica et al., 1992), Mollica and colleagues have also developed a scoring algorithm to adapt this measure to *DSM-IV* criteria, and suggest this method for use in populations for which the instrument has not been validated (Mollica et al., 1999). This approach assigns items to PTSD symptom criteria, with those items endorsed quite a bit or extremely indicating presence of the symptom. A review of instruments used in studies of refugees (Hollifield et al., 2002) noted that the HTQ has been found to be statistically reliable and valid in multiple studies across multiple traumatized populations. Reliability in the present sample ($\alpha = .87$) supports this finding.

The HTQ was administered by clinical interviewers with the help of interpreters when necessary. Over four fifths (83.6%) of the interviews were administered in English ($n = 149$, 37.3%) or French ($n = 172$, 43.0%), languages for which a standard version of the HTQ is available (i.e., a translated-back translated version for French). For interviews in other languages, interpreters interpreted HTQ items from the English version in session. Languages in these sessions included Fulani ($n = 54$, 13.5%), Mandinka ($n = 3$, 0.8%), Wolof ($n = 2$, 0.5%), and four others ($n = 1$ each). Review of the archival clinic records from which these data were drawn was approved by the Institutional Review Board of New York University School of Medicine.

We conducted CFA using Mplus software (Version 3; Muthén & Muthén, 2004).

RESULTS

Reported Trauma

All participants reported at least one trauma experience related to political or ethnic violence. The most common experiences involved physical assault ($n = 343$, 85.8%). Other experiences included deprivation of food, water, or medical needs ($n = 114$, 28.5%), sexual assault ($n = 111$, 27.8%), being forced to witness the abuse of others ($n = 95$, 23.8%), extended forced postures ($n = 51$, 12.8%), degradation (e.g., forced nakedness in front of family, abuse with excrement; $n = 50$, 12.5%), be-

ing burned ($n = 39$, 9.8%), stress to senses (e.g., being bound; exposure to extreme heat; $n = 38$, 9.5%), electric shock ($n = 25$, 6.3%), pharmacological manipulation ($n = 10$, 2.5%), asphyxiation ($n = 6$, 1.5%), and amputation ($n = 3$, 0.8%).

Harvard Trauma Questionnaire Item Endorsement

Item means, standard deviations, and endorsement rates are presented in Table 1. Endorsements of HTQ items suggest high rates of what Euro-American practitioners would identify as symptoms of intrusion (item endorsements, defined as endorsing *quite a bit* or *extremely*, ranging from 53% to 81%) and avoidance (64% to 67%), followed by moderate rates of arousal (47% to 67%) and low rates of numbing (19% to 39%). Few participants endorsed an inability to recall important details of their trauma. There were no item endorsement differences across region (i.e., West vs. Central Africa).

Model Fit

As the HTQ uses one scale, we were able to use the covariance matrix for CFA, which is preferable to using the correlation matrix. In the absence of information about which symptoms would constitute canonical items for given dimensions within models, we fixed factor loadings to the first item listed in each proposed factor at 1.00. Fit statistics for each model are presented in Table 2.

As all were nested within Model 1 we were able to calculate differences in chi-square values between the general PTSD model (Model 1) and all others. We were also able to calculate chi-square differences between the *DSM-IV* model and Model 3. In addition, we were able to judge overall superiority by examining a number of fit indices: the model chi-square, the standardized root mean square residual (SRMR), the root mean squared error of approximation (RMSEA), the Tucker–Lewis index (TLI), and the comparative fit index (CFI), and Akaike's information criterion (AIC). A model is deemed to have adequate fit if SRMR and RMSEA values are .10 or less, and TLI and CFI values are .90 or greater, although some have

Table 1. West and Central African Patients' Endorsement of Posttraumatic Stress Disorder Symptoms ($N = 400$)

Item	Full sample		Responded <i>quite a bit</i> or <i>extremely</i>	
	<i>M</i>	<i>SD</i>	<i>n</i>	%
B1. Recurrent thoughts or memories of the most hurtful or terrifying events.	3.20	0.87	325	81
B2. Recurrent nightmares.	2.58	1.07	225	56
B3. Feeling as though the event is happening again.	2.49	1.12	214	53
B4./B5. Sudden emotional or physical reaction when reminded of the most hurtful or traumatic events.	3.03	0.94	304	76
C1. Avoiding activities that remind you of the traumatic or hurtful event.	2.76	1.03	268	67
C2. Avoiding thoughts or feelings associated with the traumatic or hurtful event.	2.84	1.09	255	64
C3. Inability to remember parts of the most traumatic or hurtful events.	1.64	0.94	77	19
C4. Less interest in daily activities.	1.97	0.98	115	29
C5. Feeling detached or withdrawn from people.	2.11	1.06	154	38
C6. Unable to feel emotions.	1.69	0.90	105	26
C7. Feeling as if you don't have a future.	2.21	1.14	157	39
D1. Trouble sleeping.	2.92	1.06	271	68
D2. Feeling irritable or having outbursts of anger.	2.12	1.02	153	38
D3. Difficulty concentrating.	2.54	1.02	215	54
D4. Feeling on guard.	2.41	1.08	197	49
D5. Feeling jumpy, easily startled.	2.37	1.06	188	47

suggested more strict criteria, with SRMR values of .08 or less, RMSEA values of .05 or less, and CFI values of .95 or greater (Hu & Bentler, 1998, 1999). The AIC values are often used to compare nonnested models, with lower values indicating better fit.

Not surprisingly, Models 2–5 all fit statistically better than the general PTSD model, Model 1 (all p values < .001). Model 5 showed the largest differences in chi-square value between any model and the general PTSD model.

All 4-factor models fit the data adequately according to SRMR, RMSEA, TLI, and CFI values. The AIC value was lowest for Model 5.

Figure 1 presents Model 5 with items and factor loadings (standardized). Univariate correlation between factors (r s) are presented on arcs between factors. The strongest association was between aroused intrusion and hypervigilance factors, and the weakest between avoidance and numbing.

Table 2. Confirmatory Factor Analysis Model Fit for PTSD Symptoms Among West and Central African Patients

Model	χ^2 (<i>df</i>)	SRMR ^c	RMSEA (95% CI)	TLI	CFI	AIC
1. General PTSD model	249.22 (104)	.050	.059 (.050–.068)	.898	.911	16955.53
2. <i>DSM-IV</i>	189.52 (101)	.043	.047 (.036–.057)	.936	.946	16901.83
3. <i>DSM-IV</i> 4-factor	131.52 (98)	.034	.029 (.013–.041)	.975	.980	16849.83
4. Dysphoria 4-factor	156.37 (98)	.038	.039 (.027–.050)	.964	.956	16874.68
5. Aroused intrusion 4-factor	125.16 (98)	.034	.026 (.007–.039)	.980	.983	16843.47

Note. PTSD = Posttraumatic stress disorder; *DSM-IV* = *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (American Psychiatric Association, 1994).

SRMR = squared root mean residual.

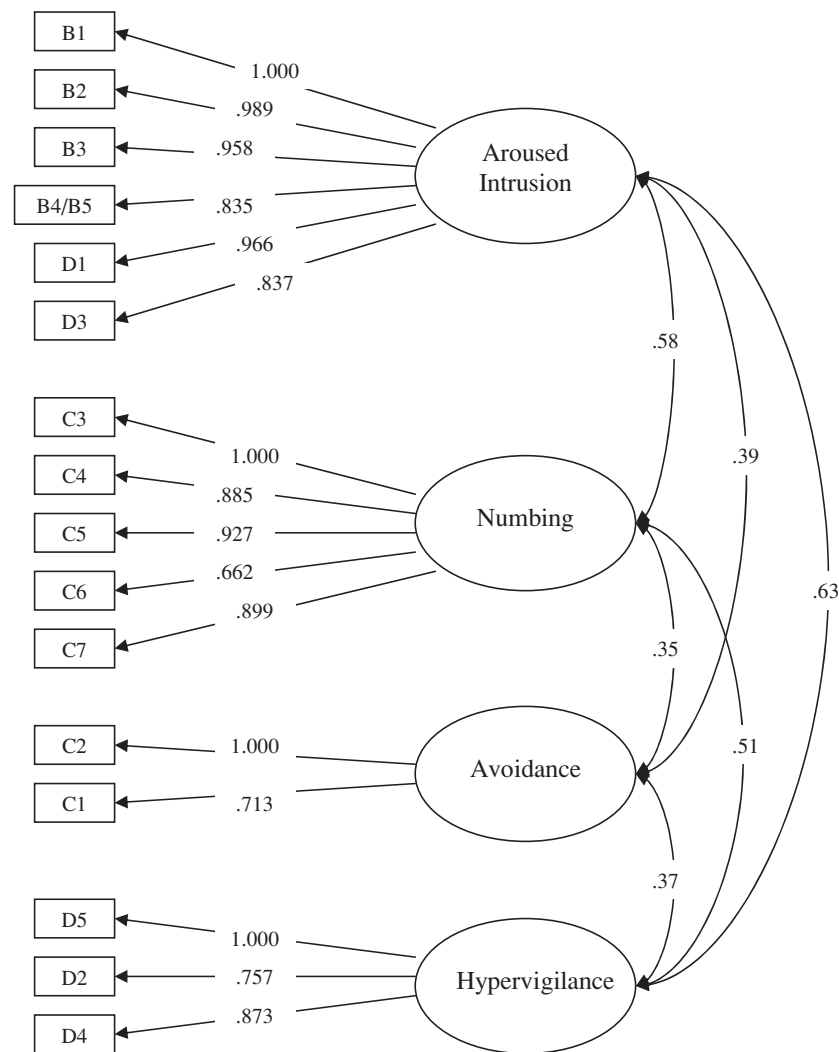


Figure 1. Aroused intrusion model of posttraumatic stress disorder (PTSD) symptoms (as they appear on the Harvard Trauma Questionnaire; HTQ). Rectangles correspond to *DSM-IV* symptoms and ellipses are latent factors. Factor loadings are standardized. Correlation between factors is indicated on arcs between factors. The HTQ includes symptoms B4 and B5 on one item.

DISCUSSION

Our findings support a posttraumatic stress factor structure among Africans exposed to political violence that combines aspects of hyperarousal with intrusion, assigns hypervigilance symptoms to their own factor (separating them from other hyperarousal symptoms), and includes numbing and avoidance symptoms on separate factors. Although

fit statistics indicated that this model had the best fit of the models we tested, strictly speaking, the statistical preference for this model over others (with the exception of the general PTSD model) cannot be established, as the models we tested were not nested. All 4-factor models fit the data well. Confirmatory factor analysis researchers will agree that it is not uncommon for there to be multiple best fitting models for a given data set, a reflection of the mathematical

realities of factor analysis. Between these models, we prefer the aroused intrusion model because of our clinical observations that for many of our African patients, symptoms of hyperarousal and intrusion are indistinguishable. For example, sleep disturbance, construed as a symptom of hyperarousal in the *DSM-IV*'s phenomenology, is often linked to nightmares by our clients (a *DSM-IV* symptom of intrusion).

We believe that it is instructive that the *DSM-IV* model fit the data worse than those that separated avoidance and numbing. As with most results of PTSD factor structure (e.g., King et al., 1998), our findings suggest that the Criterion C is best understood as two separate factors, effortful avoidance and involuntary emotional numbing. This is consistent with the assertion that avoidance is a purposeful response to posttraumatic stress—i.e., coping with the traumatic memory—and emotional numbing involves involuntary ANS responses. These two phenomena are separate, statistically, but also phenomenologically (Litz, 1992)—and they should be conceptualized as two different types of reactions. That this finding is replicated in a non-Euro American sample suggests that this distinction is useful cross-culturally, and may support the argument that those symptoms more directly linked to ANS functioning (e.g., numbing) should not be combined with other, perhaps more cognitively mediated behavior (e.g., avoidance). Although we encourage practitioners to conceptualize these as important differences, we acknowledge that phenomenological distinctions do not necessarily affect diagnostic validity. For instance, it may be that satisfying avoidance *or* numbing (as opposed to avoidance *and* numbing) in addition to the other symptom criteria is enough to warrant a diagnosis of PTSD. This is a clinical decision, not a statistical one.

Under no circumstances should these findings or our presentation of them be misconstrued to claim we have discovered an “African PTSD.” As Keane, Kaloupek, and Weathers (1996) reminded us, reliability is only the basis from which to begin examining validity: “the fact that an instrument is reliable and its items seem to interrelate in comparable ways across cultures does not ensure that it is measuring the same construct across groups of people”

(p. 191). As we know from the literature and our own clinical practice, there are also other clinically relevant symptoms of distress related to trauma among Africans that are not included in what those in Euro American mental health know as PTSD. These include somatic sensations of “crawling” beneath or on the scalp, intense heat in the body or head, and perceived sudden movements of the heart (e.g., “heart flying out”; Patel, 1995). Including these on posttraumatic distress inventories is warranted. Subsequent factor analyses with these symptoms combined with Euro American PTSD symptoms might then teach us something about where these more somatic expressions of distress fit in the phenomenology of posttraumatic distress. It may be that somatic symptoms are an extension of emotional numbing or perhaps bodily expressions of arousal or aroused intrusion.

In addition to not claiming an African PTSD, we wish to emphasize that we have only proposed a model and found that it is adequate in one sample of West and Central Africans exposed to violence. The true test of any model is its replicability. Unfortunately, given the archival nature of this data, we had a limited number of participants (and therefore not enough power to split the sample and replicate our final model) and a highly selective sample. Although studies of PTSD have shown little variance in symptom structure across types of trauma events, our sample was characterized by migratory stressors as well as trauma. Although not clear theoretically how migration might affect PTSD symptom structure per se, migration is clearly a major life event, and we are not able to discount an effect. Studies of PTSD symptom structure should be undertaken using posttraumatic stress data collected in Africa itself, using a different population. It may be that, for example, in a sample of African peacekeeping troops other models might be preferable. We also encourage testing the replicability of this model in samples from other cultural groups as well, as there is no data in this study or in the literature to indicate that the aroused intrusion model does not fit universally.

Another potential limitation is the use of nonstandard translations of the HTQ for a subsample of participants. We chose to include these cases to ensure that there was

not a bias against non-European language speakers and thus more traditional African idioms of distress. However, clearly our field needs properly translated instruments in indigenous African languages if we are to further examine the phenomenology of trauma responses among this population.

We have used a standard Euro American PTSD symptom inventory among West and Central African torture and war survivors to test the structure of these symptoms among this population. In doing so, we recognize that there is a tension inherent within the practice of the treatment of trauma survivors in an international context. We must describe the distress of individuals from multiple cultures in a standard manner so as to communicate to other practitioners and policy makers; we must also describe that same distress in a culturally specific manner so as to present the individual's state to himself or herself and treat the individual accordingly. Our goal for this study was in line with the former, and although we recognize and value the latter, we believe that our findings are important for those interested in describing posttraumatic responses and those working with this population.

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