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A Randomized Trial of a Reconciliation Workshop with and without PTSD
Psychoeducation in Burundian Sample.

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Abstract

Posttraumatic stress disorder (PTSD) psychoeducation is increasingly offered in diverse cultural settings. As the literature offers theoretical arguments for why such information might be normalizing and distress-reducing, or might risk morbid suggestion of greater vulnerability, a two-sided hypothesis was proposed to examine the specific effect of PTSD psychoeducation. Participants of a trauma healing and reconciliation intervention in Burundi were randomized to conditions with and without PTSD psychoeducation, or to a waitlist control. Both interventions reduced symptoms more than wait list. Participants in the condition without psychoeducation experienced a greater reduction in PTSD symptoms relative to other conditions. Findings are discussed in relationship to intervention development for traumatic stress in non-industrialized and culturally diverse settings.

Introduction

Posttraumatic stress disorder (PTSD) was recognized in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM–III) in 1980 as a syndrome associated with the experience of a traumatic event (APA, 1980). Current PTSD diagnosis includes a prerequisite traumatic event, three symptom clusters (re-experiencing, avoidance/numbing, and hyperarousal), and a requisite duration of symptoms of one month following the associated event. Lifetime prevalence for PTSD among adults in the U.S. is approximately 8% (APA, 2000). In people who have experienced a traumatic event, 20-30% develop chronic symptoms that persist throughout their lifetime (Bryant, 2004). The vast majority of trauma survivors either recovers naturally or is sufficiently resilient such that they never develop full-scale PTSD. Within a growing literature on traumatic stress reactions, questions emerge as to the degree to which PTSD is the normative response to trauma around the world. Recent studies report evidence for the existence of PTSD symptoms across regions as diverse as Algeria, Cambodia, Ethiopia, Gaza, and Sri Lanka (de Jong et al., 2001; Neuner, Schauer, Catani, Ruf & Elbert, 2006).

Recent investigations in pre-industrial regions aim to determine what are efficacious treatments for traumatic stress. Staub, Pearlman, Gubin, and Hagengimana (2005) designed and evaluated an intervention for survivors of the Rwandan genocide that yielded decreased PTSD symptoms relative to waitlist control. Intervention included information on the origins of genocide, PTSD psychoeducation, and basic psychological needs, but design did not allow for discernment of specific effective components. In another study, Sudanese refugees were randomly assigned to either one session of PTSD psychoeducation, psychoeducation plus supportive counseling, or psychoeducation plus

narrative exposure therapy (Neuner, Schauer, Klaschik, Karunakara, & Elbert, 2004). Narrative Exposure Therapy was associated with significant decreases in PTSD symptoms at post-intervention and one-year follow up. A study of multi-disciplinary treatments for Nepali torture survivors was found to moderately reduce participants' non-specific complaints, but disability remained high (Tol et al., 2009). Other treatment studies (Catani et al., 2009; Sezibera, Broeck, & Phililppot, 2009) with similar populations showed symptom reduction but lacked either randomization or control conditions, or did not allow for specific identification of the effective components within the intervention.

Whereas PTSD psychoeducation is a common component of PTSD treatments (Foa, Keane, Friedman, & Cohen, 2009), little research exists on its specific effect (Ehlers et al., 2003). Psychoeducation, typically conveyed either preventatively or after the onset of clinical distress, includes basic information about common reactions after a trauma and coping skills for how to reduce distress (Wessely et al., 2008). Recent studies have found that it may not improve treatment outcomes in the context of prevention (Turpin, Downs & Mason, 2005) or early intervention (Sijbrandij, Olff, Reitsma, Carlier, & Gerson, 2006). However, other studies show that PTSD psychoeducation can reduce PTSD symptoms (Resnick, et al., 2007). Few studies offer designs to identify the specific effect of PTSD psychoeducation, especially in chronically symptomatic populations. For instance, in the Neuner et al. (2004) study discussed above, psychoeducation alone was associated with significant increases in PTSD symptoms at one year post-treatment. We cannot be certain whether the psychoeducation itself, the

absence of other treatment beyond psychoeducation, or differential historical factors may have contributed to the effect observed.

Even less is known about the specific effect of PTSD psychoeducation with non-industrialized populations. Theorists critical of unbridled dissemination of PTSD psychoeducation caution against the medicalization of distress (Bracken, 2002), and the possibility of morbid suggestion (Shephard, 1999), that are theorized to overwhelm protective factors derived from contextually-adaptive coping mechanisms (Kagee & Naidoo, 2004). Yet, there is a paucity of evidence to support or refute these claims, particularly in diverse cultural settings.

Determining the effectiveness of PTSD psychoeducation depends in part on understanding non-industrialized cultural response to traumatic events. Rwanda and Burundi, two neighboring sub-Saharan countries sharing cultural and linguistic origins as well as recent histories of mass violence, have been the location of several recent studies exploring traumatic stress presentation, prevalence, and treatment (Hagengimana et al., 2003; Schaal & Elbert, 2006; Sezibera et al., 2009; Yeomans, Herbert, & Forman, 2008). Hagengimana and Hinton (2009) offer a detailed account of Rwandan response to trauma known as *Ihahamuka*. Literally meaning “without lungs,” *Ihahamuka* refers to a fear response with frequent and profound shortness of breath, and associated physiological symptoms. The authors report that onset is sometimes associated with cues reminiscent of traumatic events. Subjective reports during our work in Burundi suggested that this word is also increasingly synonymous with Western concepts of traumatic stress.

The need to identify how people respond to and how they recover from traumatic events has become a central issue in international psychological domains. PTSD psychoeducation is frequently provided as part of humanitarian packages developed by international agencies in non-industrialized, disaster, and post-conflict settings. How diverse populations respond to trauma, and the type of treatment from which they will most benefit, needs continued discernment to inform international assistance for recovery from disaster and war.

The current study aimed to evaluate the effects of PTSD psychoeducation within a larger trauma healing and reconciliation intervention in a rural region of Burundi, a small African country that suffered a civil war in which over 300,000 people were killed (AFSC, 2000). In order to more definitively parcel out the specific effects of PTSD psychoeducation, an experimental design was utilized such that participants were randomized to receive an intervention with PTSD psychoeducation, an intervention without PTSD education, or were placed on a wait list. First, we hypothesized that both active treatment interventions would prove effective relative to the wait list control. Second, given the paucity of conclusive evidence on the effect of PTSD psychoeducation, we formulated our hypothesis as two-tailed. The central aim was to observe the specific effect of the inclusion/exclusion of PTSD psychoeducation on traumatic stress symptoms, both narrowly and more broadly defined, as well as on more general symptoms of anxiety, depression, and somatization.

Method

Participants

Participants were recruited in the spring of 2007 from among future participants of two trauma healing and reconciliation workshops, located near two Internally Displaced Persons camps in rural Burundi, and offered by a small non-profit organization. One hundred and twenty-four participants were contacted and invited to be interviewed prior to beginning the workshop. Sample size was constrained by the organizing body of the reconciliation program. These participants were referred to the workshop through a network of church elders who identified them as community members in psychological distress possibly as a result of experiences during the war.

One hundred and twenty-four participants attended their appointments for pre-test interviews, were informed of random allocation procedures, and gave written consent to participate in the study (Figure 1). Participants were blocked according to ethnicity and gender and randomly assigned to condition. Four participants did not arrive for the workshop intervention, and seven more did not complete post-tests. Therefore, 113 participants completed both assessments and the intervention (38 WP, 37 WNP, 38 WLC).

Of the 124 participants at baseline, 44.4% were female and 48.3% lived in the camps. The mean age was 38.6 years ($SD = 12.8$). Only 5% of the sample had completed more than 6 years of education. Ethnic composition of the sample was 52.4% Hutu and 47.6% Tutsi. Almost all participants had been directly victimized by violence during or since the conflict onset in 1993, and many as much as 14 years prior to the time of this study. Participants received a small reimbursement for transportation expenses only. Consent forms were blind-back translated, reviewed, and approved by the IRB of Drexel University.

Measures

All instruments were translated into Kirundi and then blind-backtranslated into English. The two English versions were then compared and adjustments to the translation were made in an iterative, dynamic process between the primary investigator and three Burundians co-investigators. Prior to their use, the measures were checked for content and semantic equivalence by the three-person Burundian advisory team (Flaherty, Gaviria, Pathak, & Mitchell, 1988).

The Hopkins Symptom Checklist-25 (HSCL-25; Hesbacher, Rickels, & Morris, 1980) was designed as a self-report measure and uses a 4-point Likert scale across an Anxiety subscale (10 items) and a Depression subscale (15 items). The HSCL-25 total score can be used as a global measure of emotional distress (Mollica, Wyshal, de Marneffe, Khuon, & Lavelle, 1987). The HSCL-25 had a Cronbach's α of .86-.92 across multiple languages (Kleijn, Hovens, & Rodenburg, 2001). In a recent study with a Burundian sample, the two subscales of the HSCL-25 had a Cronbach's α of .88 and .90 (Yeomans et al., 2008). When compared to diagnoses of major depressive episode based on clinical interview, HSCL-25 Depression had a sensitivity of .88 and specificity of .73 (Mollica et al.). The HSCL-25 has proven to be culturally sensitive with samples around the world and has demonstrated sufficient validity and reliability (Fox & Tang, 2000). Similar to Terheggen et al. (2001), we added 10 somatic-items of the Hopkins Symptom Checklist-58 (HSCL-58; Mattson, Williams, Rickels, Lipman, & Uhlenhuth, 1969) that were not redundant to the HSCL-25. This hybrid measure (35 items; hereafter referred to as HSCL) was used to assess a broad range of symptoms of distress. Internal reliability of the HSCL for this sample yielded Cronbach's α = .90.

The Harvard Trauma Questionnaire Part IV (HTQ; Mollica et al., 1992) was designed as a self-report measure of PTSD symptoms. The HTQ-IV symptom list uses a 4-point Likert scale and includes 16 items that reflect the standard PTSD symptoms as well as 14 additional items (HTQ-b) added when the measure was culturally validated in a Cambodian refugee sample. Additional items include reference to themes of guilt, loneliness, shame, betrayal, and rumination. Mollica et al. established a clinical cut-off of 2.5, reported an interrater reliability of .93, Cronbach's $\alpha = .90$, and test-retest correlation of .89 for the HTQ. The HTQ has been translated for a number of samples and consistently yields sufficient Cronbach's α in the range of .74-.89 (Kleijn et al., 2001). In a recent study with a Burundian sample, the HTQ-IV had an alpha of .90 (Yeomans, et al., 2008). In this study alphas were .84 (HTQ) and .92 (HTQ-b).

To assess prior exposure to trauma discourse, participants were asked if they knew the meaning of the following words: *Ihahamuka*, trauma, and PTSD. They were also asked to provide frequencies for exposure to information about "reactions to frightening or violent events" via radio, literature, and workshops.

Procedure

Workshops were offered in two communities in rural, north-central Burundi. In each community, using a computerized random-number generator, participants were assigned to condition according to stratified randomization (by gender and ethnicity) to either workshop with psychoeducation (WP), workshop without psychoeducation (WNP), or waitlist control (WLC). All of the workshops were led by Burundian facilitators chosen by the non-profit for their extensive experience with trauma workshop facilitation and for having demographics comparable to the participants – rural, poor,

many without substantial formal education, and balanced in gender and ethnicity. All facilitators had a full day of training dedicated to the modification of the standard workshop to accommodate planned differences in condition. Facilitator teams were balanced across location and condition. The waitlist control condition received the workshops after the second assessment period.

Interviews were conducted 6 weeks before the beginning of the intervention and 2 weeks after its completion. Baseline and post-test interviews were conducted by two Burundian men and two Burundian women, and both ethnicities were represented within the team. The primary investigator was not present during the enrollment or interviews, but remained nearby so as to consult with the staff when questions arose. A discussion of the voluntary and confidential nature of participation preceded the interview. Most participants were not fully literate, so measures were administered orally. The Likert scale was demonstrated visually by showing pictures of glasses containing varying amounts of water (Terheggen et al., 2001). Each participant completed the event history, the symptom measures, the Trauma Discourse Exposure interview, and a short sociodemographic form at baseline. Participants and interviewers (at pre and post) were blind to condition assignment.

Intervention

Workshop with psychoeducation. The standard intervention included two phases. Six groups of approximately 20 participants gathered for 3 days, and 1 month later each workshop group reconvened for a full-day follow-up session during which major workshop components were reinforced.

The 3-day workshop used discussion, experiential exercises aimed at fostering interpersonal exchange, and games to explore themes of trauma, loss, anger, trust, and the roots of violence (adapted from AVP, 2002; Kreidler & Furlong, 1995) consistent with theory outlined in Staub et al. (2005). The Healing and Reconciling Our Communities workshop manual (AGLI, 2006) emphasized that recovery from trauma lies in the restoration of the relations between community members, and in understanding how trauma can affect these relationships and individuals. Healing and Reconciling Our Communities integrates theoretical frames as described by Judith Herman (1997) and Staub et al.. Each of Herman's three stages of recovery from trauma were incorporated within the HROC workshop design. HROC draws on Staub et al.'s emphasis on the need for personal recovery and interpersonal reconciliation by means of "a neighbor-to-neighbor healing process, which must include cognitive and affective engagement with experience in the context of interpersonal support" (p.305).

Psychoeducational content on the first day of the workshop included a 90-minute presentation and discussion of the 17 specific symptoms of PTSD. An orientation to and solicitation of potential Criterion A events was also included. These ideas were reviewed again in the afternoon, and participants shared how they had been affected by the traumatic events they had experienced (1 hour additional). Coping with trauma was addressed in terms of teaching relaxation skills and with a substantial emphasis on repairing relationships with community members.

Workshop with no psychoeducation. The active workshop condition with no psychoeducation was identical to that described above, with two exceptions. First, this condition did not include the introduction of PTSD psychoeducational content. Second,

to ensure that both workshop conditions were of equal length, additional time was devoted to an exercise in which participants formed pairs and answered questions provided to them. The assigned topics facilitated communication around perspectives on trust, safety, sense of security, and inter-ethnic relations in the community (e.g. “someone I trust and why,” “a time I overcame fear”). Importantly, participants were encouraged to discuss how they have been affected by events during the war, but unlike in the WP condition, facilitators did not augment this discussion with any PTSD psychoeducational content.

Waitlist control. Waitlist control participants were enrolled in the standard workshop. Their participation was postponed until after the termination of the initial workshop cycle.

Data Analysis

The study utilized a 3 X 2 mixed factorial design, with a between-subjects factor of condition (workshop with psychoeducation [WP], workshop with no psychoeducation [WNP], and waitlist control [WLC] and a within subjects factor of time (baseline and post-intervention). The primary independent variables were condition and time, and the dependent variables were measures of psychological symptoms.

Results

There were no significant baseline differences between the three treatment groups across age, gender, ethnicity, symptoms, education level, traumatic events experienced, or on prior exposure to trauma discourse.

Facilitators completed a report after each workshop in reference to the integrity of the condition. Reports indicated that workshop components were consistent as planned and true to treatment condition. Facilitators did report three instances (in the course of over 2500 participant hours) in which a participant proposed the concept of “trauma” during a brainstorm about the consequences of the war. As previously instructed, the facilitators acknowledged the statement, but did not foster discussion on it. Facilitators were not blind to condition as they required awareness of differences in content between conditions.

Event History and Baseline Symptoms

All participants were asked to endorse items from a list of 19 possible traumatic events as listed in the HTQ- Part I (Mollica et al., 1992). The frequencies with which participants endorsed each item as an event they had experienced or witnessed are listed in Table 1. Across these 19 items, the mean number of types of events experienced was 9.9 ($SD = 2.1$). The mean number of types of events experienced or witnessed was 12.6 ($SD = 3.2$).

Mean scores on the Anxiety and Depression subscales (HSCL-25) were 2.22 ($SD = 0.74$) and 1.97 ($SD = 0.60$), respectively. The mean somatization subscale (HSCL-58) score was 2.29 ($SD = 0.69$). Level of anxiety and somatization were markedly higher, and depressive symptoms were slightly higher than what would be found in a North American psychiatric inpatient sample (Derogatis, 1994; Table 2).

The sample’s mean score on the HTQ–Part IV was 2.14 ($SD = 0.55$; range 1.0 to 3.6). When including Mollica et al.’s (1992) additional 14 items (HTQ-b) that intend to capture more culturally variable traumatic stress reactions, the sample’s scores were $M = 1.97$ ($SD = 0.53$; range 1.0 – 3.6; Table 2).

The percentage of participants who reported exposure to didactic, radio, or written information about how people are affected by extremely frightening or violent events was 10.8%, 61.7% and 11.7%, respectively. Not one participant was familiar with the term “posttraumatic stress disorder” and only 4.6% were familiar with the word “trauma.” Seventy-four percent were familiar with the term *Ihahamuka*.

Primary Hypothesis Tests

PTSD symptoms. An ANCOVA with pre-test scores as a covariate was conducted with condition as an independent variable and post-intervention HTQ scores as the dependent variable to assess whether the effect of treatment depended on condition. The ANCOVA indicated that there was a main effect (medium in magnitude) for condition, $F(2) = 6.87, p < .01$, partial $\eta^2 = .11$, while covarying out the effect of pre-HTQ scores. Contrasts showed that participants in the WLC had significantly greater HTQ scores than those in the WP, and than those in the WNP. Participants in the WNP showed a trend for having less severe HTQ symptoms than those in the WP following intervention. Thus, the intervention reduced symptoms, and participants who did not receive PTSD psychoeducation showed a trend for greater improvement than those who did receive psychoeducation (Table 3).

The same analysis was conducted using Mollica’s broader definition of traumatic stress symptoms (all 30 items on the HTQ; HTQ-b). The ANCOVA showed a main effect for condition, $F(2) = 5.84, p < .01$, partial $\eta^2 = .09$, while covarying out the effect of pre-HTQ-b scores. Contrasts showed that participants in the WLC did not have significantly different HTQ-b scores than those in the WP. However, participants in the WNP showed significantly lower HTQ-b scores than those in the WP, as well as compared to those in the

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WLC. In this case, people who received no trauma education in their workshop had significantly lower scores than people who received the workshop with trauma psychoeducation or who were in the WLC. Those in the WLC had the highest scores, although this was not significantly different from those receiving trauma psychoeducation (Table 3).

General symptoms. An ANCOVA with pre-test scores as a covariate was conducted with condition as an independent variable and post-intervention HSCL scores as the dependent variable. However, the ANCOVA indicated that there was no main effect for condition while covarying out the effect of pre-HSCL scores, $F(2) = 1.37, ns$. Thus, post-treatment scores reflecting general distress did not vary significantly across conditions (Table 3). Results of all three analyses were consistent with parallel intent-to-treat analyses.

Discussion

The current sample was drawn from a population of rural Burundians, all of whom reported histories of multiple extremely distressful events. These events included being forced to harm or kill others, witnessing the murder of family members, and rape. Our findings suggest that the intervention reduced traumatic stress symptoms in program participants. Two weeks after the intervention, participants of each treatment condition reported significantly lower levels of traumatic stress than those in the wait-list control. More notably, it was found that compared to WLC, participants randomized to the condition without PTSD psychoeducation saw greater decreases in their traumatic stress symptoms than those randomized to the condition with psychoeducational content (HTQ: trend of $p = .08$; HTQ-b: $p < .05$). There are two possible explanations for this differential outcome. One explanation is that the inclusion of psychoeducation about

PTSD and traumatic events may have reduced the otherwise beneficial effect of the program's "trauma healing" intervention. Rather than having a normalizing effect, new information about traumatization may have exacerbated or altered symptoms, or suggested a condition of greater vulnerability. Such a finding could support the concerns that, in some settings, the importation of a PTSD psychoeducation that emphasizes individualistic psychopathology and vulnerability might undermine resilience and lead to greater distress (Summerfield, 2004).

A second explanation is that the content used to balance intervention length in the alternate treatment condition (WNP) was responsible for the observed differences between groups. Participants shared in pairs on a series of topics related to issues of trust, security, and inter-ethnic relations in the community. This aspect of interpersonal dialogue was present in both conditions, but this specific exercise was present only in the alternate condition. The additional time devoted to this content could have been responsible for differential outcomes, particularly as observed on the HTQ-b. This would be consistent with Staub et al.'s (2005) argument for the importance of interpersonal exchange in the wake of neighbor-to-neighbor violence such as was perpetrated in Burundi. In summary, either psychoeducation may have reduced otherwise beneficial treatment effects, or interpersonal dialogue and sharing may have proven to be more helpful than psychoeducation.

The reduced effectiveness of the psychoeducation group was consistent across both a narrow measure of traumatic stress (HTQ) or a broader one (HTQ-b). Although the former was limited to a trend ($p = .08$) for this sample size, the effect sizes were equivalent (b 's = $-.18$ and $-.23$). Notably, the participants in the psychoeducation

condition reported greater severity of trauma symptoms that were not explicitly mentioned in the psychoeducation component. This result may suggest that the differences observed in the groups were due to a more generalized vulnerability as it relates to traumatic stress symptoms, or that the additional interpersonal intervention content promoted further recovery.

Factors of participant disclosure may have also contributed to the observed results. First, perhaps the “true” trauma symptom levels of the two intervention groups were equivalent, but participants in the condition with psychoeducation felt less reluctant to disclose traumatic stress symptoms after the intervention. Alternately, they may have recognized the symptoms in themselves, or better comprehended items on the translated questionnaires, only after participating in the intervention. However, the observed generalized effect on traumatic stress symptoms discussed above, and participant symptom endorsement at baseline of moderate levels of distress on the HTQ, may suggest otherwise.

The intervention did not appear to have a significant effect on more general symptoms relative to the waitlist control. One would expect that symptoms would have decreased in a similar manner as was observed on the HTQ, given general issues of comorbid presentation and treatment effect. These results may suggest that this particular intervention’s impact was limited to traumatic stress symptoms.

The current results are best explained by two possible mechanisms. They raise the possibility that certain types of PTSD psychoeducation may exacerbate or influence symptom presentation. A plausible mechanism for this effect is that psychoeducation about supposedly normative reactions to trauma induces an expectation that trauma

exposure is debilitating, and that this expectation, in turn, induces a newly acquired vulnerability. Perhaps the effect of psychoeducation depends on the message of resilience or vulnerability that associated with it. Alternately, particularly in a more collectivist culture, structured opportunities for interpersonal exchange may play a critical role in distress reduction.

Certain limitations of the study warrant discussion. Our attempt to improve on past studies by including a specific assessment of functional impairment was hampered by a measure that lacked sensitivity with this specific sample. PTSD was not diagnosed, but was only estimated using a cutoff score from a self-report measure validated in diverse but markedly different populations around the world. Due to environmental constraints, treatment integrity was conducted by the workshop facilitators. Given that post-intervention assessment is limited to a single time point two weeks after the intervention, it is not clear to what extent this represents a sustained effect. The index traumatic events took place up to 14 years prior to the time of intervention. (Note that participants lived under the persistent threat and actuality of renewed periodic violence during this period.) The time lag may limit the generalizability of the findings, and the study warrants replication in a sample with less latency between Criterion A and intervention. Nevertheless, these limitations were more than offset by important strengths, including randomization, multiple groups, culturally-sensitive application of measures and proper translation of materials, the balancing of interventionists' treatment conditions, and use of a highly-traumatized population.

The prevalence of posttraumatic stress disorder has been demonstrated across diverse regions of the world, and work has begun to identify effective treatments in these

regions. PTSD psychoeducation is a common component of such treatments, given the assumption that it will contribute to distress reduction. The findings of this study suggest that PTSD psychoeducation for people without prior exposure to such ideas may diminish the benefits of other intervention components. At the very least, these findings speak to the importance of careful consideration of the tenor of messages of vulnerability or resilience attached to the psychoeducational content conveyed, as outcome may depend on the expectancies associated with its delivery. Alternately, the results bring emphasis to the possibility that interpersonal dialogue may be a critical ingredient for healing. This study's findings do not contradict evidence for the prevalence of PTSD across cultures, or suggest that people are not affected by extreme stress. Instead, the study examined the specific effects of including a psychoeducational component in an intervention for a traumatized population. Additional studies and innovative research designs will be necessary to replicate these findings, tease apart possible explanations for the differences observed across the conditions of the present study, elucidate mechanisms, and give greater consideration to local constructs (such as *Ihahamuka*). Until additional research is completed, these findings suggest caution in the presumption of the value of PTSD psychoeducation in some cultural settings, particularly to the exclusion of an emphasis on interpersonal exchange and reconciliation. Careful consideration should be given to whether psychoeducational information is couched in a message of recovery or protracted vulnerability.

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Table 1. *Frequency and Types of Events Endorsed (HTQ – I)*

<u>Event</u>	<u>% Witnessed</u>	<u>%Experienced</u>
Combat situation	0.4	98.8
Forced to hide	0.8	97.1
Unnatural death of family member	0.8	96.7
Lack of food and water	0.4	95.0
Narrowly escaping death	6.3	91.7
Lack of shelter	-	90.4
Ill health and no medical care	7.5	86.2
Loss of personal property	9.2	81.9
Confined to indoors because of danger	5.6	79.5
Betrayed and placed at risk of death	18.3	41.7
Serious physical injury from combat	45.4	35.0
Forced to hide among the dead	22.9	27.5
Imprisonment	18.3	23.8
Sexual abuse/humiliation	25.4	10.0
Forced to harm or kill a stranger	24.6	10.0
Forced to harm or kill a family member or friend	24.2	9.2
Disappearance/kidnapping of spouse	18.3	8.8
Rape	25.0	5.4
Disappearance/kidnapping of son or daughter	19.6	3.8

Note. HTQ = Harvard Trauma Questionnaire.

Table 2. Means and Standard Deviations for HTQ, HTQ-b, and HSCL across Three Conditions

	<u>WLC (n = 38)</u>		<u>WNP (n = 37)</u>		<u>WP (n = 38)</u>	
	<u>Time 1</u>	<u>Time 2</u>	<u>Time 1</u>	<u>Time 2</u>	<u>Time 1</u>	<u>Time 2</u>
	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>	<u>M (SD)</u>
HTQ	2.04(.50)	2.11(0.54)	2.25(0.62)	1.89(0.45)	2.14(0.49)	1.97(0.45)
HTQ-b	1.89(.49)	1.83(0.52)	2.07(0.62)	1.61(0.37)	1.99(0.53)	1.77(0.48)
HSCL	2.02(.60)	1.83(0.67)	2.10(0.65)	1.69(0.54)	2.15(0.57)	1.76(0.62)

Note. HTQ = Harvard Trauma Questionnaire Part IV Items #1-16. HTQ-b = Harvard Trauma Questionnaire Part IV Items #1-30. HSCL = HSCL-25 + somatic subscale from HSCL-58. WP = Group with psychoeducation. WNP = Group without psychoeducation. WLC = wait list control.

Table 3. *Contrasts for HTQ, HTQ-b, and HSCL Across Three Conditions with Time 1 as a Covariate*

DV	Condition	<i>b</i>	Confidence Interval (95%)	partial η^2
HTQ	WLC vs. WNP	.36**	.17 - .55	.11
	WLC vs. WP	.18*	.01 - .37	.03
	WP vs. WNP	.18	.37 - .02	.03
HTQ-b	WLC vs. WNP	.32**	.13 - .50	.09
	WLC vs. WP	.09	-.09 - .27	.01
	WP vs. WNP	.23*	.42 - .04	.05
HSCL	WLC vs. WNP	.19	.05 - .44	.02
	WLC vs. WP	.14	.10 - .38	.01
	WP vs. WNP	.05	-.20 - .30	.00

Note: HTQ = Harvard Trauma Questionnaire Part IV Items #1-16. HTQ-b = Harvard Trauma Questionnaire Part IV Items #1-30. HSCL = HSCL-25 + somatic subscale from HSCL-58. WP = Group with psychoeducation. WNP = Group without psychoeducation. WLC = wait list control. DV = Dependent variable.

* $p < .05$, ** $p < .01$.

Figure 1. Subject Flow.

