

EFFECTS OF MULTIPLE CONCURRENT INTERPERSONAL TRAUMAS ON
POST TRAUMATIC STRESS DISORDER SYMPTOMOLOGY
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BY

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Effects of Multiple Interpersonal Traumas on Post Traumatic Stress Disorder Symptoms

Everywhere in today's world there are wars, natural disasters, and interpersonal crimes such as sexual assault and rape. Post-traumatic stress disorder (PTSD) occurs in people who have been exposed to traumatic events and have strong reactions such as fear, terror, horror, helplessness or a belief that their life was in danger (Turnbull et al. 2002). According to the *Diagnostic and Statistical Manual of Mental Disorders* (DSM IV-TR; American Psychiatric Association, 2000), for an event to be considered traumatic, the person has to have experienced, witnessed or happened upon an event or events that involved actual or threatened death or serious injury, or the event was a threat to the physical integrity of the self or others. Secondly, the person's response has to involve extreme fear, helplessness, or horror. Furthermore, after establishment of traumatization, the DSM IV offers three clusters of major symptoms of PTSD. The first is called the *re-experiencing* cluster of symptoms, which involves recurrence of traumatic memories, in nightmares or spontaneously, which can also be triggered by stimuli that are reminiscent of the trauma. The second cluster is *avoidance and numbing*, which involves avoiding situations that remind the person of the traumatic event, shutting down emotional expression, or social withdrawal. Individuals with PTSD reportedly find re-experiencing of the events intolerable and disturbing (Turnbull et al., 2002). Lastly, *Hyper-arousal* (mostly characterized by hyper-vigilance) involves insomnia, irritability, and agitation.

Refugee populations

Refugee trauma research has tried to encompass multiple traumas because this

population often experiences multiple traumas such as war, rape, death of family members, and loss of property, etc. However, a major critique of past studies is that the researchers usually combine the multiple traumatic events into one catastrophic event. For example, Schultz (2006) concentrated on the Bosnian refugee rape victims and didn't consider other traumatic factors that could have contributed to their PTSD symptoms such as witnessing death of family members, torture, and loss of homes. Although Shultz examined the effectiveness of treatment on PTSD symptoms with rape as the only trauma, the interventions were not scrutinized in the larger context of war hostilities or as part of other traumatic events. This is a common shortcoming in much of the current PTSD research. Past research supports the concept that individuals react differently to various types of trauma; therefore, it seems erroneous to ignore other contributing traumas to the symptoms and consider only one. It is important to consider all the other traumas because no one knows how much weight each one has in the formation of PTSD, especially when it becomes an issue of interpersonal traumas vs. non-interpersonal trauma. Theoretically, interpersonal trauma seems to have a greater impact on the individual than non-interpersonal because other aspects of the individual (such as trust) are affected, which makes the healing process more complex.

Trust and mental health

According to Erickson's theory of "Basic Trust Versus Basic Mistrust," the main task of infancy is to acquire a favorable ratio of trust to mistrust. If the balance is weighted toward trust, the child has a better chance of weathering the later crises than if it is weighted toward mistrust (Miller, 2002). Erickson defines basic trust as "an essential trustfulness of others as well as fundamental sense of one's own trustworthiness" (1968,

p.96). Miller (2002) states that “if mistrust wins out over trust, the child, or later the adult, may be frustrated, withdrawn, suspicious, and lacking in self-confidence.”

Therefore, individuals who experience interpersonal trauma in childhood or adulthood are more likely to develop more mistrusting tendencies, which may result in greater psychological symptomology.

Effects of Multiple Traumas

Relatively little research has attempted to consider the interplay of multiple interpersonal traumas on the symptoms of PTSD. However, Scott (2007) assessed the differential and combined impacts of multiple lifetime stressors in the development and severity of PTSD symptoms. Clinical and non-clinical participants were assessed for their exposure to four types of interpersonal trauma: childhood physical and/or sexual abuse, lifetime community violence, and domestic violence in adulthood. PTSD symptomology was assessed using the Los Angeles Symptom Checklist (LASC), and the results indicated that exposure to lifetime multiple traumatic experiences positively correlated with severity of PTSD symptoms. The study also revealed clinical participants to have had more lifetime traumas than non-clinical participants, therefore clinical participants displayed more symptoms. Because it was correlational research, and researchers were assessing life stressors, we can't be certain that PTSD symptoms are a result of the mentioned traumas rather than an accumulation of other factors not mentioned.

With respect to the above study, Scott (2007) suggested that exposure to long-term multiple traumas is correlated with severe (in terms of frequency, and intensity) PTSD symptoms, but little is known about multiple interpersonal traumas experienced simultaneously. In events such as war- where individuals are raped, tortured and beaten,

family members killed, homes are destroyed, and relocation to an unknown, unstable place is imperative-- these individuals are expected to be affected on a different level than just a single-trauma victim. For example, Neuner et al. (2004) studied the refugees of the West Nile region who had high exposure to traumatic experiences posed by years of armed conflict. Results showed that, of the 58 respondents who experienced the greatest number of traumatizing experiences, all participants reported symptoms which met the DSM-IV criteria for PTSD. The authors found that there was a clear dose-effect relationship (the relationship between the dose of harm-producing factors and the severity of their effect on exposed organisms) between traumatic exposure and PTSD in populations with high levels of traumatic events.

In support of findings that severe traumatic events correlate with severe PTSD symptoms, Nelson et al. (2004) studied 562 residents in the former Yugoslavia who had faced civil war and a NATO-led bombing campaign in 1999. Thirteen percent of the participants had symptoms consistent with PTSD while 49.2% had symptoms consistent with depression and 66% had both disorders. Through multivariate logistic regression models, they found that significant PTSD predictors included refugee status and residence in the Serbian enclave. The authors concluded that, three years post-war, symptoms of PTSD remained a significant concern among refugees, especially those suffering subsequent economic instability, and those living in rural areas. Overall, this particular study has shown that an accumulation of traumatic events results in more symptoms of PTSD because refugees who were still suffering in one way or the other, still had more symptoms than those who faced less trauma.

Effects of interpersonal traumas

In addition, research shows that interpersonal trauma is more distressing or is related to higher rates of disorder, than noninterpersonal trauma. For example Resnick et al. (1993) found that lifetime rates of PTSD associated with interpersonal trauma (rape) ranged from 31% to 39%, whereas the rate of PTSD associated with noninterpersonal trauma (natural disaster) was only 9%. Furthermore, Schumm, Briggs-Phillips, & Hobfoll (2006) found that the effects of interpersonal trauma are cumulative such that women who experienced either child abuse or adult rape were six times more likely to have probable PTSD, whereas women who experienced both child abuse and rape were 17 times more likely to have probable PTSD.

McCauley et al. (1997) reported that women with both adult and childhood abuse had more psychological problems and physical symptoms than those with either in isolation. Also, Follette et al. (1996) found that there was a linear increase in reported cumulative abuse and symptoms on the Trauma Symptom Checklist. Griffing et al. (2006) examined the interrelationships between childhood abuse, exposure to maternal domestic violence, and PTSD symptomology. They reported that a high co-occurrence between exposure to maternal domestic violence, childhood physical and sexual abuse, and the frequency of lifetime violence exposure predicted PTSD symptomatology. A myriad of studies show a correlation between cumulative, multiple, interpersonal traumas and increased traumatic stress but there's little to no empirical research on PTSD symptomology in relation to simultaneous, multiple, interpersonal traumas.

Another study that attempted to incorporate multiple interpersonal traumas was, Nishith, Mechanic, and Resick (2000), who examined the relationship between childhood sexual and physical abuse and prior adult sexual and physical victimization to predict

current PTSD symptoms in recent rape victims. They found that a history of child sexual abuse and adult victimization contributed to current PTSD symptoms within the cumulative context of other adult trauma. Although this study specifically looked at multiple, interpersonal traumas and PTSD symptoms, the traumas were once again cumulative, versus simultaneous.

In summary, the intent of this study is to examine the effects of multiple interpersonal traumas (incurred within a brief time period) on severity of PTSD symptoms in order to add to the body of knowledge about trauma experiences among populations such as refugees and war victims. This knowledge will guide informed treatment, providing clinicians with early intervention tools and insights into psychological sequela of war trauma. The hypothesis generated to this end, as demonstrated by the literature on the dose-effect relationship for PTSD (Nishith, Mechanical and Resick, 2000), was that greater reports of simultaneous multiple interpersonal trauma as assessed by the Posttraumatic Diagnostic Scale (Foa, 1996), and would lead to more severe PTSD symptomology on the Impact of Event Scale (Weis & Marmar, 1996). The war was considered one event for the purpose of this study, therefore making all the traumas simultaneous and not cumulative.

Method

Participants

Participants were 267 (roughly equal numbers of men and women) Liberian refugees living in an International Red Cross camp in Ghana, West Africa. All participants who attended the screening session were paid U.S. \$1 (approximately 1 Ghana cedi). No one under the age of 18 was allowed to participate in the study. Anyone who was experiencing distress or a worsening of psychological symptoms was referred to the emergency room at Buduburam Hospital, which was located on the refugee camp.

Participants were obtained through oral announcements made to classes at the War Affected Children Rehabilitation Organization (WACRO) and through postings made at public locations such as the Pan African College of Peace and Conflict Resolution and various local churches and mosques. These recruitment announcements did not mention compensation of any kind. Compensation was not included in the announcements due to restrictions imposed by the collaborating institutions.

Protocol

Anyone who was interested in participating was asked to show up at either the Evangelical Lutheran Church on camp or the classroom building of WACRO. Participants were seated with at least one chair separating them to help protect privacy while completing the questionnaire. Participants completed the survey using a paper and pencil form. In the actual survey, participants were asked to account their personal

experiences during the Liberian civil war and to report on their psychological health. In addition, participants were also asked to complete a set of demographic items (e.g., sex, age, country of origin, marital status, etc.). All subjects spoke English as their official language, and thus, all measures were given in English, although a Liberian collaborator who is fluent in the local dialects was present to assist when communication problems arose. Upon completion of the screening survey, the participants were asked to remove the Letter of Informed Consent from the other documents and place them in separate boxes that were provided by the researcher. The boxes were placed in the front of the room, were clearly identified, and had only a small slit through which the papers were passed. Upon placing the forms into their respective boxes the participants were provided with a “debriefing form.” Participants who experienced distress were referred by the primary investigator for further debriefing by the “mental health” counselor located at the International Red Cross camp where the refugees were housed. To assure culturally sensitive care and efficacious treatment, all research activities were supervised by a Liberian pastoral counselor who was familiar with the social, historical and cultural issues that faced this population.

Measures

Two measures of PTSD were utilized in the current study as well as a comprehensive demographic questionnaire. The primary predictor—number and type of traumatic stressors was assessed using the Posttraumatic Distress Scale (Foa et al., 1997). The primary outcome variable—severity of PTSD symptoms was assessed using the Impact of Event Scale (IES) (Horowitz, Wilner, & Alvarez, 1979). A brief description of each measure, as well as relevant psychometric information for each is outlined below.

Interpersonal Trauma

A survey was conducted on 40 students at Ball State University to determine whether items of traumatic events on the PDS were considered interpersonal or non-interpersonal in nature. According to the results, of the twelve traumatic events mentioned on the PDS, three of them were categorized as non-interpersonal (accident, disaster, and life-threatening illness). The remainder, non-sexual assault/acquaintance, non-sexual assault/stranger, sexual assault/ someone you know, sexual assault/stranger, combat, sexual contact under 18 with someone five or more years older, imprisonment, torture, were all identified as interpersonal traumatic events, which was separated in the data analysis.

Posttraumatic Distress Scale

The PDS is a 49-item self-report measure recommended for use in clinical or research settings to measure severity of PTSD symptoms related to a single identified traumatic event. The PDS is unique in that it assesses all of the DSM-IV criteria for PTSD (i.e., Criteria A – F) and inquires about the past month (time frame can be adjusted for different uses). Thus, in addition to measuring the severity of PTSD symptoms (Criteria B, C, & D), it also inquires about the experience of a Criterion A traumatic events, about duration of symptoms (Criterion E), and the effects of symptoms on daily functioning (Criterion F). The PDS has four sections: Part 1 is trauma checklist; in Part 2, respondents are asked to describe their most upsetting traumatic event.

(Questions specifically ask about when it happened, if anyone was injured, perceived life threat, and whether the event resulted in helplessness or terror). Part 3 assesses the 17 primary PTSD symptoms. (Respondents are asked to rate the severity of the symptom

from 0 ("not at all or only one time") to 3 ("5 or more times a week / almost always"). Part 4 assesses interference of the symptoms in daily functioning.

The PDS yields a total severity score (ranging from 0 to 51) that largely reflects the frequency of the 17 symptoms of PTSD. The PDS has demonstrated high internal consistency ($\alpha = .92$) and good test-retest reliability (.74) in its English version (Foa et al., 1997). Agreement between PTSD diagnoses obtained from the PDS and the Structured Clinical Interview for DSM-III-R SCID-PTSD module was 82% (Foa et al., 1997). The sensitivity of the PDS was reported as .89 and its specificity was .75 (Landolt et al., 2002). The scale is widely used for screening and assessing PTSD in clinical and research settings.

Impact of Event Scale.

The IES-R is a 22-item self-report measure that assesses subjective distress caused by traumatic events. It is a revised version of the older version, the 15-item IES (Horowitz, Wilner, & Alvarez, 1979). The IES-R contains seven additional items related to the hyper arousal symptoms of PTSD, which were not included in the original IES. Items correspond directly to 14 of the 17 DSM-IV symptoms of PTSD. Respondents are asked to identify a specific stressful life event and then indicate how much they were distressed or bothered during the past seven days by each "difficulty" listed. Items are rated on a five-point scale ranging from 0 ("not at all") to 4 ("extremely"). The IES-R yields a total score (ranging from 0 to 88) and subscale scores can also be calculated for the intrusion, avoidance, and hyper-arousal subscales. In general, the IES-R (and IES) is not used to diagnose PTSD; however, cutoff scores for a preliminary diagnosis of PTSD have been cited in the literature as 44.

For IES intrusion, $\alpha = 0.86$ (range 0.72-0.92), for IES avoidance $\alpha = 0.82$ (range 0.65-0.90). Using the 0.80 criterion set by Carmines and Zeller (1979), the IES sub-scales are consistent, which indicates that each measures a homogeneous construct.

In the original report on the IES (Horowitz et al., 1979), adequate test-retest reliabilities were reported for the two sub-scales: avoidance and intrusion (.87 and .79 respectively); the time between measurements was one week. Test-retest estimates were also presented by Solomon and Mikulincer (1988), who found test-retest reliabilities of .56 and .74 respectively; the time between measurements was one year. Weiss and Marmar (1997) reported test-retest reliabilities for IES sub-scales based on two different samples. For the first sample, the average time since event was 3.1 years and the time between measurements was six months. The second sample completed the IES six weeks after the event and follow-up was six months later. Test-retest reliability for the first sample was .57 for IES intrusion and .51 for IES avoidance; for the second sample, reliabilities were .94 and .89, respectively. Thus, suggesting that time from event might be a relevant factor.

Data Analyses

For the purpose of this study, analyses will be broken into two phases—a frequencies and descriptives analysis and the main analysis. A preliminary power analysis was conducted using GPOWER (Faul & Erdfelder, 1992) and the results indicated that in a hierarchical regression analysis with four predictor variables (age, sex, marital status and number of interpersonal traumas), a sample size of 129 would be needed to achieve a medium effect size with an α of .05 and a β of .20.

Descriptive statistics

Prior to running confirmatory analyses as proposed in the hypotheses section, a frequencies and descriptives analysis was run on all primary predictor and outcome variables to facilitate a better understanding of the features of the sample population.

Furthermore, in a review of adverse outcomes in natural and human-caused disasters, Norris, Byrne, Diaz, and Kaniasty (2001) outlined five demographic variables that predicted post-disaster psychological distress.

Gender- In 93% of 45 samples, women or girls were affected more adversely by disasters than boys or men, both in terms of magnitude and chronicity of effect. This was a main finding in Breslau and Davis' (1992) study of PTSD symptoms in a population of urban adults.

Age and Experience- in American samples where middle-aged adults were differentiated from older and younger adults, they were most adversely affected by post-disaster distress. According to Kilpatrick et al. (1989) older adults were not at greater risk than other adults following trauma perhaps because they have more developed coping strategies or, as suggested by Norris and Murrell (1988), they may have greater experience with similar events, which they have survived.

Culture and Ethnicity- in most studies, majority groups tended to fare better than ethnic minority groups (Norris, 1992).

Family Factors- Marital status was a factor for women only, such that husbands' symptom severity predicted wives' symptoms more strongly than wives' did husbands'. Being a parent also added to the stress of disaster recovery, particularly for mothers.

Socio Economic Status- SES as manifested in education, income, or occupational prestige, was a significant predictor of post-disaster distress. In 91% of the studies, lower

SES was linked to greater distress, and this relationship became stronger with greater severity of exposure.

Hence, a preliminary analysis using SPSS was performed on all potential confounding demographic and methodological variables to detect unpredicted effects on the predictor variable trauma dose (PDS) or the outcome variable PTSD symptomology (IES-R). This preliminary analysis included gender, age, and marital status. For two of the demographic variables (e.g. age and marital status), values were collapsed to facilitate analyses and increase power. Actual values for age were reduced to one of six levels (1 = 15-20; 2 = 21-26; 3 = 27-32; 4 = 33-45; 5 = 46-56; 6 = 57+) and values for marital status were collapsed to 1 = married/partnered or 2 = divorced/widowed/single/never married. As there was inadequate variance in reports of ethnicity or occupational status (all participants were Liberian refugees in this study), these variables were not considered further in the interaction term. Frequencies of all demographic variables at screening are reported in table 1.

Data cleaning

Two methods were used to establish the validity of participant responses prior to performing the main analysis. First, upon data entry all data was visually scanned to assess for response patterns that were not consistent with the theoretical underpinnings of measures and/or subscales (e.g. reporting all zeros on a single scale). Second, a frequencies and descriptives analysis was output to report mean scores, frequency counts, and standard deviation scores of each independent and dependent variable cited in the study. Raw data was plotted in two-dimensional space to look for outliers- records that deviated more than two standard deviation units above the mean on more than two of the

main scales (PDS or IES) were purged from database. Up to ten percent of the data may be purged if they meet criteria as an outlier.

Missing data

These methods were adopted as a policy for missing data in the main analyses. Any record missing twenty percent or more of the data on a single subscale was dropped from further analysis. All statistical analyses were run using a listwise deletion rule (every subject that has missing values on any of the variables in the analysis were removed). If the sample size should be reduced such that there is no longer adequate power to detect significant effects, a pairwise deletion rule (removal of the specific missing values from the analysis) was adopted. Finally, should power remain inadequate to detect significant effects of the predictor variables on the outcome variable, data imputation (imputation of missing values with the mean of the observed values) will be considered to increase the sample size.

Main analyses

An exploratory regression analyses with simultaneous variable entry were used to examine the main effects of trauma dose and on traumatic stress symptoms. Consistent with the hypothesis, the primary independent variable is number of interpersonal traumas (as identified on the PDS) was entered first. The demographic variables (identified as covariates in the above described chi squares) were entered in the following order, age, gender, and marital status. The dependent variable for the analysis was IES total score.

Results

All statistical analyses were performed using SPSS 16.0 (2008). There was an initial sample of 267 participants, which was reduced to $N=139$ due to list-wise deletion rules for missing data. Age and sex were the most common unanswered questions. Participants' ages ranged from 18 years to over 57 years old ($M= 30.26$). There were approximately 94 males and 45 females; 25 of them were married and 114 were single, widowed or divorced. The sample also included Protestants, Catholics, Mormons, Jewish, Muslim and other. Education ranged from less than secondary to graduate degree.

Select demographic and methodological variables were examined as shown in table 1 to detect unpredicted relationships between possible confounding factors and the primary variables—interpersonal traumas (PDS) and severity of PTSD symptoms (IES).

Initial analyses were implemented to detect whether there were effects or relations among variables (i.e. age, gender, and marital status) using the *chi* square test of association. The cross-tabulation of age categories and marital status indicated there was an association between these two variables ($\chi^2 = 39.83$, $df = 5$, $p <.001$), with more people in the older age range being married than in the younger range.

In addition, one-way ANOVA was utilized to determine if there was a main effect for any of the demographic variables (age, marital status, sex) on the predictors or outcomes. An ANOVA performed on the demographic variable age and IES total scores revealed a significant curvilinear relationship with younger people and older people

having lower IES score than those of middle age. To control for this inverted U-shaped curve, the values for age were centered and squared to control for U-shape because centering renders all the regression coefficients in the equation meaningful as reflecting the regression function at the mean of the predictor. Centering also eliminates the extreme multicollinearity. Age was significantly related to the outcome variable $F(5,151) = 3.14, p < .01$. There were no significant effects for marital status or sex on IES total score or PDS interpersonal traumas.

Main Analyses

Hierarchical multiple regression analysis was utilized to examine the contributions of interpersonal traumas, age, sex and marital status to PTSD symptoms. The dependent variable was IES total score. After controlling for the main effects of (age), the resulting coefficients for the regression are shown in Table 2. The strongest predictor, based on the standardized coefficient, was interpersonal traumas ($\beta = .20, p < .05$), which was supportive of the research hypothesis that simultaneous multiple interpersonal traumas are positively related to severity of PTSD symptoms.

There were no other significant predictors but marital status approached significance

($\beta = -.15, p = .08$), indicating that marital status may be important in predicting PTSD symptom severity; more married people had lower PTSD scores. Past research suggests that individuals with social support such as a spouse have lower chances of developing PTSD.

Discussion

The intent of the current study was to determine whether greater reports of multiple concurrent interpersonal traumas were related to more severe PTSD symptoms. The results supported the hypothesis and were consistent with the literature on dose-effect relationship for PTSD (Nishith, Mechanical, and Resick, 2000), that greater interpersonal trauma correlates with higher PTSD symptoms. Further, in the current study, age was found to have a curvilinear relationship with PTSD symptoms. According to Kilpatrick et al. (1989), middle-aged adults are more likely to have more PTSD symptoms than those who are younger or older in age. A study by Bonanno et al. (2007) found that participants over 65 years of age were least likely to have PTSD. Research suggests that older and younger are usually taken care of by the middle aged individuals, therefore relieving them of some stress, and leaving the middle-aged to take all the responsibility. However, when centered, age was not a significant predictor of trauma symptomology in the regression equation.

Limitations

Despite the significant results, the current study had several limitations. The participants represented a narrow range of ethnicity (Liberians) and according to Breslau et al. (2004); ethnic minority status is often reported as a risk factor for the development of PTSD, which could have influenced the results. A sample with more diversity and wider range in age would have benefited our results; most data was not used because participants failed to indicate their ages, which might have been due to multicultural issue

of importance of age, and views on identity. Most individuals did not have their birth certificates and culturally, they identify themselves in a collectivistic manner such as relationships, e.g. mother, sister, instead of individual aspects such as age and sex. All participants were involved in the Liberian Civil war, which was unique in its shifting power differential and longevity, therefore making it difficult to apply these findings to other victims of war. This could be resolved by using participants from different parts of the world, who experienced different wars and traumas, diverse ethnicities, wider range of age groups and equal number of sexes.

Also, all measures were self-reported. Their answers could have been biased because they were in a refugee camp, in horrible conditions, and maybe over-reported in order to get help from the researcher. As a result, data should be interpreted cautiously. In addition, cultural issues might have affected their answering pattern, because most individuals were answering in an extreme manner 1 or 7 as seen from visual scanning for response patterns during data entry. This particular issue could have been resolved by more explanation during data collection process.

Furthermore, interpersonal traumas were determined by students at Ball State University instead of the participants, which might not have been consistent with the victims' interpretation. That could be corrected by having the participants identify what they consider interpersonal trauma, instead of people outside of the study. Finally, it's probable that demographic variables were not significant due to an insufficient number of participants. Specifically marital status, because literature e.g. Koenen, Stellman, & Sommer, (2003) has consistently found that lack of social support is associated with PTSD; therefore, a sufficient number of participants might have changed the results

marginally.

Implications

This research could prove to be beneficial for psychologists who work with trauma population. The impact of simultaneous multiple interpersonal trauma requires an adaptation or emphasis of establishing trust in the therapeutic relationship to accommodate the unique experiences of this particular population that's correlated with mistrust. Erickson (1968) argues that mistrust can be beneficial in an unsafe environment, but when individuals move to a safe environment and still have mistrust, then it becomes a misfit, therefore problematic. Individuals who have experienced horrendous simultaneous interpersonal trauma, become understandably mistrustful of their surroundings, which makes it difficult if not impossible to treat unless trust becomes re-established in the individual's life and in the therapeutic relationship. Suedfeld et al. (2005) studied holocaust survivors immediately and 50 years after the end of the holocaust, and found statistically significant differences for most Eriksonian crises, with favorable resolutions of the crisis outnumbering unfavorable ones, except *Trust* vs. *Mistrust*, where the latter resolution predominated. Chodoff (1980), concurred that holocaust survivors expressed significantly more *Mistrust* than *Trust* of other people, due to their experiences of betrayal and persecution. Therefore, establishment of trust must be the primary focus in the treatment process with individuals who experienced multiple, simultaneous trauma.

Therapists would have to incorporate interpersonal interventions along with the cognitive behavioral therapy approach to challenge the mistrust and develop a trusting relationship. Practitioners should expect therapy to take longer due to the complexity of

the trauma. In addition, patience is imperative for the counselor because, clients from this particular population are more likely not to believe in the treatment process, and therefore hesitant in fully engaging or complying with the process.

Future Research

Future research should strive to replicate this study in a broader population of West African adults who may have experienced multiple simultaneous interpersonal traumas outside of the context of war (e.g. victims of crime, partner/child abuse, prisoners, etc.) With the ultimate goal to develop interpersonal interventions appropriate to the guiding issue of basic trust inherent in human-caused trauma.

Table 1.

Descriptives for Primary Predictor, Outcome, and Demographic Variables

Variable	Percent or Mean (Standard deviation)			
Sex	Male		Female	
Percent / Mean (Standard Deviation).	63.5%		36.29%	
Marital Status	Married	Single	Married	Single
	31	132	13	78
Age	30.26 (9.33)			
Religion	Protestant		66.7%	
	Catholic		15.3%	
	Mormon		7%	
	Jewish		3%	
	Muslim		3%	
	Other		14.3%	
Education	Less than secondary		23.4%	
	Secondary		48.3%	
	Some College		19.2%	
	Associates		4.2%	
	Bachelors		3.1%	
	Graduate		1.7%	
PDS – Interpersonal trauma	1.45 (1.93)			
IES total	34.47 (11.51)			

Table 2

Summary of Regression Analysis Predicting PTSD Symptoms, According to
Interpersonal Trauma, Age, Gender, and Marital Status

Variable	<i>B</i>	<i>SE B</i>	<i>Beta</i>	<i>Sig. Change</i>
(Constant)	36.579	3.672		.000
Interpersonal	1.132	.471	.202	.017
age	-.010	.007	-.123	.144
sex	1.466	1.953	.064	.454
marital status	-1.915	1.097	-.149	.083

$R^2 = .074$, $n = 139$

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Appendix A (Demographic Data)

Age (in years): _____

Gender Male Female

Marital status (Check all that apply)

- Married/partnered
- Divorced/separated
- Single/never married
- Widowed

Ethnicity (Check all that apply)

- Black
- Middle Eastern
- Asian
- White
- Latino or Hispanic
- Other

Is English your primary language?

- Yes No

Religion (Check all that apply)

- Protestant
- Catholic
- Mormon
- Jewish
- Muslim
- Buddhist
- Hindu
- Other _____
- None

Years of education

- Less than secondary school diploma
- Secondary school diploma
- Some college
- Associate degree
- Bachelor's degree
- Post Baccalaureate/Graduate/Professional

Current country of residence: _____

What was your country of birth? _____

What country do you identify as your home? _____

Were you orphaned during the Liberian Civil Conflict? Yes No

Did you perform military service during the Liberian Civil Conflict? Yes No
If yes, for which military unit did you serve during the Liberian Civil Conflict?

If you experienced military service, what was the nature of your participation in the Liberian Civil Conflict? Check all that apply: If no military service, please skip to next item.

- a. Combat
- b. Patrolling, surveillance
- c. Camp sentry or guard
- d. Body guard for commander
- e. Scout, spy
- f. Weapons maintenance
- g. Care of sick and wounded
- h. Porter
- i. Cook
- j. Sexual partner
- k. Other _____

At what age do you consider someone to be an adult? _____

What are the criteria you use to assess maturity or adulthood?

Appendix B (PDS)

Many people have lived through or witnessed a very stressful and traumatic event at some point in their lives. Indicate whether or not you have experienced or witnessed each traumatic event listed below by marking Yes or No in the bubble provide.

1. Yes No Serious accident, fire, or explosion (for example, an industrial, farm, car, plane, or boating Accident)
 2. Yes No Natural disaster (for example, tornado, hurricane, flood, or major earthquake)
 3. Yes No Non-sexual assault by a family member or someone you know (for example, being mugged, physically attacked, shot, stabbed, held at gunpoint)
 4. Yes No Non-sexual assault by a stranger (for exam being mugged, physically attacked, shot, stabbed, or held at gunpoint)
 5. Yes No Sexual assault by a family member or someone you know (for example, rape or attempted rape)
 6. Yes No Sexual assault by a stranger (for example rape or attempted rape).
 7. Yes No Military combat or a war zone
 8. Yes No Sexual contact when you were younger than 18 with someone who was 5 or more years older than you (for example, contact with genitals, breasts)
 9. Yes No Imprisonment (for example, prison inmate, prisoner of war, hostage)
 10. Yes No Torture
 11. Yes No Life-threatening illness
 12. Yes No Other traumatic event, briefly describe
- IF YOU MARKED YES TO ANY OF THE ITEMS ABOVE, CONTINUE. IF NOT, STOP HERE AND TURN IN YOUR SURVEY PACKET.

14. If you marked Yes for more than one traumatic event in Part 1, indicate *which one bothers you the most*. If you marked Yes for only one traumatic event in Part 1, circle the same one below.

1. Accident
2. Disaster
3. Non-sexual assault/acquaintance
4. Non-sexual assault/stranger
5. Sexual assault/someone you know
6. Sexual assault/stranger
7. Combat

8. Sexual contact under 18 with someone 5 or more years older
9. Imprisonment
10. Torture
11. Life-threatening illness
12. Other traumatic event

Below are several questions about the traumatic event you marked in Item 14.

15. How long ago did the traumatic event happen? (circle ONE)
1. Less than 1 month
 2. 1 to 3 months
 3. 3 to 6 months
 4. 6 months to 3 years
 5. 3 to 5 years
 6. More than 5 years

For the following questions, mark Yes or No on the answer sheet.

During this traumatic event:

16. Yes No Were you physically injured?
17. Yes No Was someone else physically injured?
18. Yes No Did you think that your life was in danger?
19. Yes No Did you think that someone else's life was in danger?
20. Yes No Did you feel helpless?
21. Yes No Did you feel terrified?

Below is a list of problems that people sometimes have after experiencing a traumatic event. Read each one carefully and choose the answer (0-3) that best describes how often that problem has bothered you **IN THE PAST MONTH**.

Rate each problem with respect to the traumatic event you marked in Item 14.

It has bothered me in the past month:

- 0= Not at all or only one time
 1= Once a week or less/once in a while
 2= Two to four times a week half the time
 3= Five or more times a week/almost always

- | <u>0</u> <u>1</u> <u>2</u> <u>3</u> | |
|---|--|
| 26. <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | Having upsetting thoughts or images about the traumatic event that

me into your head when you didn't want them to |
| 27. <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | Having bad dreams or nightmares about the traumatic event |
| 28. <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | Reliving the traumatic event, acting or feeling as if it was happening again |
| 29. <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> | Feeling emotionally upset when you were reminded of the |

traumatic event (for

30. example, feeling scared, angry, sad, guilty, etc.)
 the traumatic event Experiencing physical reactions when you were reminded of

31. (for example, breaking out in a sweat, heart beating fast)
 the traumatic event Trying not to think about, talk about, or have feelings about

32. Trying to avoid activities, people, or places that remind
 you of the traumatic event.

33. Not being able to remember an important part of the
 traumatic event

34. Having much less interest or participating much less often
 in important

35. activities
 Feeling distant or cut off from people around you

36. Feeling emotionally numb (for example, being unable to
 cry or unable to have

37. loving feelings
 Feeling as if your future plans or hopes will not come true

(for example, you
 will not have a career, marriage, children, or a long
 life)

38. Having trouble falling or staying asleep

39. Feeling irritable or having fits of anger

40. Having trouble concentrating (for example, drifting in and out
 of conversations,

losing track of a story on television, forgetting what you
 read)

41. Being overly alert (for example, checking to see who is around
 you, being

Uncomfortable with your back to a door, etc.)

42. Being jumpy or easily startled (for example, when someone
 walks up behind you)

43. How long have you experienced the problems that you reported above? (Circle only ONE)

- a. Less than 1 month
- b. 1 to 3 months
- c. More than 3 months

44. How long after the traumatic event did these problems begin? (Circle only ONE)

- a. Less than 6 months
- b. 6 or more months

Indicate if the problems you rated in Part 3 have interfered with any of the following

areas of your life DURING THE PAST MONTH. Mark Yes or No.

- 45. Yes No Work
- 46. Yes No Household chores and duties
- 47. Yes No Relationships with friends
- 48. Yes No Fun and leisure activities
- 49. Yes No Schoolwork
- 50. Yes No Relationships with your family
- 51. Yes No Sex life
- 52. Yes No General satisfaction with life
- 53. Yes No Overall level of functioning in all areas of your life.

Appendix C (IES-R)

Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you

DURING THE PAST SEVEN DAYS with respect to *the traumatic event that you just described above.*

0	1	2	3

Not at all	Rarely		Sometimes
	Often		

0	1	2	3	Statement
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	1. Any reminder brought back feelings about it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	2. I had trouble staying asleep
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	3. Other things kept making me think about it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	4. I felt irritable and angry
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	5. I avoided letting myself get upset when I thought about it or was reminded of it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	6. I thought about it when I didn't mean to
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	7. I felt as if it hadn't happened or wasn't real
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	8. I stayed away from reminders about it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	9. Pictures about it popped into my mind
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	10. I was jumpy and easily startled
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	11. I tried not to think about it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	12. I was aware that I still had a lot of feelings about it, but I didn't deal with them
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	13. My feelings about it were kind of numb
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	14. I found myself acting or feeling as though I was back at that time
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	15. I had trouble falling asleep
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	16. I had waves of strong feelings about it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	17. I tried to remove it from my memory
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	18. I had trouble concentrating
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	20. I had dreams about it
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	21. I felt watchful or on-guard
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	22. I tried not to talk about it

