

***HOW DO POSTTRAUMATIC STRESS AND ACCULTURATION
CORRELATE WITH MARITAL FUNCTIONING IN A BOSNIAN REFUGEE
SAMPLE?***

A Senior Thesis

By

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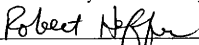
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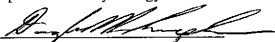
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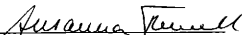
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Abstract

How Do Posttraumatic Stress and Acculturation Correlate with Marital Functioning in a Bosnian Refugee Sample ?

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Two of the most pressing problems facing today's rapidly growing population of refugees are dealing with the consequences of their past traumatic experiences (PTSD symptomology) and adjusting to a new culture (acculturation). Various clinical observations and a few previous studies have linked these variables to marital adjustment problems. The present correlational study was conducted to clarify these relationships. PTSD and acculturation were independent variables and marital satisfaction/distress was the dependent variable. Forty Bosnian refugee couples living in the United States completed translated PTSD Symptom Scale - Self-Report, Behavioral Acculturation Scale, Marital Satisfaction Inventory - Revised (MSI-R), and a demographic questionnaire. PTSD symptomology was the best predictor of marital functioning: the two showed strong significant positive correlation. PTSD was also significantly negatively correlated with the acculturation level. After controlling for PTSD, acculturation did not show significant correlation with marital functioning. Gender effects were obtained: wives' marital satisfaction was best predicted with husbands' PTSD, husband's acculturation, and their own PTSD; while husbands' marital satisfaction was not well predicted by any of the variables. The findings can provide useful guidelines to mental health professionals dealing with refugees and other traumatized populations.

To my grandma

Mojoj baki

A growing number of people worldwide are forcefully displaced, uprooted from their homelands, and resettled in new countries. The United Nations estimated that there were 19.7 million refugees as of November of 1993. Today, one of approximately 125 people in the world is a refugee (Sawyer, 1995). Western countries, especially traditionally immigrant countries like the United States, have become a new home for many of these unfortunate individuals and families escaping war, ethnic cleansing, political prosecution, and organized rape. Past traumatic experiences--together with continuous stress regarding culture shock, adaptation, and integration into the new society, which applies to all immigrants--make refugee population especially vulnerable to mental health problems. Moreover, these unique refugee experiences and cross-cultural considerations warrant professional interventions tailored to the specific needs of this growing population. However, refugee agencies and most mental health providers in the United States have not been successful in providing these kind of preventive or curative psychological services. Consequently, many refugees do not get the help they need, which in turn greatly diminishes their short and long term ability to become well-adjusted, productive members of American society (Chambon, 1989; van der Veer, 1992; Nann, 1982; Salvendy, 1983). A great need exists for more psychological research with refugees to offer possibilities for immediate application.

Scientific knowledge relevant for understanding refugee mental health has substantially increased during the last decade. Most studies have dealt with the relationship between immigrant and, more specifically, refugee experiences and various psychiatric disorders. Some researchers have also tried to identify factors that influence

psychological adjustment of misplaced individuals and families. Problems in the area of marital and family functioning are among the most often cited refugee adjustment problems (Agger & Jensen, 1989; Buchwald, Klacsanzsky, & Manson, 1993; Lipson, 1991; Salvandy, 1983; Stein, 1986). Yet, only a few studies have systematically examined factors that correlate levels of marital (dis)satisfaction within a refugee population. Levels of posttraumatic stress and acculturation emerge as two of the most interesting related variables because they can be viewed as quantifying the two previously mentioned aspects of refugee experience.

Roberts et al. (1982) and Carroll, Rueger, Foy, and Donahoe (1985) compared Vietnam combat veterans diagnosed with Posttraumatic Stress Disorder (PTSD), non-PTSD combat veterans and non-combat veterans. The first study ($n = 274$) reported that PTSD veterans scored higher on the MMPI Family Problems scale and significantly higher on clusters of problems dealing with intimacy and sociability. The second study ($n = 60$) reported that the PTSD group had significantly more problems with self-disclosure, expressiveness, and physical aggression toward their partners and with global relationship adjustment. An Israeli study with families of 382 combat veterans found a positive correlation between their rate of PTSD and marital conflict (Solomon, Mikulincer, Freid, & Wosner, 1987). A subset of 932 Vietnam veterans from the National Survey of the Vietnam Generation (NSVG) was divided into group with PTSD ($n = 231$) and group without PTSD ($n = 736$). The PTSD group reported significantly more marital problems, as measured by Marital Problem Index (Jordan et al., 1992). I am not aware of any studies relating PTSD or posttraumatic symptomatology of the members of refugee families to the level of marital adjustment. A refugee population often consists of both

civilians and combatants. Both members of a marital dyad of refugees, therefore, have “potential” for developing PTSD. *The purpose of the present study was to explore the suggested correlation using a refugee sample.*

Many therapists and researchers who have worked extensively with refugees observed that a differential rate of acculturation between spouses was often related to marital problems (Chambon, 1989; Guus van der Veer, 1992; Lin, 1986). However, insufficient empirical evidence exists for these claims, especially with refugees. Oey (1991) found that similar levels of acculturation between Chinese-American spouses correlated positively with marital adjustment, consensus, and satisfaction in the marriage. Her sample consisted of endogamous and interracial married couples. Using a sample of 72 Iranian immigrant couples and 79 mixed Iranian-American couples, O'Brien (1992) reported a significant negative correlation between marital satisfaction scores and couple's disparity in cultural resistance and cultural shift scores. In contrast, Negy and Snyder (in press) found that spousal differences in acculturation did not correlate with any of the scales of the Marital Satisfaction Inventory - R (MSI-R). Their sample included 75 Mexican-American families. A related question of interest is how acculturation scores of wives and husbands independently correlate with marital adjustment. Again, conflicting and scarce evidence is available. A study with 550 Mexican-American immigrant women reported a weak negative relationship between level of acculturation and marital strain (Vega, Kolody, & Valle, 1988). Negy and Snyder's study found a significant positive correlation between acculturation and three of the MSI-R scales for females, while none were significant for males. *A goal of the*

present study was to resolve these inconsistencies, while exploring relevant issues with refugees.

The independent variables in the present study were levels of PTSD and acculturation, and the dependent variable was level of marital distress/satisfaction.

Based on the previous research and this researcher's personal observations of refugees, it was hypothesized that a significant positive correlation between level of PTSD and level of marital distress, both for females and for males, would emerge. It was also hypothesized that: (a) a significant positive relationship would be found between spousal difference in the level of acculturation and level of marital distress, (b) a significant positive relationship would be found between female acculturation level and level of marital distress, and (c) a significant negative relationship would be found between male acculturation level, and level of marital distress. No significant correlation was expected to be found between levels of PTSD and acculturation. Further, the extent to which an individual lives sheltered within the ethnic community and isolated from the larger American culture was hypothesized to serve as a moderator variable, such that the higher level of "Bosnian exclusivity" would weaken correlations between independent and dependent variables.

Method

Subjects

Forty Bosnian refugee couples from the Houston and Chicago areas participated in the study. All were married, had been a couple since before the war (1992-1996), and have resided in the US at least one, and at most five, years. All participants were exposed to war and war-related traumatic events, based on self-report. Some had spent time in

concentration camps. Couples were selected through various refugee/resettlement organizations and agencies. Attempts were made to maximize sociodemographic diversity. Due to an accentuated level of this population's reluctance and reservation to take part in psychological (or any other) research, only approximately 30% of couples approached agreed to participate.

The mean age of participants was 36.3 year, ranging from 23 to 68 years. The mean length of their marriages and mean length of their stay in the US were 10.6 and 3.3 years, respectively. Regarding the highest level of education completed by subjects: 1% elementary school, 46% high school, 14% junior college/vo-tech school, 26% Bachelor's degree, 13% Master's/Doctorate degree. Seventy nine percent of participants were currently employed outside home and 46% had no knowledge of English language prior to coming to the US. Nineteen couples had children.

Materials

PTSD Symptom Scale - Self-Report (PSS-SR). The PSS-SR (Foa, Riggs, Dancu, & Rothbaum, 1993) was used to measure posttraumatic stress symptomatology. This instrument contains 17 items, each rated on a 4-point scale, corresponding to the DSM-III-R criteria for posttraumatic stress disorder (PTSD). It yields a continuous score, assessing number and severity of PTSD symptoms. Higher scores indicate more and/or more severe PTSD symptoms. The scale has been shown to have high test-retest and interrater reliability, good concurrent validity, and excellent convergent validity with the Structured Clinical Interview for DSM-III-R (Foa et al., 1993).

Behavioral Acculturation Scale (BAS). The BAS (Szapocznik, Scopetta, & Kurtines, 1978) was used to measure acculturation to the American culture. It contains

24 items, each rated on a 5-point scale. The scale yields a continuous score, with higher scores indicating higher acculturation level. It is not ethnically specific. A validation study of this instrument, with a sample of Cuban Americans, found high internal consistency, high test-retest reliability, and good construct validity (Szapocznik et al., 1978).

Marital Satisfaction Inventory - Revised (MSI-R). The MSI-R, a 150-item, true-false measure of relationship functioning (Snyder, 1997), was used to measure marital satisfaction/distress. The MSI-R is. It identifies the nature and intensity of distress in various areas of partners' interactions. The MSI-R yields two validity scales, one global distress scale and 10 scales assessing specific dimensions of marital/relationship functioning. The following is a list of scale names, abbreviations, and brief descriptions:

Inconsistency (INC) - - A validity scale assessing individuals' consistency in responding to item content. (High scores reflect greater inconsistency.)

Conventionalization (CNV) - - A validity scale assessing individuals' tendencies to distort the appraisal of their relationship in a socially desirable direction. (High scores reflect denial of common relationship shortcomings.)

Global Distress (GDS) - - Measures individuals' overall dissatisfaction with the relationship.

Affective Communication (AFC) - - Evaluates individuals' dissatisfaction with the amount of affection and understanding expressed by their partner.

Problem-Solving Communication (PSC) - - Assesses the couple's general ineffectiveness in resolving differences.

Aggression (AGG) - - Measures the level of intimidation and physical aggression experienced by respondents from their partner.

Time Together (TTO) - - Evaluates the couple's companionship as expressed in time shared in leisure activity.

Disagreement About Finances (FIN) - - Measures relationship discord regarding the management of finances.

Sexual Dissatisfaction (SEX) - - Assesses dissatisfaction with the frequency and quality of intercourse and other sexual activity.

Role Orientation (ROR) - - Evaluates the respondent's advocacy for a traditional versus nontraditional orientation toward marital and parental gender roles. (High scores reflect a nontraditional orientation.)

Family History of Distress (FAM) - - Reflects the disruption of relationships within the respondent's family of origin.

Dissatisfaction With Children (DSC) - - Assesses the relationship quality between respondents and their children as well as parental concern regarding one or more children's emotional and behavioral well-being.

Conflict Over Child Rearing (CCR) - - Evaluates the extent of conflict between partners regarding child rearing practices.

Individuals' responses are scored for 13 profile scales. Each of the scales, excluding the validity scales (INC and CNV) and role orientation (ROR) are scored in a direction so that higher scores reflect higher levels of marital/relationship distress.

The MSI-R is a revision of the original 280-item inventory (MSI). Previous studies have demonstrated convergent and discriminant validity of the original MSI scales

(see Snyder, Lachar, Freiman, & Hoover, 1991, and Snyder & Costin, 1994, for reviews). Actuarial tables linking MSI-R scores to clinicians' and partners' descriptions of the relationship show that MSI-R scales correlate with wide range of external criteria, consistent with their interpretive intent (Snyder, 1997).

"Bosnian exclusivity". Two questions were devised to measure the extent to which an individual lives exclusively within the ethnic community, and thus isolated from the larger American culture. On a scale from 1% to 100% subjects were asked how much time he/she spends with Bosnians (a) at work and during the organized activities outside home and (b) during the rest of a day.

Demographic information. A modified standard demographic questionnaire obtained information about age, length of marriage, length of stay in the US, number of children, number of extended family members, education level, number of hours worked outside home, type of occupation at present and in pre-war Bosnia, years of learning English prior to arrival to the US, financial status as compared with the status in Bosnia), and knowledge of English language (as compared to other refugees).

A Bosnian language version of PTSD Symptom Scale - Self-Report was obtained from Dr. Stevan Weine at University of Illinois Chicago Psychiatric Institute, who has used it in his research with Bosnian refugees (see Weine et al., 1995a, 1995b). All the other instruments were translated to the Bosnian language by the researcher. The blind back-translation by university students of Bosnian origin (who have spent a minimum of three and the maximum of eight years in the US) was used to check for accuracy, sensitivity and validity of the translation. Discrepancies in translation were discussed and resolved by the researcher, the student translators and American clinical psychologists

who were involved in the study. By following the guidelines and methodology previously employed in work with Southeast Asian refugees (Carlson & Rosser-Hogan, 1991; Kinzie, Tran, Breckenridge, & Bloom, 1980; Mollica et al., 1987) and Bosnian refugees (Weine et al., 1995a, 1995b), an attempt was made to maximize ethnocultural relevance of the measures and this project in general.

Procedure

The researcher briefly described the study to interested couples; her Bosnian origin facilitated rapport with potential subjects. Informed Consent forms, translated into the Bosnian language, was obtained from all participants. Subjects were given a choice between English and Bosnian language versions of the measures. All chose the Bosnian versions. The measures were administered to couples in their homes. Wives and husbands completed the measures independently and without collaboration.

The descriptive answers were translated to English, the raw data were coded and entered into SPSS, and all scales were scored. Correlations with MSI-R scales were calculated using raw scores, rather than normalized T-scores. The data were analyzed in two ways: treating the individual as a unit of analysis and treating the couple as a unit of analysis.

Results

This study used a correlational design. Due to the large number of correlations derived, some significance was expected to be found by chance alone. To minimize this error, all correlations were considered significant only at $p < .01$.

Correlations between PTSD symptomatology (PSS-SR score) and all MSI-R scale scores were computed for the sample of 80 individuals (see Table 1). As expected, PTSD

was significantly positively correlated with Global Distress ($r = .44$). Also, out of 10 additional scales assessing specific areas of marital functioning, six showed high significant positive correlations. Problem Solving Communication and Affective Communication showed the highest correlations ($r = .70$ and $.63$, respectively). Role Orientation (ROR) was significantly negatively correlated with PTSD ($r = -.46$) and Family History of Distress showed positive trend.

The Global Distress (GDS) scale showed a weaker significant negative correlation with acculturation level ($r = -.30$). Contrary to expectations, PTSD and acculturation were found to be significantly negatively correlated ($r = -.46$). In view of this finding, an additional set of partial correlations was computed to examine if the reported significant correlations would persist. Table 1 shows that significant positive correlations between PSS-SR scores and MSI-R scale scores became somewhat weaker when acculturation was controlled for; however, they remained significant at $p < .01$. The correlation between PTSD and ROR failed to remain significant when controlling for acculturation, due to the high significant positive correlation between ROR and acculturation ($r = .67$). The correlation between GDS and acculturation, as well as correlations between other MSI-R scales and acculturation, lost significance when PTSD was controlled for. The only exception was the Disagreement About Finances scale. Its correlation with acculturation remained significant when PTSD was controlled for ($r = -.44$). This may be due to the significant positive correlation between acculturation and present occupation level ($r = .39$).

Acculturation was also significantly positively correlated with education, prior English learning experience, and present knowledge of English ($r = .33$, $.52$, and $.57$,

respectively), and significantly negatively correlated with amount of time spent with Bosnians during work and organized activities, and during other times ($r = -.35$ and $-.63$, respectively).

To test for the moderating effect of “Bosnian exclusivity” on the correlations between independent and dependent variables, a series of multiple regression analyses was performed (Baron & Kenny, 1986). Contrary to the hypothesis, no significant moderating effects emerged.

The second analysis approach was performed by treating couples as the unit of analysis and, thus, obtaining correlations separately for husbands and wives. The calculated intercorrelations among PTSD, acculturation, and MSI-R Global Distress (GDS) for both spouses are shown in Table 2. The significant positive correlation between PTSD and GDS was found for wives ($r = .53$), but not for husbands. Steiger Modification of the Pearson-Filon test, which takes into account interdependence of husbands’ and wives’ scores, was performed to test for the difference between the spouses’ correlations (Kashy & Snyder, 1995). The correlations did not differ significantly. Husbands’ and wives’ correlations between PTSD and other MSI-R scales measuring facets of marital functioning (i.e., AFC, PSC, AGG, TTO, FIN, SEX, FAM, DSC, CCR) did not differ significantly either.

The following results were obtained contrary to expectations: (a) neither wives’ nor husbands’ correlations between acculturation and GDS were found to be significant, (b) wives’ correlation between acculturation and GDS was a negative trend ($r = -.39$, $p < .05$), and (c) difference between spouses’ acculturation levels was not significantly correlated with their GDS combined score.

When controlled for PTSD, all significant correlations between acculturation and various MSI-R scales (excluding ROR), both for husbands and wives, disappeared. The only exception was the correlation between wives' acculturation and Disagreement About Finances scale ($r = -.43$, $p < .01$). Controlling for occupation, however, diminished this significance ($r = -.31$).

Several interesting findings emerged when spouses' PTSD, acculturation, and GDS were cross-correlated (see Table 2). Husbands' GDS was not well predicted by any of the variables. However, wives' GDS was better predicted with husbands' PTSD ($r = .65$, $p < .01$) and husbands' acculturation ($r = -.64$, $p < .01$), than with their own PTSD and acculturation. When husbands' PTSD was controlled for, even the previously reported significant correlation between wives' PTSD and GDS disappeared. Also, the expected absence of significant correlation between PTSD and acculturation appeared to hold true for correlations involving wives' acculturation. Yet, contrary to expectations, husbands' acculturation was significantly negatively correlated with both their own PTSD ($r = -.57$) and their wives' PTSD ($r = -.51$).

Discussion

In line with previous research, PTSD symptomatology was found to be a powerful predictor of Global Distress and most other areas of marital functioning. It is interesting that both kinds of communication distress (Problem Solving and Affective) showed the strongest correlations with PTSD. This finding corroborates case study observations by Weine, Vojvoda, Hartman, and Hyman (1997) who reported that traumatic experiences were rarely shared or discussed within a survivor family. Family members, each with

his/her own trauma, often become isolated from one another. This results in communication breakdown.

Correlations between PTSD symptomatology and the MSI-R scales were very similar for husbands and wives. An intriguing result indicated that a wife's global marital satisfaction was better predicted by her husband's PTSD symptomatology, rather than her own. This might indicate females' orientation toward others (especially toward her partner) and/or the strong patriarchal component of Bosnian culture.

Since the correlational nature of this research does not allow for definitive conclusions regarding direction or causality, one should be open to alternative explanations. Thus, it is possible that more PTSD leads to more marital problems, but it is also possible that unhealthy marital relationship may make one more vulnerable to developing PTSD (after the encounter with extraordinary trauma). In any case, the results suggest that refugee resettlement personnel and clinical community dealing with refugees should not limit their preventive and curative efforts to PTSD (as well as to other anxiety and depressive) symptoms. Mental health professionals should be on alert with people, especially women, showing high rates of PTSD symptomatology because they seem to be more susceptible to higher rates of various marital problems. On the other hand, when dealing with refugees, a pronounced marital problems may lead way to PTSD diagnosis and treatment. Individual, marital, and/or family therapy should be employed when appropriate and accepted.

Acculturation was not shown to be a good predictor of marital distress. Weak, unclear, negative correlations were obtained for both sexes; after the correlations with PTSD were accounted for. Higher acculturated individuals had a somewhat lower rate of

marital problems. Contrary to expectations, wives' higher acculturation and more liberal gender role was not associated with worse relationship functioning. A possible explanation lies in the finding that, once more, wives' global marital distress was better predicted by their husbands' acculturation, and thus also by his gender role orientation. It seems that higher acculturation, especially for husbands, was mildly conducive to a healthier marital relationship. Differences between spouses' acculturation levels were, surprisingly, not predictive of their marital distress. However, too much measurement error associated with husband's acculturation scale, wife's acculturation scale, and both of their MSI-R scales might have accounted for this lack of significance.

Contrary to the hypothesis, acculturation level and level of PTSD were significantly negatively correlated. This finding is concurrent with most, but not all, research that examined relations between levels of acculturation and psychopathology. Studies with Mexican Americans (Vega, Kolody, & Warheit, 1985; Vega, Warheit, Buhl-Auth, & Meinhardt, 1984), Greek immigrants (Madianos, 1984), and Southeast Asian refugees (Westermeyer, Callies, & Neider, 1990; Westermeyer, Neider, & Callies, 1989) found that those who were less acculturated showed higher level of psychological distress. A few others found just the opposite (Moscicki, Locke, Rae, & Boyd, 1989). These studies measured acculturation and psychopathology in very different ways, and often had many methodological problems. I am not aware of any studies measuring PTSD specifically as it relates to acculturation levels.

Interestingly, wife's acculturation was not strongly associated with either her or her husband's PTSD, while husband's acculturation showed a pronounced influence on

both marital partner's PTSD symptoms. Again, a described inter-gender phenomenon was observed.

Many hypotheses exist vis a vis direction and causality of PTSD-acculturation relation observed here. For example, the higher acculturated refugees may experience less acculturative stress, thus lowering (or not increasing) their rates of PTSD. Also, higher acculturated refugees may indicate a sub-population of refugees who "throw themselves into new life without looking back" and this avoidant style of coping may be helpful in dealing with PTSD (at least in some situations and for some individuals). It is also possible that refugees with more severe PTSD coming into the United States, may be more rigid and reluctant to acculturate. It is beyond the scope of this study to disentangle these hypotheses. However, the basic correlational findings may be of use to mental health and social work professionals. It was suggested that lower acculturated refugees might be at greater risk for developing or having PTSD. Women, in particular, should be approached with additional care, given their "passive roles" among the described intercorrelations.

Finally, the extent to which an individual lives and works within the Bosnian ethnic community, isolated from the larger American culture, did not emerge as a moderator of the described correlations. Although the moderating effects could be envisioned conceptually, the operational definition of the "Bosnian exclusivity" was not as sound. A measure focusing on sources, quantity and quality of social support would better serve the intended purpose.

There were several limitations of this study. The sample was not selected randomly, and only a small percentage of the approached couples agreed to participate

(i.e., powerful self-selection). The sample over-represented individuals with higher educational levels and socioeconomic status, when compared with Bosnian pre-war population or Bosnian refugees in the U. S. . As always, future studies will elucidate how these present findings generalize to other Bosnian refugees, other refugee groups, other immigrant groups and other populations of PTSD sufferers.

There were some limitations with the instruments used, as well. The acculturation scale measured only behavioral aspects of acculturation, and it has not been validated on Bosnians. Issues of translation, cross-cultural validity and ethnocultural relevance are typical limitations inherent in any cross-cultural study. Additionally, subjects' uneasiness with a long self-report questionnaire, as well as with certain sensitive questions (e.g. with sexual content) may have also been culture bound.

Future studies may explore similar problems, with larger, more representative samples of various refugee groups. Longitudinal refugee research would be able to tackle many important, time-bound, questions that were beyond the scope of the one-time assessment. Adding different aspects of acculturative stress, social support, and coping - measured in a sound, ethnoculturally relevant way - would be an interesting extension of the present study.

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Table 1

Pearson Correlation Coefficients between MSI-R Scales and PTSD for Eighty Individuals

MSI-R Scale	PTSD	PTSD, controlling for Acculturation
Global Distress (GDS)	.44**	.36**
Affective Communication (AFC)	.63**	.55**
Problem Solving Communication (PSC)	.70**	.62**
Aggression (AGG)	.15	.06
Time Together (TTO)	.56**	.48**
Disagreement About Finances (FIN)	.51**	.34**
Sexual Dissatisfaction (SEX)	.43**	.40**
Role Orientation (ROR)	-.46**	-.23
Family History of Distress (FAM)	.28*	.25*
Dissatisfaction With Children (DSC)	.23	.14
Conflict Over Child Rearing (CCR)	.55**	.50**
Inconsistency (INC)	.02	-.09
Conventionalization (CNV)	-.64**	-.57**

Note. $n = 38$ for DSC and CCR.

* $p < .05$

** $p < .01$

Table 2
Intercorrelations (Pearson Correlation Coefficients) among PTSD, Acculturation, and Global Distress for Forty Couples

	PTSD Husband s	PTSD Wives	Accult Husbands	Accult Wives	GDS Husbands	GDS Wives
PTSD Husbands	---	.67**	-.57**	-.20	.34*	.65**
PTSD Wives	---	---	-.51**	-.38	.25	.53**
Acculturation Husbands	---	---	---	.56**	-.29	-.64**
Acculturation Wives	---	---	---	---	-.14	-.39*
GDS Husbands	---	---	---	---	---	.58**
GDS Wives	---	---	---	---	---	---

Note. Accult = Acculturation. GDS = Global Distress.

* $p < .05$

** $p < .01$